



OFFICE OF DEVELOPMENT & COMMUNICATION

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# THE BALAMANDIANS

ALUMNI NEWS

SPOTLIGHTS



Lara Bou Chebl

# FOREWORD FROM THE PRESIDENT



**DR. ELIAS L. WARRAK**

*President*

From the scientific perspective of an eye surgeon, a visual acuity of 2020 means you have seen it all. However, the year 2020 makes you think again.

A year to remember,  
A year you wish it won't have a "look-a-like",  
A year you strive to forget,  
A year of endless nightmares.

It is the year of unprecedented crises and overwhelming catastrophes.

With a promising "Thawra" that has elicited a wakeup call to the smoldering corruption in a dormant society, we had the feeling of a resurrected hope – a hope of establishing a new Lebanon: a Lebanon of justice, equity, and prosperity. With the rightful screaming of a young generation, and the rising fists of genuine hearts, we reflected on our shameful past that we were unable to abolish for a better future.

After the uneventful "Thawra", we dipped in despair after failing to extract the inherent corruption of a governing mediocracy. While wandering in our disappointment, we crashed into a devastating pandemic that changed life as we knew it. We had to learn how to avoid kissing the ones we love, be socially distant from the ones we cherish, and stay confined when we are badly sick. We learned how to listen to the eyes and ignore the lips.

Still, despite all our sufferings, we grabbed the opportunities, and we acclaimed the prosperity of our University. This year we were ranked the second best university in Lebanon, and we hopped up 10 places in the Arab Region QS Ranking.

It is our strategy to seize the opportunities when everyone else is wandering in hopelessness.

It is our obligation to promote hope and happiness, where despair and sorrow prevail.

We will always be the standing ones, and the outstanding.

God bless you all and keep you safe.

## FROM THE EDITOR

Dear Balamandians,

The Balamandians team is always looking for ways to tell stories of change and growth, and the lifelong impact of the University of Balamand on its students and alumni.

As resilience rightly needs to be an explicit goal of universities, this issue gathers testimonials from our alumni, identifying how they dealt with disruptive shocks and tragedies. It also reflects on how the University of Balamand faced many pressing issues such a post-pandemic strategy, at a time of economic, social crises and severe financial hardships.

In this challenging year, the University of Balamand worked hard to salvage the academic year for its students, while maintaining exam integrity. It has also made a significant leap in the QS World University Rankings where it soared among the top 43% universities worldwide, moving up by 80 positions, and ranking second best university in Lebanon.

Fostering a culture of nation building, environmental responsibility, and human development has been at the forefront of Balamand's mission in driving innovation, dedication for the public good, and engagement with the community.

As you go through this issue, you will find a wide array of topics, ranging from education, healthcare, to food security and wildfire risk assessment and management. This issue is also a reflection of our community's concerns addressed by our alumni, faculty, staff and the many different departments and units who have shown creativity and flexibility in their responses to these unprecedented times.

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## **UOB RANKS 2<sup>ND</sup> IN THE QS WORLD UNIVERSITY RANKINGS**



The University of Balamand soared among the top 43% universities worldwide, moving up by 80 positions, and ranking second best university in Lebanon.

In addition to UOB's adamant commitment to excellence in all facets of learning, this year's progress is largely attributed to a strategic pro-active decision of President Elias Warrak to assess, benchmark and improve the university performance. He thus established the Office of Data and Institutional Research to leverage institutional data and implement a systematic data reporting methodology to improve performance and inform decision making. Moreover, and considering the seminal importance of international reputation through ranking, President Warrak's decision to form a UOB Ranking Committee, with a clear mandate to develop a comprehensive strategy that particularly improves ranking, contributed to this pronounced leap.

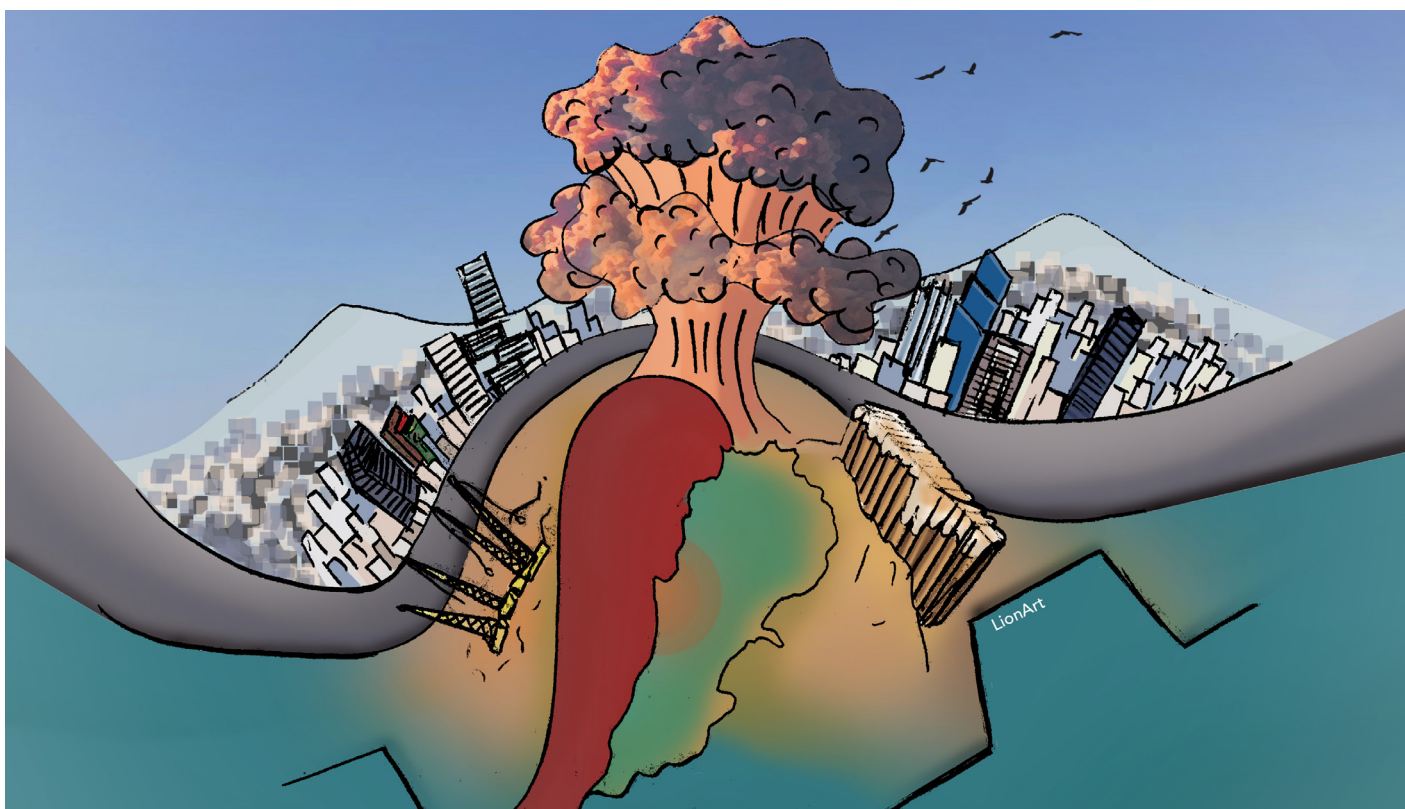


# TESTIMONIALS

*There is no doubt that the Beirut explosion has affected all of us in one way or another. We have delayed the launching of this issue so we could offer a space, where those of you from the affected faculties would share their sentiments either through words or through artistic expressions.*

*These testimonials rightfully depict pain, anger and despair, but if you look closely you will see the indomitable human spirit that, even in its description of death and darkness, brings forth heartfelt expressions through the process of creation and creation is life.*

**SALIM TANNOUS**  
*Director of Development & Communication*



**LARA BOU CHEBL**  
*LionArt - Beirut Explosion*

It is sad to see the images of my home for 6 years, the newly built ALBA (a project by AAA, where I currently work) destroyed.

As an architect living and working in Ashrafieh, I was particularly touched by the Beirut Explosion. Yet, I found the strength to move forward, after cleaning our apartment and helping at the office, I continued volunteering on the ground with: The Youth of the Order of Malta.

*Lara Bou Chebl, Architecture, Master' 2018*



## TESTIMONIALS



KHALED BALLOUT  
*ALBA Instructor*  
*The picture speaks for itself*

## TESTIMONIALS



MELINDA MOUZANNAR

*Animation, License' 2016*  
*Talk About Beirut*

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That day was supposed to be one normal shift but it turned out to be the worst day of our lives. Few seconds destroyed everything and took our loved ones from colleagues and friends. Being able to save lives despite our injuries was our ultimate goal.

*Jessica Adwan, Nursing, BS' 2017*

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During my undergraduate years I resided next to St. Georges hospital for nearly 5 years while attending Balamand. Seeing the footage, it was too much to handle, especially that I had been in the area one day before the explosion seeking nostalgia of what I lived. Two weeks later when I finally went back to Beirut, I headed to my old campus. Luckily, I had my partner with me, for it was too much destruction to handle in one sight. All the once lively classrooms, entirely quiet library were torn to pieces. The sight of no windows really spooked me and had me imagine what some people had witnessed. I wasn't surprised to see many medical residents I had once seen on campus participate in the collaborative efforts to provide the immediate relief for those in need.

*Mohamad Nouredine, Medical Laboratory Sciences, BS' 2019*

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Although I haven't been physically there but I definitely was emotionally and mentally. My deepest condolences go to the families of the victims and my complete support and respect to all the citizens who did their best to help in this tragedy. Being a Balamand student and an intern at Saint George Hospital and witnessing these iconic places being vastly destroyed by the explosion is beyond words...Wishing for nothing but a better Lebanon where we can live in peace and love.

*Lara Yahya, Nutritional Sciences, BS' 2013*

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I was on duty at St. George Hospital when the blast occurred. I have no recollection of most of the events that occurred afterwards since I had many lacerations and injuries on my head. I feel so blessed that my unborn baby and I came out of the rubble alive.

*Zepur Aharonian, Nursing, BS' 2011*



## TESTIMONIALS



MOHAMAD ALAMEDDINE

*Illustration, Master' 2019*  
*Enfijjar*



No words can describe how I felt that night, i almost lost my son whose office at the port was destroyed.

This is a holy land where Christ performed his first miracle.  
Do we feel safe? No.  
Do we believe in our government? We don't.  
We can only rely on each other and the spirit of solidarity that was shown since the explosion.

The politicians were nowhere to be seen. Maybe it is better because whatever they have to say cannot bring back those victims and cannot heal the hearts of grieving parents or those who lost their homes.

May God protect us from what's next.

*Caroline Chaaya, Public Health and Development Sciences,*  
*BS' 2016*



On the afternoon of a calm day in Baabdash, I was sitting at home working on an article when what seemed to me an earthquake happened. Five minutes later, friends and family started reaching out to me to find out if I was safe; it was a blast, yet I considered it similar to all others.

However, when I turned on the TV screen, I was unable to process the images as I could not have expected its severity transmitted live. Beirut was devastated! The images of human bodies, of rubbles, and of chaos were more than shocking. Nevertheless, the footages from the St. George Hospital left me speechless; the hospital was severely damaged and injured people were flocking in need of help.

At that moment, my duty rushed me to wear my scrubs and white coat and drive to the hospital. With the extensive traffic, I had to park far and walk towards the establishment. I saw Beirut as I never did before; thick fumes were everywhere, sirens and car horns were loud, the asphalt was covered by glass powder, buildings were ruined, people were on the streets; it was chaos, it was apocalyptic.

I got to the hospital and started assisting as much as I could; in-patients were being evacuated while the injured were provided first aid. When I stepped in the building where I once trained, I felt that this blast not only destroyed the edifice, it also ruined some of my best memories!

The human losses are unexplainable, the collective trauma is unforgettable, and the heritage loss is priceless. The images, the confusion, the panic, and the chaos still haunt me. During these times of mourning and suffering, I turn to the Lord for His assistance. We might heal with time, yet the scar is there forever!

*Ralph Jalbout, General Medicine, MD' 2019*



## TESTIMONIALS



SEROP MESROB KHAJADOURIAN  
*Arts visuels, Master' 2019*

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On Tuesday August 4, 2020, 18:05, I arrived home an hour early from work and while sitting with my family we heard the sound of an aircraft and a deep explosion sound.

We didn't know what that was until I received a message from my manager saying that Saint George Hospital is in complete destruction.

When we arrived and saw the site, I cried, I haven't imagined that the damage is this big and severe. We reached the delivery unit, where there was the catastrophe. A woman in labor covered with blood, voices shouting "please help; please go over there"... so we started to search for injured patients or staff until I found a practical nurse on the floor. We started to reanimate her but there wasn't any response, she is dead.

Cries and alarms were the only thing you can hear, amid chaos, blood, tears and losses. I went to the OR where doctors were calling for medications so I started to help the patients according to the doctor's orders. Open wounds were severe; scratches from glass were everywhere. I felt as if I was watching a movie. No electricity, we were using the lamps of our cell phones to suture the wounds. Ambulances were everywhere putting on their sirens. It was a nightmare. I thought to myself how lucky I am staying alive with my family. If I stayed another hour at the hospital, I would have been injured or dead for God's sake.

For me, i feel like there is no future anymore. All we need as Lebanese is security, dignity and health insurance in order to survive and move on.

*Lina Raoub, Nursing, BS' 2005*

## TESTIMONIALS



In my six years of working as a registered nurse, 2020 was by far the hardest. Throughout the year, the choice of becoming a healthcare worker and taking an oath of taking care of patients was put in perspective day after day.

August 4<sup>th</sup>, 2020 was one of my first few days off since the beginning of the year. At around 6:05 pm that day, I heard a strange sound coming from far and getting close. Then, I heard an explosion that was far, followed by an earthquake-like rumbling. It was “the blast”. I was home, and so was my family, which I still thank God for, every day. We were safe, but from the horrific sound of the blast, it was evident that many were not.

Our neighbors were screaming, we opened our front door and saw our neighbor running down the stairs drenched in blood. I immediately tried to identify the main wound and attempted to stop the bleeding from the glass cuts with the basic supplies I had in my first aid kit at home. After sending my neighbor to a nearby hospital for sutures, I was ready to leave to the hospital.

One of my colleagues informed us that she had evacuated three babies with the help of other colleagues and an attending physician and had now reached Abou Jaoudeh Hospital. With the relief that they were safe and knowing that they had already started evacuating the hospital, my nurse manager asked me to head to Abou Jaoudeh Hospital since I was the closest to it to take care of our patients there. I was in charge of taking care of our premature babies that night as any other normal shift, except I was not working in my unit, not in my hospital, not with my colleagues.

The next morning, those babies were transferred to a peripheral hospital in Bekaa. My contribution that day was minimal in comparison with my colleagues working in the ER or injured. However, I learned that we have to thrive and go beyond ourselves for the safety and well-being of our vulnerable patients, since after all we are their advocates.

In a city that was destroyed, the healthcare workers at Saint George Hospital University Medical Center were a beacon of hope. To the University of Balamand, thank you for making me the nurse I am today.

*Mia Hajj, Nursing, BS' 2015*



ELYSE KHOURY

*Graphisme et publicité, Master' 2011*

*Layers of Mar Mikhael & Gemmayzeh after the blast*



## NURSING...AN ACT OF HEROISM!

"Nursing, in principle, is an act of heroism", said Mr. Edgard Joujou, CEO of Saint George Hospital, University Medical Center, few days after the blast. I tried to recall every single moment of the night of August 4th, 2020. All I can remember was helping in the evacuation of patients, visitors and employees. I didn't feel I was doing something brave. I felt I was doing my job, my mission. I was respecting "Florence Nightingale Pledge" I took 13 years ago.

Despite all the will and the determination of rescuing the highest number of victims, I couldn't see a bit of light during this forceful darkness, until I saw my ex-UOB nursing graduates, future colleagues, in front of me, asking how they can help.

August 4, 2020 was the first day of employment for the 2020 graduates of UOB Nursing Program. After few hours of a long day of orientation where we discussed the Nursing Department mission, vision, goals and values, the cursed blast happened. I couldn't realize that all what was discussed during the day was translated into practice during that night. The commitment, motivation, teamwork, sense of belonging, empathy, and dedication of these Balamandians new employees gave me a sense of pride I never felt before. Did I feel this pride because I am myself a UOB nursing graduate? A UOB part-time teacher? A SGHUMC nurse? The answer is NO.... I felt this pride because I found the essence of nursing in the eyes of each student, because I saw the professional nursing practice and dedication in every one of them as future colleague, and most importantly, I realized that a true leader exists in every one of them.

Finally, I understood that I felt this pride because of them....Because I have the proof that these novice nurses made a huge difference in such an atypical, unprecedented disaster.

Thank you for being not only superhuman, but for being superheroes.

Thank you for being true BALAMANDIANS!

Thank you class of 2020!

*Lara El Daher, Nursing, BS' 2007*



REINE ABBAS

*Arts plastiques, D.E.S' 2000  
Ghadab*

## TESTIMONIALS



TINA SLEIMAN

*Graphic Design, BFA' 2003*  
*Lebanon 2020*



Twenty years ago, I joined the graphic design program at ALBA at the University of Balamand. After graduation, equipped with a degree I am honored to hold, I was able to pursue a meaningful career. Today, I appreciate that I can express my voice as an alumni of the university that I hold dearly in my heart.

This year has brought innumerable difficulties. The country witnessed bloodshed, destruction and forest fires, but I believe it will rejoice in relief, reconstruction, and harvesting the fruits of our labor if we keep our hopes up and work together towards the future. Lebanon is Lebanon because of its determined and hardworking people and its sacred land.

At the time when the State of Lebanon was born, a century ago, Saint Nektarios of Aegina surrendered his soul to the savior, after suffering from poverty, alienation, humiliation, exhaustion and illness, but never losing faith and patience. Perhaps he is looking down upon us today to encourage us that better days are to come when we trust in salvation.

*Tina Sleiman, Graphic Design, BFA' 2003*



I had just arrived home from my shift at Saint George Hospital on the evening of August 4<sup>th</sup> when news about the Beirut blast had spread. Knowing the extent of the damage the explosion had caused, and expecting the hospital's emergency department to flood with those injured soon afterwards, I figured I would go back to the hospital and lend a hand to the staff in the emergency room. What I did not expect was to see Saint George Hospital University Medical Center (SGHUMC), which had been considered a safe haven for its employees and Beirut residents for decades, in utter ruins, with rubble covering every visible spot, and everyone on its premises in a state of panic and complete disbelief.

Overwhelmed with horror, I gathered my emotions and joined those who had already started the evacuation process. It took hours of rushing through daunting hallways, making way through the wreckage, providing the injured with first aid, and carrying immobile patients down endless flights of stairs before the hospital was completely evacuated from patients, visitors, and employees.

161 patients including newborns, children, elderly, and those in isolation units for COVID-19 were evacuated that night thanks to the heroic efforts of the medical and paramedical staff, many of whom were injured. The spirit of selflessness and solidarity exhibited by SGHUMC staff on August 4<sup>th</sup> and in the weeks following the blast conveys the most positive of messages - even when faced with a tragedy of such magnitude and with prospects looking bleak; voices for peace can still be heard.

*Pamela Fransawi, Nursing BS' 2017*



## TESTIMONIALS

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I simply have no words. No words to explain how terrifying it is, to witness 5 seconds of the scariest moments of your life. 5 seconds that lasted as long as 31 years. You do see your life in reverse. You do see the light. You do see everything flying around in slow motion.

I'm aware my art is usually brutal. But this one is as brutal as it can get. Yes. This is blood. Real blood, my blood, drained from my favorite dress, the dress my mom got me as a gift some years ago. The dress I was wearing the day it all happened.

More than 500,000 innocent people were affected by the Beirut blast on August 4<sup>th</sup>, 2020. Not a single one of them actually remembers any vivid scenes from the hardest 5 seconds of our lives. All we remember is the emergency rooms, the blood, the broken glass injuries, the bodies lying around their home town, on the streets, with no help, the rubble of destroyed buildings on impossibly blocked narrow streets. We remember how it took us more than two hours to reach a decent hospital and make sure we will actually survive.

Why? Because we're not equipped for disaster relief or catastrophic incidents.

I remember the noise. I remember the first blast. I remember the second blast. I remember I ran to the safest room in our office to hide, but didn't make it. I remember covering my head and face with my arms to protect myself, I remember bleeding all over the office, calling my loved ones and saying my goodbyes. Yes I remember that, after 4 days of being in total shock, and watching every single available video of the blast, hearing the explosions over and over again, for 4 consecutive days, to remember the least of the details of that day.

If you know me well enough, you know that every single one of my drawings represents a brief moment of my life, one I can never get over, or can't explain. Words can't always express your deepest thoughts. But art can. Ink can. And in this case, only blood can.

*Tanya Korban, Architecture d'intérieur, License' 2010*



TANYA KORBAN  
*Architecture d'intérieur, License' 2010*  
*Rebirth*

I extended the black sail of fear  
willing to leave  
towards a cloud or a star or maybe to a shore gazing tenderly onto a refugee

My baggage is plenty  
images of houses and streets  
and people who exist with no heartbeats  
the agony of a widow  
the tear of a kiddo  
and a casket of an old man in an eternal sleep

My shattered identity  
buried under the rubble  
and my old doll now a pile of burned rubber

My city is an inferno  
its fire the warmth of the wind  
its fuel my loved ones  
and old memories that were grind

Greetings to that city  
where citizens are mangled with no pity  
where an axe over the heads waves  
where free men are now slaves

Greetings to that city  
where each lie is made so pretty  
where truth is buried in shallow graves  
and hope nests in deep dark caves

so long to this city  
where myths are parts of a haunted reality  
where falsity like tree leaves grows  
and honesty is cast over by shadows

So long to this city  
who lost its divinity  
where doomed crows cry  
this city that weaved the perfect lie

## BEIRUT

THE CITY THAT WEAVED  
THE PERFECT LIE



MANAR ALI HASSAN

*Arts Visuels, Master' 2019*

*Beirut The City That Weaved The Perfect Lie*

# IN MEMORIAM



JEAN-MARC BONFILS  
*Instructor, ALBA Sin El Fil*

”

Jean-Marc Bonfils, quatre mois ont passé depuis ta disparition tragique au soir du 4 Août, laissant toute la famille de l'Alba-Université de Balamand dans un deuil qui ne cesse de grandir au fil du temps. Nous réalisons chaque jour davantage l'ampleur de ta perte.

Tes collègues enseignants ont perdu un remarquable compagnon de route d'une grande culture, un artiste au vrai sens du terme, un missionnaire qui considère que la vie est un lieu d'apprentissage journalier, un être humble, un humaniste convainquant, un modèle de politesse et de comportement exemplaires, un grand architecte des temps modernes.

A leur tour, tes étudiants pleurent toujours la disparition de l'enseignant qui leur a donné le meilleur de lui-même, qui leur a appris le respect de la nature et de l'environnement, qui leur expliquait avec patience leurs erreurs commises dans l'élaboration de leurs projets et discutait, devant eux, avec ses pairs enseignants, les arguments qu'il jugeait bons, dans le respect de tous. Cet enseignant qui leur a inculqué les grandes valeurs à honorer dans le prochain exercice du métier qu'il a chéri et respecté : le métier d'Architecte.

Quant à moi, j'ai perdu en toi un ami attachant, fidèle, désintéressé, honnête, affable et cultivé. Ton grand savoir dans les domaines de la musique classique et de l'architecture faisait de toi un interlocuteur très apprécié et sollicité.

Très cher ami,  
Je sais que ton plus cher désir était de tout faire pour que notre école d'architecture garde toujours la place de choix dans la mission qu'elle s'est choisie : la bonne formation des bâtisseurs de demain.  
Je m'engage, au nom de toute la grande famille de l'Alba-Université de Balamand (doyen, administration, enseignants et étudiants), de poursuivre le chemin de perfection et de garder à jamais dans notre esprit ton image souriante annonciatrice d'un bel avenir pour notre institution.

FAWZI NASR  
*Directeur de l'école d'architecture de l'Alba-Université de Balamand*

Jean-Marc Bonfils; four months have passed since that tragic day, August 4<sup>th</sup>, when you passed away. We are deeply shocked and saddened by the passing of a colleague and friend at ALBA. You left us grieving, realizing by the day the magnitude of your loss.

Your colleagues at ALBA have lost a remarkable friend, a colleague with great cultural knowledge. They lost an artist in the real sense of the word, a missionary who believes that life is a continuous learning journey, a humble person, a convincing humanist, known for his politeness and exemplary manners, and a renowned contemporary architect.

As for your students, they are still mourning the loss of a great teacher and mentor, who taught them to respect nature and the environment. They also lost a teacher who used to guide them with patience, point out the flaws in their designs, discuss their projects in front of other jurors, and give them tips on their evaluation standards. Your students lost a mentor who instilled in them the values inherent in the profession that he used to cherish: architecture.

As for me, I lost a faithful, loyal friend; a generous, honest, and cultured person. Your incredible knowledge in the fields of classical music and architecture made you an appreciated and solicited interlocutor.

My dear friend,  
I know that one of your dearest goals was to do everything to make the school of architecture maintain its position and mission in forming future architects: the builders of tomorrow.

I pledge on behalf of the Alba family at the University of Balamand (dean, staff, teachers and students) that we will pursue the path of perfection, and we promise to keep forever in our minds your smiling image, heralding a bright future for our institution.

FAWZI NASR  
*Director of the School of Architecture at Alba-University of Balamand*



# IN MEMORIAM



JESSICA BEZIDIJIAN  
*Nursing, BS' 2018*

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On August 4, 2020 at 6:07 pm, I was working late in my office at the Faculty of Health Sciences in Ashrafieh facing the port when the terrible death storm blew. I thought and felt this was the end for us all. I was injured and went outside, confronted by the smell of blood everywhere, but never thought that death would take away among others our beloved graduate Jessica Bezidjian. That day, we were all in a state of shock unable to imagine the extent of the calamity.

Then we heard that our Nursing Program sadly lost among others, one of our nursing graduates: the young, bright, gentle and full of life Jessica who was always present with a warm and welcoming smile, as she died from the terrible blast. Jessica was on duty that day and as usual, she arrived an hour early to be ready for her shift. This was her character: a meticulous, dedicated, motivated nurse. She never knew this would be her last day. Despite her short journey as a nurse, her contribution for many patients was remarkable during her two years as a registered nurse at SGHUMC- Psychiatric Unit, as if she knew that she would not stay for long. Since we first met her as a student, Jessica was exceptional in terms of clinical and academic excellence. She loved nursing and she was very proud to be a nurse.

Jessica is survived by her loving parents, friends, colleagues and teachers at the Nursing Program - University of Balamand. Her great spirit will surely live in the hearts and minds of every patient and person she interacted with.

BAHIA ABDALLAH  
*Nursing Program Director, Faculty of Health Sciences*

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C'est avec une grande peine que j'écris pour rendre hommage à Jessica. Mais que dire d'elle ? Les mots sauront-ils traduire, fidèlement, ce qu'elle était et représentait ? ! Étudiante exceptionnelle, tellement dévouée, consciencieuse et motivée, Jessica était un modèle à suivre. Le « nursing » ne lui était guère un métier mais une passion, voire une vocation. Ses excellentes notes et son perfectionnisme concrétisaient son amour pour ce domaine où elle s'est investie moralement, émotionnellement et académiquement.

Au stage, Jessica était distinguée et avait toujours le souci de procurer la meilleure qualité de soins aux patients auprès de qui elle a su laisser, grâce à son empathie et son engagement remarquable, ses traces. Pour lui rendre grâce, des patients et certaines familles lui ont rédigé des lettres de reconnaissance et ont témoigné de leur gratitude et leur confiance envers elle. Ambitieuse et déployant haut, très haut ses ailes, Jessica voulait continuer ses études après au moins deux ans d'expérience. Mais hélas les deux ans se sont écoulés et Jessica n'est plus là !

Jessica, tu resteras vivante dans nos cœurs et en mémoire éternelle ! Je parlerai toujours de toi auprès de mes étudiants parce que tu es et demeureras le bon exemple d'une infirmière héroïne !

VICKY GEBRAN  
*Lecturer, Nursing Program, Faculty of Health Sciences*



# IN MEMORIAM



JESSICA BEZDIJIAN  
*Nursing, BS' 2018*

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As her name, “Jessica”, means the Gift from GOD, she brightened our shifts with her positive energy, her love and her empathy. She was so honest, lovable, and professional. She was the special Nurse that all her patients loved and respected, who had been elected “Nurse of the month” several times. Her readiness to help her colleagues and contribute to achieve any new project was remarkable. Now we cannot do anything to get her back, but what we can do is to pray that her soul Rests in Peace. We love her and we will miss her so much. Our memories of her will remain with us till we will meet again.

DARINE KFOURY  
*Head Nurse, Psychiatric unit, Saint George Hospital University Medical Center*

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I knew Jessica as a nursing student. I still remember the first impression I had of her... what a beautiful and remarkable girl! Her smile truly healed. I encountered her again during her internship where she proved herself as a promising professional nurse. Then, prior to her employment, I had several meetings with her where I also met her mother. They had one simple request: to let Jessica start her professional career as soon as possible, even without having her allowed vacation. She was that motivated, and her motivation paid-off: As soon as she started, she impressed the unit's head nurse by her enthusiasm to learn. She fascinated her colleagues by her smile, ethical behavior, softness and caring approach. Her internal charm was strong enough to spread positivity and create a remarkable team spirit in the psychiatric unit. Integrity, perseverance and perfectionism characterized her. Her creativity, sense of accountability, commitment and ambition were also identified as her major assets. Jessica represented the best of the nursing profession.

This was the Jessica I knew till August 4, 2020. Then, I saw her, for the last time, on that apocalyptic night of August 4, 2020. I didn't recognize her, or I didn't want to recognize her. Her smile was missing, but her beauty and softness were still there. The fight between life and death was too much so she decided to close her eyes never to open them again. She was and stayed in a deep sleep.

Rest in peace sleeping beauty. I will see you on the other side of the stars.

LARA EL DAHER  
*Clinical Nurse Specialist, Saint George Hospital University Medical Center  
Teacher, Nursing Program, Faculty of Health Sciences*

# IN MEMORIAM



JESSICA BEZDIJIAN  
*Nursing, BS' 2018*

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My dearest Jessica,  
There are no words to explain the unfairness of this world. No words to tell you how much I would give to see you one last time, to thank you for being a part of my life. It was not supposed to be like this, we did not expect to lose you so early in life. You were the best of us, whatever you did, you excelled in it, you were smart, always the first in class, beautiful and humble. You brought positivity everywhere you went, impacting other people's lives without even knowing.

You always had that cheerful smile on your face, that I will never forget. I loved the way you felt so strong. Losing you broke my heart and the hearts of so many others. You were so innocent, and young. We started as classmates, and became colleagues but most importantly you were my best friend and my sister. There will always be something missing in my life without you in it.

My heart won't let you go and I need you to know that I miss you and I miss all of you. I'm thinking back on the past... It's true that time is flying by too fast. Nevertheless, it's different now; you're still here somehow, watching over us, guarding us from above, you were an angel on earth and now an angel in heaven.

Until we meet again. Your sister who misses you a lot.

JOANNE SAID  
*Nursing, BS' 2018*

”

I write this with great sadness over the unimaginable loss of a close friend... more than one month passed on the disastrous incident as if it was yesterday, with every blink of an eye I go through a trip of emotions whether the anger that dethroned the dopamine levels or the gratitude that was crowned over serotonin levels, and the list goes on and on.

More than one month have passed and I can still see her smile in front of me, and hear her voice in every corner at the hospital... she was a warm and kind person with a positive outlook on life and a fundamental faith in humanity, she didn't just have an impact on my life but also touched the lives of many around her. Jessica was a true friend and a passionate nurse and my one and only Armenian colleague, where we shared everything since the days we were at the university and that magnificent friendship even continued at work later as colleagues in the same unit.

Now that she's gone it will be hard to find someone to talk about everything that bothers me at work like we used to do in Armenian so no one can understand. Friends do everything together, they eat with each other, laugh with each other, cry with each other and once one is lost, the other soul explodes as the ammonium nitrate exploded and took away my friend.

Yes I've lost someone special...we have made a lot of memories in every corner in the hospital even at the workplace. To be honest I tried to close my eyes to forget but I missed out that we even made memories in our dreams, those special memories of you will always bring a smile, I will hold you tightly within my heart and there you will remain until we meet again, this is to say that to live in the heart of others is to never die.

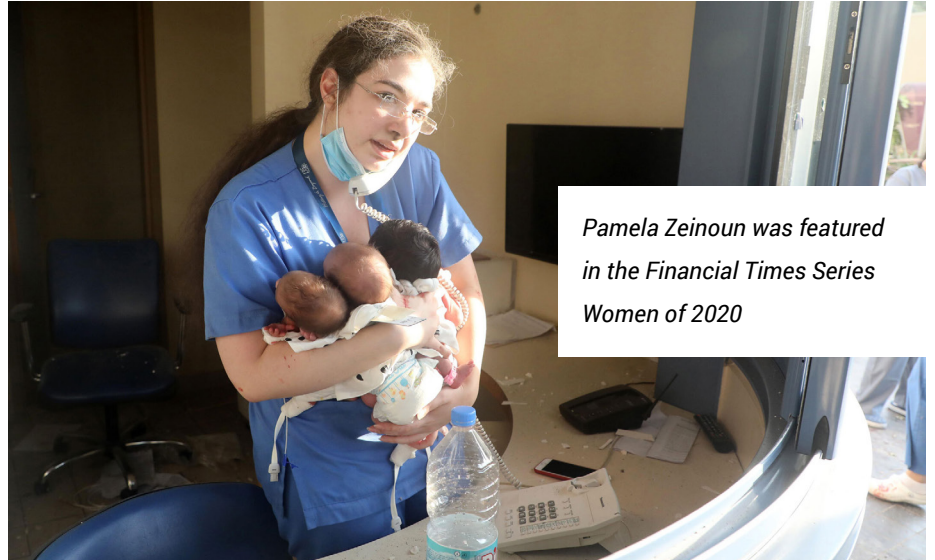
DECILE KECHICHIAN  
*Nursing, BS' 2018*

## NURSE PAMELA ZEINOUN

Becoming an Inspiration to Everyone



PAMELA ZEINOUN  
*Nursing, BS' 2015*



Pamela Zeinoun's name made the headlines, as the nurse who pulled three newborns out of the Saint George Hospital University Medical Center hit by the Beirut blast.

Beyond and above her call of duty, Pamela's story has shattered ceilings and inspired millions of people around the world. She was celebrated in the Financial Times as one of the women who emerged on the world stage and put their stamp on 2020. We have all seen the powerful image of nurse Pamela Zeinoun, which was captured by photojournalist Bilal Jawich, that shows nurse Pamela calmly cradling three newborn premature babies in the wake of the devastation caused by a massive explosion in Beirut.

Following her graduation from the Faculty of Health Sciences at the University of Balamand, she started working at the Saint George Hospital that she describes as her home.


Pamela was in the pediatric neonatal intensive care unit when the blast hit. She was able to remove herself from underneath the rubble and rushed to see the babies.

"I grabbed the ceiling with my hand and tried to pull it away just to know where the babies were because the incubators moved. They weren't in the same place", she says.

Zeinoun rescued the children from their incubators in the pitch black as the roof collapsed on them. "The incubators were misplaced, and everything was on the floor. So I had to remove the shells from the incubators, pick up the babies, hold the three of them, and get back to safety", she explains. Pamela who fought her way out of the wreckage, and walked 5km to take premature babies to another Beirut hospital after Saint George Hospital was destroyed in the explosion became an inspiration to many, and a glimmer of hope!

Asked to offer a word of advice to Balamand nursing students, she says: "there are a few noble professions in this world. Nursing is one of them. I can assure you that you will be fully equipped at the nursing program, with the knowledge, the know-how and the care needed to start your journey as a nurse."

To alumni, she concluded: "you should be proud of yourselves for previously being part of the University of Balamand. I personally am forever grateful. We have been granted the basis of everything we know from the most prestigious University and from the most welcoming faculty members".



I can assure you that you will be fully equipped at the nursing program at the University of Balamand, with the knowledge, the know-how and the care needed to start your journey as a nurse.



## DR. DANY BARRAK

Redefining Cancer and its Treatment



*Chief Resident at the Department of Surgery at Medstar Health System, Dr. Barrak recently matched into General Complex Surgical Oncology, one of the most competitive fellowships at Fox Chase Cancer Center, Temple University.*

Dr. Dany Barrak began his journey at the University of Balamand, in 2009, prompted by the reputation of the medical school, "that trained and graduated pioneers in the field", he says. After completing his MD degree from the University of Balamand in 2012, he continued his education by pursuing a Master's degree in public health from the American University of Beirut and then left to the United States to complete his general surgery residency at Medstar Georgetown University Hospital.

This year, he recently matched into General Complex Surgical Oncology, one of the most competitive fellowships at Fox Chase Cancer Center, Temple University which he describes as "one of the earliest comprehensive centers in the nation and a pioneer in cancer prevention, treatment and innovation."

Dr. Barrak believes that his education at the Faculty of Medicine helped him to be where he is today, "we learnt the necessary material but also how to think critically and solve obstacles along the way", he explains.

By striving to become a surgical oncologist, he values the unmatched support of his family, which was the foundation for achieving his goals.

Largely engaged in translational research, Dr. Barrak has focused his research on surgical oncology; mainly, the study of circulating tumor cells in early stage cancer and the concept of personalized therapies drifting away from

the “one drug for all” treatment algorithms. His clinical interests also include personalized cancer treatments. Another research he is engaged in is the study of circulating tumor cells in the division of surgical oncology at USC-Keck School of Medicine in LA, California. “We found out that you can actually learn a lot by isolating one cancer cell from the blood and will be able to even predict the cancer’s response to treatment by sequencing the genome,” explains Dr. Barrak.

He believes that systematic therapy is very morbid and has a lot of side effects some of which are irreversible. “Even though, there is a lot of work and research to be done still for the tailored treatment approach... it’s indeed very promising”, he argues.


Dr. Barrak further explains that the latest strategies to fight cancer include immunotherapy which has gained a lot of success in the fight against cancer, and targeted therapy that goes hand in hand now with surgical oncology to decrease the tumor burden.

Chief Resident at the Department of Surgery at Medstar Health System, Dr. Barrak is planning to continue his career as an academic surgical oncologist with the ultimate plan to return to the Middle East and help advance the healthcare system there.

Dr. Barrak praises the bright and upcoming healthcare professionals, and adds that he would love to come to visit the University of Balamand soon.

Asked to offer a word of advice to Balamand students and alumni, he says: “If you have a dream, pursue it! I’ll tell you it’s not going to be easy and there will be many times when you are ready to give up but don’t . Keep going because once there is a will, there is a way!”

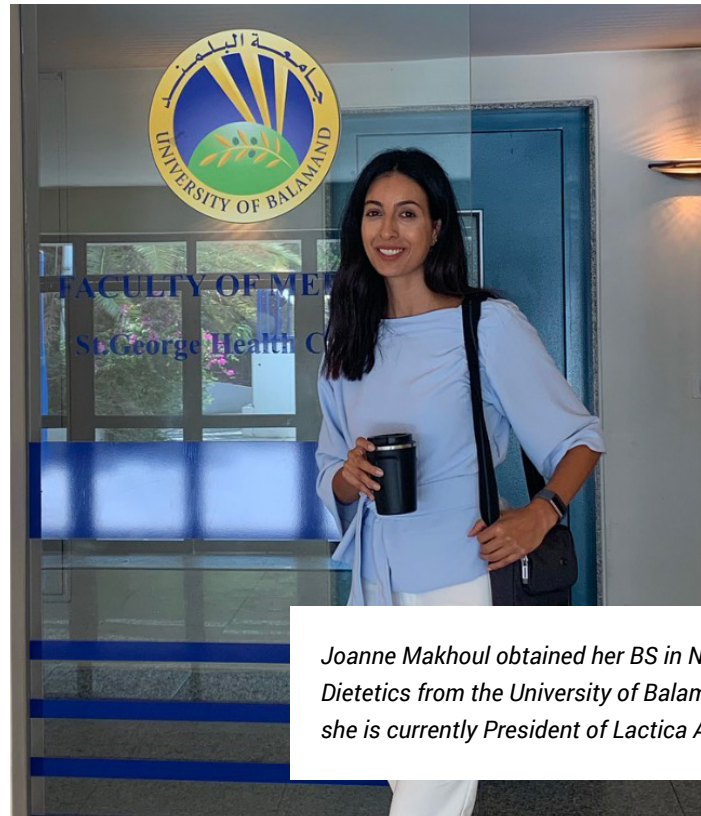
We wish him a bright future!



**My plan is to continue my career as an academic surgical oncologist with the ultimate plan to return to the Middle East and help advance the healthcare system there.**

## JOANNE MAKHOUL

Healthcare in the Service of the Community



*Joanne Makhoul obtained her BS in Nutrition and Dietetics from the University of Balamand in 2011, and she is currently President of Lactica Association.*

Joanne Makhoul obtained her BS in Nutrition and Dietetics from the University of Balamand in 2011, and then received a MS degree in Nutrigenomics and Personalized Nutrition from Universitat de Les Illes Balears-Spain. She says she has always been interested in health and nutrition. While in Balamand, as part of the community course, she had the opportunity to do her internship at the Saint George hospital in the Department of Dietetics.

While doing her clinical internship at the hospital, and while an intern at the Department of Obstetrics and Gynecology, she seemed to be interested in taking care of the mother and the baby. "I felt a need of educating mothers, and to optimize support for breastfeeding, to enable women to achieve their infant feeding goals", she says. Since then, Joanne developed an interest in improving the health of the mother and the infant through nutrition education. Today, she serves as President of Lactica Association.




Prior to joining Lactica, she worked in many NGOs on increasing the importance of nutrition and healthy eating for healthier lifestyles and communities. She organized many campaigns and workshops, and took part in “سامعين بال ٤٧” awareness campaign to enforce the implementation of law 47/2008 that ensures the protection of every child and mom’s right to breastfeed. “Law 47/2008 forbids any form of marketing and advertising campaigns for baby bottles, teats, pacifiers, baby food, and artificial formula milk from birth till three years of age,” she explains. “Breastfeeding is not only the cornerstone of a child’s healthy development, it also contributes to the health of the society and the development of the country”, she says.

One of the challenges she faced in her career is when she started working on the field, as part of the IYCF program aimed at improving infant and young child feeding (IYCF) at the community level. Field work, she says, faces significant challenges as in many communities, IYCF practices remain far from optimal, especially in the most vulnerable communities with limited access to healthcare, and in collective shelters.

Joanne says she finds the challenges posed by the job fulfilling, and says that since joining Lactica in 2015 as a board member, and then elected as president in 2019, she became a strong advocate of breastfeeding.

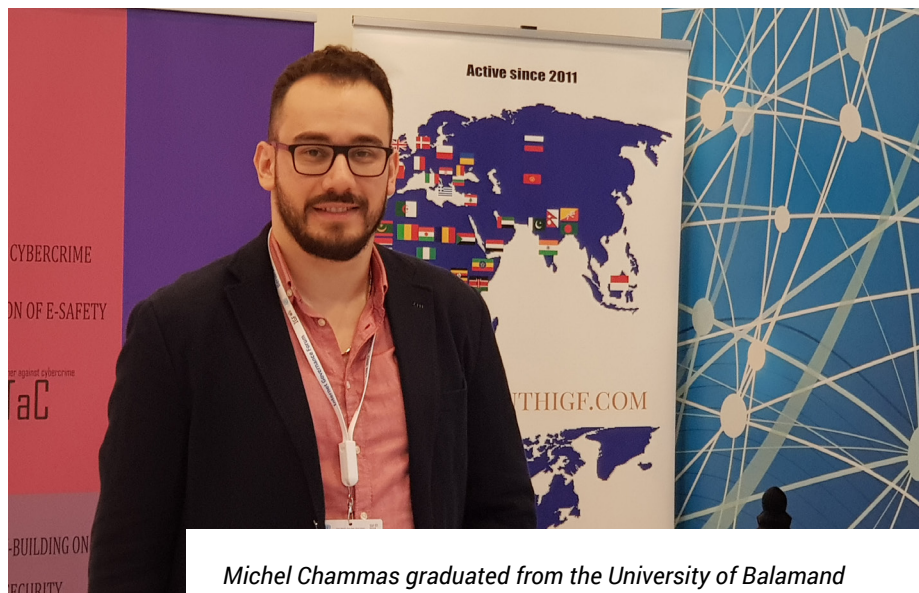
Asked to offer a word of advice to Balamand alumni and students, she says: “It is our duty and responsibility to make a difference, to think big, and to create opportunities for ourselves”.



**Breastfeeding is not only the cornerstone of a child’s healthy development, it is also the foundation of a country’s development.**

## MICHEL CHAMMAS

Ambassador for Internet Governance



*Michel Chammas graduated from the University of Balamand with a BS degree in Computer Science, and two Masters degrees, one in Networking & Communication and another one in Educational Technology.*

A strong advocate of cybersecurity, Michel Chammas was appointed as the Ambassador of the Youth Internet Governance Forum Movement (IGF), in Lebanon, which is a world leading organization in the subject of Cybersecurity awareness for young people.

Michel has represented Lebanon at a number of international events and conferences, including the Internet Governance Forum and Youth IGF in Paris 2018, Berlin 2019 and the Arab IGF in Cairo 2020, and one recently at the International Conference on Frontiers in Handwriting Recognition Competition (ICFHR 2020).

The competition, he explains, investigates the performance of large-scale retrieval of historical document fragments based on writer recognition. Michel's team claimed the first prize in the competition, and achieved the first rank with a state-of-the-art system based on advanced machine learning techniques.

Following his graduation from the University of Balamand with a BS degree in Computer Science, Michel completed two masters degrees, one in Networking and Communication and another one in Educational Technology. Currently, he


is a researcher at the Digital Humanities Center at the University of Balamand, and is completing his PhD degree from the University of Franche-Comte in France.

“My education at the University of Balamand allowed me to improve my career at different levels, through the excellent reputation of the University of Balamand, and through its engagement with international organizations”, he says.

His main research interests are in multidisciplinary fields related to technology including Machine Learning, Artificial intelligence, Digital Humanities, Digital Cultural Heritage, Augmented and Virtual Reality, Educational Technology and Cybersecurity.

Michel's contributions to Information and communications technology (ICT) are clearly significant. This is witnessed in particular by the fact that he served as a legal ICT consultant and a member of the Lebanese Multistakeholder Advisory Group (LMAG) which represents all the Internet stakeholders in Lebanon from different sectors: Government, Academia, Civil Society and Private sectors.

Michel concluded that he is a proud Balamandian, and will use academic excellence, and achievements to raise the name of the University and uphold its discipline.



My education at the  
University of Balamand  
allowed me to improve my  
career at different levels.





**Professor Georges Bahr**

*Acting Provost*

*Dean of the Faculty of Arts and Sciences*

## FACULTY OF ARTS AND SCIENCES: CREATING KNOWLEDGE THROUGH LIBERAL AND SCIENTIFIC THOUGHT

A key purpose of the University of Balamand (UOB), as indicated in the mission statement, is to “create and communicate knowledge”. In addition, the communication skills, the ability to interpret messages, to create and disseminate messaging, has become a critical skill in the 21st century. It is also indisputable that science is at the core of human knowledge and advancement. Based on these two imperatives, and in alignment with the American academic system, the Board of Trustees decided in January 2019 to fuse the Faculty of Arts and Social Sciences with the Faculty of Sciences in order to form a single Faculty, the Faculty of Arts and Sciences (FAS). This decision was also aimed at consolidating the interaction of fundamental and natural Sciences with multiple disciplines in Humanities and Social Sciences. Today, FAS has become the largest Faculty at UOB, with over 20 different programs, seeking to develop the skills of messaging and interpreting messages as well as to generate and disseminate scientific knowledge through excellent teaching, high quality research, and services to the UOB community. FAS is also committed to creating information professionals who view access to information and acquiring communication skills as important component of a democratic society.

### **Mission**

FAS educates and graduates students at both the undergraduate and graduate levels in several social science disciplines, humanities, natural and mathematical sciences. The Faculty is dedicated to conducting research in all these domains to advance new knowledge (theoretical and practical) and to create an environment that produces innovative and scholarly activities. The skill development courses offered in FAS influence the quality of all programs at UOB and the quality of a UOB graduate. The “General Education” element in FAS, offered to all UOB students, is targeted at providing students with language proficiency (English, French, or Arabic) and culture. The latter, under the cultural studies program, scans areas of Ancient Cultures of Religion, Christian and Islamic Cultures, Knowledge and Reality, Ethics and Aesthetics, Modern Thought, Modern Arab Thought, and Contemporary Challenges. In addition, the “General Education” program prepares students to become knowledgeable in Psychology, Sociology, Philosophy, Political Sciences, Political Ideologies, and Media and Society. This vast array of offered topics is taught through strategies informed by liberal and scientific thought to equip students with transferable skills such as critical thinking, complex problem solving skills, effective communication, and academic integrity.

**FAS Organizational Structure**

FAS is organized into six divisions. Each Division houses more than one Department and is administratively run by a single Head of Division.

The Division of Languages houses: Department of English Language and Literature; Department of French language and literature; Department of Arabic Language and Literature; Department of Languages and Translation.

The Division of Education houses: Department of Education; Department of Physical Education; Department of Psychology.

The Division of Cultural & Communication Studies houses: Department of Media and Mass Communication; Department of Political Science; Cultural Studies Program; Museum Studies Program; Christian-Muslim Studies program. The two latter programs only offer graduate degrees.

The Division of Biology and Environmental Science houses: Department of Biology; Department of Environmental science.

The Division Chemistry & Physics houses: Department of Chemistry; Department of Physics; Food Science and Technology Program. The latter program only offers a graduate degree.

The Division of Computer Science & Mathematics houses: Department of Computer Science; Department of Mathematics.


**Strategies for Meeting All Students' Needs**

The Departments and Programs involved in delivering "General Education" courses to all UOB students in all campuses (English language, French language, Cultural Studies), or service courses to students from other faculties (Mathematics, Computer science, Physics, and Chemistry), host around one thousand and five hundred students per semester. The curricula of these departments/programs are continuously monitored to meet the students' needs and proper training. Efforts made by the teaching academic members are gigantic and are targeted toward shaping up the students' character, knowledge, awareness, sense of responsibility, and academic abilities.

Some disciplines in FAS (Biology, Chemistry, Psychology) undertake the tasks of preparing students to be easily selected to pursue graduate studies for professional degrees, such as Medicine. Other disciplines (Education) offer Teaching diploma degrees enabling interested students from all FAS programs

to become highly trained school teachers. Graduates from the Education Department are widely sought by schools in Lebanon and in several countries of the region. The Department of Psychology has been heavily populated with students since few years, particularly at the graduate level, emphasizing the academic credibility of its Master degree in clinical Psychology and the wide availability of career opportunities for our graduates, nationally and abroad. The Physical Education Department has also been an attractive domain for students aiming at obtaining either a Bachelor or a Master of Arts degree. This Department has had, over many years, the highest publication record among all departments in FAS due to the well structured research programs pursued by most of its academic members. In addition, a high percentage of graduates from this Department succeeded in obtaining PhD degrees from universities in European countries. This has led the Faculty to envisage establishing a PhD program in Physical Education at UOB, and the file for this program is currently in the final phase of preparation for submission to the Ministry of Education.

Most of the Departments in other Divisions of the Faculty offer graduate programs with integrated research component. However, the challenge remains, as is the case in Departments of some other faculties at UOB, on evolving the conducted research level to achieve international recognition. Finally, FAS is planning to establish new multidisciplinary programs to attract highly talented students who could handle new challenges from comprehensive viewpoints and who would not be strictly limited, in their way of thinking, to either sciences or humanities.



**FAS seeks to develop the skills of messaging and interpreting messages as well as to generate and disseminate scientific knowledge.**





### **Professor Rami J Abboud**

*Vice President for Internationalisation & Engagement*

*Dean of Faculty of Engineering*

"the faculty engaged in projects that helped place our innovation and skills at the service of local communities"

It is now just over a year since I have joined the University of Balamand and I'm privileged to have been asked to write the editorial for this issue of Balamandians. I came to a place I know is very promising. I chose to come here as I genuinely believe that this university has something unique to offer, especially in Engineering. I saw the potential; I felt enchanted by the leadership's vision; I joined in July 2019. Truthfully, it has been an unorthodox year, a year of challenges of historical magnitude. But, here we are, refusing to give up, taking on challenges with the adamant Balamand spirit emerging like gold tested with fire.

The 2019-2020 academic year will go down in history as one of the most challenging years for higher education institutions worldwide. For us in Lebanon, the challenges are immeasurable. Today, we live in a country immersed in existential crises. However, in all this gloominess, I have witnessed the passion that rages within the hearts and souls of Balamandians for a better Lebanon as amplified by our students' actions at the beginning of the academic year. The adversities were monstrous, but the achievements were tremendous. Having overcome the challenges of the Fall semester and the repercussions of the civic unrest, the Spring semester started smoother until we were struck by the COVID-19 pandemic late in February 2020. However, in response, the university instantly created a COVID-19 Crisis Management Team to safeguard the university interests. We were forced to change the way we operate and I was proud to lead a university-wide effort to administer exams online as per the directions of President Warrak. I witnessed the dedication of our staff working tirelessly round the clock to come up with ingenious solutions to make sure we safeguard the Spring Semester.

The Faculty of Engineering through its GIS Center was at the hub of all of this. We managed to engineer a system that is simple yet robust, scalable, and effective with minimal cost. For that, I'm eternally grateful to the GIS team and all the volunteers who helped on the way. A special note of thanks goes to the committed faculty members, staff members, and the university IT team.

At the Faculty of Engineering, we have been busy. The year began with the faculty receiving the ABET accreditation. I take this opportunity to reiterate my thanks to all those who contributed to this great feat, past and present senior executives, faculty and staff members. From there, it was only upwards and onwards. The faculty engaged in projects that helped place our innovation and skills at the service of local communities to achieve smarter management of their affairs through e-governance. We contributed to national resilience through several innovative solutions to help municipalities and municipal unions with epidemiological surveillance and decision making on socio-economic support for local communities through dedicated custom made

"our faculty's ethos is to train the multidisciplinary innovators of tomorrow applying our motto from lab to society"

novel applications, all while continuing to do our job of delivering superior quality education to our valued students. In addition, we have signed key MOUs with local and international partners to further our research, expand our global affiliations, work with local communities, and create better job placements for our students whom have excelled in multiple fields earning awards and recognition both locally and internationally, especially in research. The same goes for our faculty members, many of whom were recognized for great achievements.

Furthermore, I'm proud to say that I have witnessed and learned about many startups that have developed out of our faculty. I think this is the best example of our faculty's role in training the multidisciplinary innovators of tomorrow, "from lab to society". In a year, we've done everything from taking part in the first Lebanese nanosatellite project to earning awards at international conferences. All of this was done in an environment plagued by uncertainty and gloominess. Still, we refused to sit on our laurels.

Adversity distinguishes the extraordinary. I am confident that our resilience as a leading institution of higher education on a regional and global scale has allowed us to emerge through these adversities to climb to a duly deserved place in the QS Ranking as second in Lebanon and one of the top 70 universities in the world for those under the age of 50. In a country beleaguered by a political and socioeconomic deadlock, added to the pandemic, our knowledge of the future remains unclear. However, I can only remain hopeful of better days ahead. Regardless of the outcome, we are committed to excellence in every aspect of our work. I can truly say, I'm excited for what the future holds for this great institution.

Finally, the devastating blast that took place on August 4<sup>th</sup> 2020 in Beirut has truly reminded us of how vulnerable we all are. It destroyed our beloved capital causing incredible damage. We all lost friends and loved ones. Our campus in Ashrafieh was devastated and our ALBA campus was severely damaged but we are determined to rise again. Our university community was particularly devastated by the loss of our colleague at ALBA, Mr. Jean-Marc Bonfils and our alumna nurse who lost her life in the line of duty, Ms Jessica Bezdjian.

I wish to dedicate this message to their memory wishing their families patience and peace in their sorrows and the Balamandians better days ahead! Please stay safe.



**Dr. Salim Kanaan**

*Vice President for Enrollment  
Management & Alumni Relations*

## STEPPING UP TO THE ECONOMIC CHALLENGES

The economic crisis and the novel coronavirus (COVID-19) pandemic have led to a complete upheaval in the educational sector, with an economic burden on parents and students. As such, universities have implemented a number of measures in response to these challenges.

**How did Lebanon's economic crisis affect UOB, as an academic institution? Can you tell us more about the measures being implemented by UOB to mitigate the impact of this crisis while safeguarding quality education?**

With the tough economic crisis in Lebanon, exacerbated by the current health crisis of COVID-19 and the recent explosion at the port, all sectors were affected including the higher education sector. Student enrollment, for instance, was particularly impacted and a large number of college students, unable to pay their tuition fees are considering leaving the private non-profit making top institutions to the Lebanese University or to other institutions with lower tuition fees and ranking.

Moreover, universities are highly affected by the Dollar rates as the students are paying in Lebanese Pounds (exchange rate of 1\$=1520) while the universities have to pay their material and equipment at a Dollar rate of 5-6 times in Lebanese Pounds.

The University of Balamand is committed to provide high quality education to its students and to graduate professionals who are active citizens in their respective societies. Accordingly, the UOB is trying to support its students by increasing their financial assistance when needed while keeping the tuition fees the same.

**Have you experienced a decline in students' enrollment for this academic year, compared to previous years? And what is your strategy to attract new students, knowing that they may prefer to enroll in universities which have lower tuition fees?**

The University of Balamand is working to fulfill its responsibility to offer quality education, while addressing students' concerns about value for money. With this objective, the UOB is improving its academic programs to meet the needs of the market, we also keep a strong faculty – student interaction;



"the University of Balamand allocated more than \$16.3 Million in financial aid and scholarships to 57% of the total number of registered UOB students"

and this has resulted in having UOB ranked second in Lebanon in the 2021 QS ranking and being among the top 70 young universities (less than 50 years old) in the world.

The number of applicants has increased this year as compared to last year in spite of the inability to visit the usual number of schools for marketing purposes. The University of Balamand reverted to an innovative digital marketing plan and organized a number of informative webinars for interested candidates with questions and answers sessions. We strongly believe this helped in having an increase in the number of applicants.

**Did the University of Balamand lower its tuition fees in response to the crisis? And will you cut the University Tuition fees in case the economic situation deteriorates?**

The University of Balamand is a non-profit making institution with the revenues depending mainly on the students tuition fees. The Administration took the decision not to change the tuition fees in response to the crisis to help students and parents and implemented a series of steps to reduce the financial difficulties that a lot of families are experiencing. The University solicited support from its alumni and allocated a budget for financial aid to secure the future of students in need.

Unfortunately, due to the variable Dollar exchange rate, the administration had to resort to a budget adjustment. Accordingly, the University adopted a number of measures including curbs on facilities and equipment while maintaining quality education; it has also reviewed and improved the offering of electives and core courses in the various campuses of the University.


**Have you noticed an increase in the number of students applying for financial aid? In this context, have you raised the financial aid allocation for students?**

In order to alleviate the financial burden placed on a number of students and families seeking assistance, the University of Balamand allocated more than \$16.3 Million in financial aid and scholarships to 57% of the total number of registered UOB students.

A financial assistance restructuring program aimed to support financially challenged strong academic students is currently being implemented. On another note, the University has signed new agreements with a number of schools and with the Lebanese Army and General Security to provide scholarships.

**Did the University show flexibility regarding late payment of tuition? Or have the students been dropped from their classes, in case they failed to pay their fees and outstanding balances?**

All fees are quoted in Lebanese Pounds and applications for deferred arrangements are reviewed by the comptroller's office. Students have the option to pay fees by installments, however they need to rearrange their payments with the comptroller's office which is done on a case by case basis.



Universities face additional challenges due to the difference in exchange rate between students payments (official dollar rate) and university payments (market dollar rate) for their usual expenditures.



**Professor Camille Nassar**

*Acting Dean of the Faculty of  
Medicine and Medical Sciences*

### **FACULTY OF MEDICINE: ENHANCING THE LEARNING ENVIRONMENT FOR STUDENTS IN PRACTICAL AND CLINICAL SETTINGS**

Amid Lebanon's economic crisis, and the COVID-19 pandemic, the healthcare system is ailing. As such, the Faculty of Medicine has adopted measures to cope with the times.

Acting Dean of the Faculty of Medicine and Medical Sciences Prof. Camille Nassar stated that "It was a great challenge for the Faculty of Medicine to salvage the academic year under the prevailing circumstances". He further added that "in line with our convictions that medical students are physicians in training and that patients do not take vacations and diseases do not go on holiday, the faculty and students made a great effort to go with the academic program to online teaching and examinations".



#### **While content is important in medical education, the delivery of content creates the learning environment. How do you evaluate the online learning at the Faculty of Medicine?**

The Faculty of Medicine (FOM) at the University of Balamand has been an integral part of the University's efforts to take to online learning in order to salvage the academic semester for its medical students.

The program at the Faculty of Medicine is divided into two parts. The first part consists of a two-year preclinical study period, and the second part is focused on clinical studies.

In the preclinical study period, it was easy to adopt and adapt to the online teaching. The overall student experience was positive, especially that students were able to take the exams from the safety of their homes at this difficult time, all while being supported by their faculty and staff members of the UOB Online Exams Task Force.

**What about the students' experience at the clinical level?**

While the preclinical study period focuses on the theoretical and practical studies, the clinical years are mostly hospital based. Students there, must rotate in the different departments of the hospital.

At the clinical level, our students integrated very well, and they started to hone their skills at the hospitals.

**It is a great challenge to go with the academic program to online teaching and examinations. How was the overall students' experience? Did you get their feedback?**

We are in continuous communication with our students, and we get their feedback almost regularly. Definitely, at the beginning, it was a very challenging issue to go from classroom teaching to online education. We were very happy with the cooperation of students, who helped us a lot with their feedback. The online examinations results speak for themselves, as they have remained like last year. We also completed the assigned curriculum at all levels, and students continued their programs as scheduled.

**Medical students match in residency programs in US. Today, we have FOM alumni operating all around the world, how close is the contact with them?**

Our office of student affairs helps students that show interest in going to the states in finding positions for electives or applying for matching programs. We do this with the help of our alumni, with the network we have in the US that is familiar with Balamand medical students and with our teaching program. The FOM OSA headed by Dr. Mary Chouceir is in continuous communication with our alumni in the US, and we find positions for them. Effectively, we are receiving a lot of support for our students and faculty.

**What can you tell prospective students who want to join the Faculty of Medicine? How are we positioned? How do you envision the future of this faculty within the changes that we are going through?**

I can assure them that they will have one of the best medical programs not only in Lebanon but in the region. We are aligned with the American medical program and we are very competitive in that sense. Students, who join us, have a very secure future. If they don't work in the country of residence in Lebanon,



they can work in the gulf, in the states. Like always, Lebanon has faced a brain drain. However, It is very important that Lebanese physicians go out, get their training, and come back to work in Lebanon. I can say that with the program we have and with the kind of education that we provide to our students, they have nothing to worry about for the future.

**How did the explosion affect medical students?**

After the explosion, and the partial destruction of Saint George hospital, we were badly affected. In a sense, we were lucky to have Mount Lebanon hospital, to move most of our students here, in different departments and we were able to send few of our students to AUH. And now we are back on track.

Our projection is to have the proper education for our students and not to compromise neither on the quality nor on the time frame of medical education studies. We are happy to say that we are doing this very pragmatically.

We worked very hard and over a period of time to find the right hospital that matches our academic needs and we were lucky to sign an agreement with Mount Lebanon Hospital (MLH) in July 2020, that allowed the MLH to become a university medical center.

**From the economic crisis, coronavirus pandemic, to the blast, how is the enrollment at the Faculty of Medicine? Is it harder to recruit students?**

Our faculty has always been picky in selecting its students. Over the past years, we had around 70 students in class. President Warrak had a vision that adding the number of students in the medical school will be of good value, at the same time we have more facilities to teach the students and that is why we increased the number of students this year up to 135.

The increase in students' enrollment has helped alleviate the economic factor in that sense, and at the same time, our educational program did not suffer.

The Faculty of Medicine has affiliations with two hospitals, and we are aiming to have an affiliation with a third hospital. So effectively, we are spreading at the level of the country and hopefully we can spread abroad later on.

**Lebanon's medical system is affected by country's economic crisis. Is this pushing doctors out of Lebanon?**

The process of exporting medical experts has always been a trend in Lebanon. Since the establishment of our medical school, every year 20 of our students match in US residency training programs. And I can assure you that probably more than 90% of our students remain in the states. What changed this year after the economic crisis and explosion, is that many of our well established

physicians either found a place outside or they went back to US especially if they are American trained.

This is a national crisis, all hospitals will suffer. The medical profession as such is suffering with the devaluation of the Lebanese pound, where many of our physicians are almost working for free. And that would contain a new outlook into this career. It is a noble profession for sure, but people have to survive.

### **What are the prospects ahead for our medical graduates?**

The medical school has always attracted a lot of applicants and this is simply because the medical profession is an international profession and we are training our students so that they can work anywhere if they take the American residency program. They can be American board certified and work all over the world. If they want to practice medicine in the Arab world, they can take the Arab Board Certification. What we are training in our graduates is their capacity to work anywhere and this is a very important factor in that sense.

### **How did the disruptive change in medical education impact the Faculty of Medicine? How is the Faculty of Medicine adapting to a changing healthcare system?**

In essence, we are looking in different angles, on how to modify the program, to be congruent with what we aspire in physicians and medical students. We are trying to find new resources for our faculty, the way we deal with our students. In a further development, our residency programs are split between Saint George Hospital and Mount Lebanon Hospital. That gave us a chance to take more residents; now we are running 250 residents a year.

When they finish, they can either go to France or Belgium for further training. We have many affiliation agreements with many French facilities, hospitals, and we are part of a training program in Brussels (FOSFOM), where our residents can go there for two or more years.

Effectively, we are trying to help create a new outlook into our programs, to make sure that our students and residents get the proper training that will open doors for them.



**Professor Karim Echtay**

*Acting Dean of the Faculty of  
Health Sciences*

## FACULTY OF HEALTH SCIENCES: CHALLENGES AND NEW BEGINNINGS

The Faculty of Health Sciences (FHS) campus in Achrafieh will relocate to the University of Balamand (UOB) Beirut Campus in Dekwaneh/Alba Campus. Moving to these new premises will give FHS the opportunity to continue its expansion and to further enhance its outstanding learning environment in Beirut.

As the mission of FHS is to meet the educational and professional development needs of the community in flexible learning spaces through pioneering programs, President Warrak ensured to move FHS to the Dekwaneh/Alba Campus.

Acting Dean of FHS Prof. Karim Echtay stated that: “we should provide a physical environment that is comfortable, secure, and accessible, to our students, with state of the art facilities”. As such, he added that moving to new premises in the capital Beirut, reflects “the strategic educational planning of President Warrak, who believes that a university facility is an integral component of the conditions of learning”.

### **Lebanon faced humanitarian emergency after the Beirut blast. How was the FHS affected?**

The Beirut explosion added severe strain to a healthcare system that is already suffering from an economic crisis, civil unrest and the COVID-19 pandemic. Unfortunately, the blast had a humanitarian, an educational, economic and emotional impact on the FHS. The FHS building, located in Achrafieh, was severely damaged including the furniture, educational and lab material that were also destroyed. Three of our faculty members and one student were injured on the premises. One of our Alumni nurses lost her life while on duty, and tens of others were injured.

The blast also affected the daily operations; all administrative and educational activities were completely paralyzed. The main concern was to evacuate the building and to safeguard the remaining functional material. The damage happened during a critical academic period where a number of candidates refer to the Faculty for orientation, submission of applications for the entrance exam and admissions.



This upheaval was also emotionally disruptive. Faculty members were affected by the loss or injury of parents, friends and by many students who lost their homes. Faculty members were forced to move out of their work place that collapsed.

**Did the Beirut blast and the COVID-19 pandemic send a message on the importance of healthcare professionals?**

The COVID-19 pandemic and the blast provided strong evidence on the critical role of health professionals in risking their lives to save others' lives. Through their dedication, hard work and thoughtfulness, they emerged as the heroes of this challenging time.

With the COVID-19 pandemic, the healthcare professionals are at the frontline of service provision. They properly and promptly respond to the requirements of this pandemic by delivering high quality healthcare services. The pandemic continues to spread and they are fighting to control it using evidence-based practice. They raise public awareness, do screening tests, issue national health policies and implement preventive and curative measures as per the international recommendations.

As for the blast, the healthcare professionals worked so hard to respond to this massive emergency. They were able to provide care for more than 6,000 injured persons. In a short period of time, they successfully evacuated the hospitals that were rendered non-functional. They safely transferred ICU and critical COVID-19 patients to other hospitals.



In this regard, the FHS had a noticeable contribution through its students and alumni in rescuing people injured by the blast. Many humanitarian initiatives and projects have been initiated to support stricken people physically, psychologically and socially.

The exemplary role of many FHS alumni has been internationally highlighted such as the courageous initiative of our graduate from the Nursing Program, nurse Pamela Zeinoun, who saved the life of three premature babies with the support of other FHS graduates.

In view of all the efforts and achievements, people are becoming more aware about the health professionals' importance and more confident and thankful for all what they successfully do.

#### **Are there enough healthcare workers?**

Indeed, the healthcare sector is an important labor market. However, in Lebanon, we have an abundant number of physicians and a shortage in nurses. The need of nurses largely exceeds the available resources.

#### **How do you close this gap and remedy the shortage of healthcare workers?**

The FHS at UOB is committed to respond to the needs of the country and region by graduating health professionals who are highly qualified and ready to engage in active roles in the healthcare system and with the families and the communities. This entails the continuous development of academic, co-academic, research, and service programs that are integrated, scientifically sound, socially appropriate, multidisciplinary, and impact-directed. This promotes the reputation of the FHS programs and makes it one of the most competitive and attractive faculties in the country.

Adding to that, the FHS is based in three different areas of Lebanon, which makes it easily reachable for the students. It has many affiliations and networking with different healthcare centers and organizations which enriches students' exposure to different healthcare experiences.

The FHS also has a friendly environment that is highly conducive to learning. It has an individualized approach with the students and provides them with special assistance to their specific academic, economic and psychosocial concerns. It also has many facilities that help the students feel comfortable and develop the sense of security, identity and belonging to the Balamandian family.

"with the COVID-19 pandemic, the healthcare professionals are at the frontline of service provision"

**Did you notice an increase in the enrolment at FHS?**

This year, we noticed a remarkable increase in the enrolment at the FHS, a major provider of high quality education and training, tailored to meet the needs of the healthcare workforce.

The novel coronavirus outbreak and the public health crisis raised awareness on the importance of healthcare professionals. This impacted students' enrolment in the FHS, as the healthcare industry is one of the most prominent sectors of the country and abroad particularly with the worldwide economic crisis and the collapse of many companies which resulted in high rates of unemployment.

**What are the steps you are taking at FHS to improve healthcare awareness?**

Since its establishment in 1996, the FHS devoted itself to promoting health and has always advocated towards a healthy environment and lifestyle. It dedicated enormous resources on awareness campaigns and health promotion activities in the Lebanese community and at all Lebanese territories. The FHS also has many health initiatives in the region. Faculty members are expert in different fields. They play an active role in the governmental and non-governmental healthcare organizations, associations, academic institutions and the community considering the cultural diversities and the ethical principles.

With the outbreak of the COVID-19 pandemic, the FHS through its academic and co-academic programs has been intensively engaged in public health activities at the national level to spread awareness and train people and professionals on the way to deal with this health crisis. This includes training sessions for municipalities, general security forces, local and international front liners from different NGOs, public and private sectors, schools, health and social workers, refugees, disabled people.

After the Beirut blast, the Faculty with its co-academic programs conducted health promotion activities and actions in order to meet the immediate needs of women, youth and children, elderly, and disabled persons affected by the blast, in addition to environmental health awareness campaigns.

The Faculty actively participated in the COVID-19 screening program at the University (Hayati). This service was offered for free to the Lebanese community in different regions.

At FHS, the safety of the students comes first. Awareness sessions and health messages are being constantly disseminated. All students do a PCR test for COVID-19 before they start their clinical training and are strictly requested to abide by the required precautions measures at every training site.

"FHS had a noticeable contribution through its students and alumni in rescuing people injured by the blast"

**You, at FHS are working in partnership with St. George Hospital University Medical Center. Are there any other agreements and MOUs?**

The FHS has a strategic partnership with Saint Georges Hospital – University Medical Center. With the expansion of the Faculty at the Main Campus in Koura and at the Souk El Gharb Campus, additional cooperation agreements were signed with various Hospitals at the level of the Faculty. These hospitals include Mount Lebanon Hospital, Ain W Zein Hospital and many more.

**You will be soon moving to the new campus in Dekwaneh. Can you list the facilities of this campus? How long have you been preparing for this move?**

The Faculty have been preparing its move from Achrafieh to Dekwaneh for more than a year, the move was fast forwarded by the Beirut blast.

We will be moving to the new building in Dekwaneh in December 2020. It includes multidisciplinary laboratories that vary from Chemistry, Biology, Nursing, Nutrition etc. in addition to a highly equipped research laboratory to promote scientific research at the Faculty and the University. The building includes, in addition to the administrative and academic offices, classrooms supplied with multimedia equipment and video conferencing facilities.





### PROFESSOR ELIE KARAM

*Acting Dean of the Issam Fares  
Faculty of Technology*

## ISSAM FARES FACULTY OF TECHNOLOGY: CHALLENGES AND OVERDUE CHANGES IN TECHNOLOGY PROGRAMS



In 2006, the University of Balamand (UOB), in collaboration with the Issam Fares Foundation, envisioned the establishment of the Issam Fares Institute of Technology aiming primarily at integrating the applied aspects of technology into university programs that could fill the gap need in national development and work sectors. The Institute was established in 2009 and was consolidated in 2014 into a Faculty, the Issam Fares Faculty of Technology (IFFT). While the original plan focused on establishing technology programs in the Beino-Akkar campus, the IFFT offers different programs on the different University campuses: the Main Campus in Balamand, the Beino campus in Akkar, and the Souk El-Gharb campus in Mount Lebanon.

The IFFT is a leader in applied technology in Lebanon and amongst the top in the MENA region. At the IFFT, students learn theory through direct hands-on experience related to actual needs and skills required in the job market. With a firm grounding in science, mathematics and technology disciplines, our students study aircraft maintenance (unique to UOB), mechatronics, telecommunications and networking, civil engineering and construction, agriculture, and management of organizations. Given our commitment and dedication to experiential learning and academic excellence, our academic programs challenge our students and prepare them to graduate as lifelong learners ready to “hit the ground running” once they are employed.

The COVID-19 pandemic confirmed an existing conviction that technology and human life cannot be separated. We use and depend on technology in our daily life and our needs and demands for technology keep on rising. Humans use technology to travel, to communicate, to learn, to do business, to live



"the COVID-19 pandemic confirmed an existing conviction that technology and human life cannot be separated"

well in comfort. Today, technology surrounds us. It has radically transformed the way we live our lives. That is why, now more than ever, the world needs the skills, innovation, and know-how of technologists who are well equipped with an educational background, applied skills, and mindset that allow them to excel in today's workplaces that are constantly changing, physically and virtually. This is exactly our calling at the IFFT.

While technological advancement has brought a lot to the world, it has also caused detriment. Its misconception and poor application have resulted in intensifying existing problems and caused serious threats to our lives and society. This is why we are committed to educating our students to apply technology in agriculture, communication, business, industry, construction, aviation and other related fields. We want our students to innovate in producing solutions to problems we face in our local communities and to contribute to national development. Technologists will have to work with engineers, designers, scientists, healthcare providers, and business developers to that end.

The biggest challenge facing us today is to predict the type of future we need to have and then create relevant technologies that will simplify the way we do things. As the demand for skilled technologists mounts, our faculty boasts a very dynamic group of qualified scholars committed to the advancement of technology. We aspire to continually evolve according to the demand of the market to be an educational hub combining technology, innovation, skills, and social responsibility to instantly engage with work life demands. We have tailored our programs to fit the future needs of the market, the community, the industry, and our students.

#### **Need for Technology Programs & IFFT Vision**

Lebanon is currently facing major economic, agricultural, energy, industrial, and environmental problems. Solutions are long overdue and require the incorporation and integration of objective and effective reforms based on modern technologies. A Technology education provides a good platform for determining and implementing relevant solutions needed in different sectors, such as industry, energy, agriculture, and others. Workforce should become more educated and equipped with all the necessary tools essential for highly sophisticated and competitive market.

We definitely need to develop a national plan that would enhance Lebanon's chances to play a leading role in technology education and accordingly to become a technology hub for national development and a competitive role in the region. To ensure the success of such a plan, it is essential to secure the proper national higher education strategic planning and to engage a

true commitment from various stakeholders to establish or develop major industrial and manufacturing ventures that will mutually sustain the long-term growth and development of the technology programs that will in turn sustain the further development and growth of the economic sectors. We see a vital need that the Lebanese industries and work sectors become more informed and directly engaged in academic Technology programs that we believe are essential for the sustainable development of the Lebanese economy and the various related sectors of production, energy, water resources, agriculture, construction, transportation, aviation, health, banking, finance, insurance...

Amidst the difficulties we have been facing over the past twelve months, our three-year technology programs have been restructured to make sure that we remain at the forefront in this field and ensure that an optimum level of applied skills would be provided and acquired. We have also added new tracks as well as new programs. These programs would focus on product development and direct skills relevant to the need of specific job markets. For that matter, we are teaming and building joint ventures with key stakeholders at the national level and abroad to ensure the success of our endeavors. Ultimately, the IFFT alumni are our greatest asset to play a key role towards the success of this plan.





**RIGHT REV. ARCHIMANDRITE  
JACK KHALIL**

*Dean of the Saint John of Damascus  
Institute of Theology*

## SAINT JOHN OF DAMASCUS INSTITUTE OF THEOLOGY: ENGAGING WITH THE NEEDS AND ASPIRATIONS OF CONTEMPORARY SOCIETY



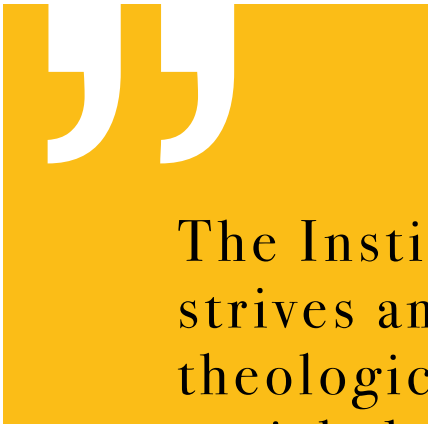
In this academic year 2020-2021, the Institute of Theology celebrates its Golden Jubilee of higher education and spiritual formation. Its programs cover all undergraduate, graduate, and postgraduate education: Bachelor of Theology, Master of Theology and PhD in Theology, in addition to a Master of Applied Orthodox Theology distinctively organized in collaboration with the Antiochian House of Studies in America. The Institute runs several e-learning theological programs as well, in both Arabic and Spanish, explains Dean of the Saint John of Damascus Institute of Theology, Right Rev. Archimandrite Jack Khalil.

Dean Fr Jack stated that one of the missions of the institute is to find the appropriate atmosphere for educating Orthodox spiritual priests and pastors, who will overcome the dualism between abstract intellectual knowledge and practical pastoral care. He added that, the role of the institute is to prepare leaders filled with divine and worldly wisdom. To reach these objectives, the institute offers a rich curriculum, and many extracurricular academic activities such as seminars and workshops. One of the most recent seminars that was held at the institute premises, he explains, was the meeting of the Holy Synod of Antioch, that discussed contemporary social and spiritual issues facing the life and the family, where it gathered a number of the institute's professors, theologians and lay specialists from all over the Antiochian diaspora.

He further added that the Institute of Theology at the University of Balamand stands as a lighthouse of Christ's knowledge, where each member of the faculty, administration, and student body seeks inspiration and enlightenment from the wellspring of the Apostolic Orthodox Tradition and strives amidst the contemporary theological, spiritual, and social challenges to spread the proclamation of the Divine Revelation as light and life to humanity in our world today.

Right Rev. Archimandrite Jack Khalil stated that the institute has developed agreements and partnerships with international universities, which provide vibrancy to the program, through international visitorship and exchange opportunities. He added that the institute, through its doctoral program, strives to engage with the needs and aspirations of contemporary society in the genuine spirit of the Christian East. This new doctoral program has already several enrolled students from Lebanon and Syria, and other candidates preparing to enroll in the program from overseas. Dean Fr Jack announced that PhD candidates studying at the Antiochian House of Studies, will be enrolled in the doctoral program at Institute of Theology, as both institution agreed to collaborate together. He also shared one of the ongoing projects at the institute such as preparing an academic translation of the New Testament into a modern Arabic language.

On a final note, Dean Fr Jack stated that the institute has been bearing witness to its mission through the vibrant lives of its many graduates, with their foremost being His Beatitude Patriarch John X of Antioch and All the East who graduated in 1978, and served twice at Dean of the Institute.



The Institute of Theology  
strives amidst the contemporary  
theological, spiritual, and  
social challenges to spread  
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Revelation as light and life to  
humanity in our world today.





**M. André Bekhazi**

*Doyen de l'Alba*

### MESSAGE DU DOYEN DE L'ALBA

Fastidieuse est la tâche de parcourir à rebours cette année 2020, de faire le compte à nouveau des obstacles et des tragédies qui l'ont jalonné. Je ne m'y emploierai donc pas dans ces lignes, préférant évoquer le présent et l'avenir, autant que possible.

Je ne peux néanmoins taire mon émotion quant à la disparition de Mr Jean-Marc Bonfils, membre éminent du corps enseignant et ami très cher de l'Alba, qui nous a plongé dans un deuil effaré, et dont nous perpétuerons sans trêve le souvenir et notre attachement pour l'homme qu'il était.

Je veux donc rendre aujourd'hui hommage aux disparus mais également aux vivants, à tous ceux qui ont permis et permettent encore que l'Alba se relève, tienne debout et continue à ouvrir ses portes aux étudiants et aux acteurs de ce pays. Notre personnel administratif, nos enseignants, nos étudiants n'ont pas cessé de travailler malgré des conditions parfois pénibles, dans des bureaux ou des salles de classes ouvertes aux quatre vents, sans portes ni fenêtres. Depuis le début du mois de novembre, et grâce à l'effort conjugué de plusieurs partenaires tels que l'Ambassade de France, le Ministère de la culture et le Ministère de l'enseignement supérieur français, que je remercie du fond du cœur, notre campus a pu retrouver ses couleurs pour redevenir un hôte bienveillant à l'égard de tous. Cela n'aurait pas été possible non-plus sans la patience et l'intelligence de tous les membres de notre belle Académie.

Depuis la mi-mars 2020, nous nous sommes employés à conduire nos formations online, intégrant autant que possible les nouveautés induites pour nos disciplines, que les difficultés inhérentes à une communication soudain dématérialisée. Avec un aménagement des cours en présentiel en effectif réduit et une grande persévérance de nos professeurs, les étudiants ont pu poursuivre leur apprentissage, expérimenter des savoir-faire et présenter leurs diplômes malgré un calendrier bousculé. La principale frustration concerne les nouveaux étudiants, ceux qui nous ont rejoint en octobre et avec lesquels nous avons eu beaucoup moins de contacts directs. Mais je fais confiance au temps, à l'engagement de chacun et à la foi de tous qui sauront palier à ces difficultés.

L'Alba peut s'enorgueillir en ce premier semestre d'une nouvelle année universitaire, et malgré un exil libanais exponentiel, d'avoir maintenu un taux d'inscription satisfaisant pour ses écoles, et d'être en mesure de poursuivre ses engagements auprès de la jeunesse. Preuve que l'éducation et les arts restent une priorité pour beaucoup dans ce pays. Bien entendu, nous avons eu à faire des efforts, à proposer davantage de bourses, à nous adapter à des cas particuliers, mais cela relève aussi de notre mission en tant qu'établissement d'enseignement supérieur.

Début 2021, le campus de l'Alba abritera provisoirement la faculté de médecine et de sciences médicales de l'Université de Balamand, dans des locaux spécifiquement équipés à cet effet. Je suis heureux, en dépit des circonstances tragiques qui ont frappé la faculté de médecine de l'Hôpital orthodoxe, que nos efforts s'unissent dans un élan fraternel pour privilégier plus que jamais l'enseignement et assurer l'avenir de la jeunesse de ce pays.

André Bekhazi  
Doyen de l'Alba

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It is a tedious task to travel backwards in the year 2020 and recount the obstacles and tragedies that have marked it. I will therefore not attempt to do so preferring to evoke the present and the future as much as possible.

Nevertheless, I cannot hide my emotion regarding Mr. Jean-Marc Bonfils' passage. Mr. Bonfils was an eminent member of Alba's teaching staff and a friend of our academy. He plunged each one of us into grief and will always be remembered for the man he was.

In fact, I would like to pay tribute to the ones who sadly left us but also to the living, especially to those who have helped Alba stand on its feet keeping the doors of learning open for students and future strongholds of our country. Our administrative staff, our teachers and our students have been working round-the-clock in their offices and classrooms which were completely devastated after the massive explosion that hit Beirut. Since the beginning of November, and thanks to the combined efforts of several partners such as the French Embassy, the Ministry of Culture and the French Ministry of Higher Education, our campus has been able to welcome everyone again. This wouldn't have been possible if not for the collective patience and perseverance of all the members of our beloved Academy.

Since mid-March 2020, we have committed ourselves to conduct our online training courses integrating all the possible novelties as well as the unforeseen obstacles related to the diminishing communication. With the reduced number of students and the great determination of the teachers, our students were able to experiment new skills, continue their learning process and even graduate through challenging schedule. Actually, the main frustration concerns the new students who joined the academy in October and with whom we had little contact. But I am confident that time and dedication of all will help overcome these current difficulties.

During the first academic semester and despite the considerable migration our country has experienced, Alba is proud to have maintained a satisfactory enrollment rate in all its departments while fulfilling its duty towards the young. This proves that education and arts remain a priority. Of course, we had to offer more scholarships to accommodate to specific situations. However, this is part of our mission as an institution of higher education.

Finally, Alba will temporarily house the Faculty of Medicine and Medical Sciences of the University of Balamand in the year 2021. Regardless of the tragic circumstances that have struck the Faculty of Medicine of the Orthodox Hospital, I feel honored of our joined efforts and hope to give education more concern and still ensure the future of the youth of this country.

André Bekhazi  
Dean of Alba



**Dr. Hala Khayr Yaacoub**

*Acting Dean of the Faculty  
of Business and Management*

## FACULTY OF BUSINESS AND MANAGEMENT: A LIFELONG COMPANION FOR PROFESSIONALS

The Faculty of Business and Management at the University of Balamand offers a variety of undergraduate, graduate, and post graduate degrees that “are proving more and more relevant in days of crises and uncertainties, as the only constant is the need for life-long learning and continuous professional development”, says Acting Dean of the Faculty of Business and Management Dr. Hala Khayr Yaacoub.



The Faculty of Business and Management has always prided itself on its undergraduate programs, whether in Business Administration (BBA) with its different concentrations, the Tourism and Hospitality management with its practical component, and the Economics program with its different tracks. Many of our graduates are working at international, regional and local companies. The ambience at the faculty is that of care, compassion, fine work and value for money. We believe that a degree in business is like a multi-purpose plug that can ignite any career, whether that maybe in sports, arts, consultancy, entrepreneurship, finance, marketing, accounting or leadership.

A variety of graduate and post graduate degrees are offered at the faculty. These are proving more and more relevant in days of crises and uncertainties, as the only constant is the need for life-long learning and continuous professional development. Mature students are keen ‘to never let go of a good

*"The EMBA program is aligned with my career development plan. It is rich in information, case-studies, and constructive discussions. It greatly improved my communication, negotiation, decision making and leadership skills. It positively impacted my job as a Medical Engineering Manager at Saint George Hospital. I highly recommend it".*

**RIAD FARAH**

**Award Winning Medical Engineering Manager  
Saint George Hospital, University Medical Center**

*"My DBA journey contributed to promoting not only my academic profile and professional career but also to creating and establishing linkages with credible and prominent professional entities as well as dear and valued friendships with colleagues from Lebanon and different parts of the world".*

**DOLLY BASSIL**

**MPH, DBA,  
Strategies, Systems, and MEAL  
Consultant**

*"The DBA experience has enhanced my knowledge not only as a writer, researcher and academician, but also as a practitioner. I received incredible support from the professors and the administration, and the class interactions were amazing. Now, I lead people differently within my organization while maintaining economic growth"*

**AHMAD NASRALLAH**

**MPH, EMBA, DBA  
Chief Executive Officer, Dar Al Shifa  
Hospital, Kuwait**

crisis', as attributed to Winston Churchill. They are investing in themselves to ensure future employability and to master more than ever needed business soft-skills. Students are opting for evening classes of Masters in Business Administration, Masters in Human Resources, or Masters in Accounting and Finance. Executives are opting for the newly revamped Executive MBA, themed 'Navigating Crises'.

The holistic EMBA starts with a thriving module, a set of soft-skills modules involving value creation, decision making, negotiation and conflict resolution, a business acumen set of courses spanning over the different fields of finance, economics, marketing, management and accounting. The importance of regional and global business contexts and risk assessments are also covered. Navigating crises is made easier through crisis management, strategic management and consultancy practicum capstone modules. Over three days per month for 18 months, a journey of growth and enlightenment is facilitated by a team of top academicians and practitioners with international experiences.

The Doctorate in Business Administration at ISEOR research Center at the University of Lyon III, is co-directed by the Faculty of Business and Management at the University of Balamand. It is a three-year program where students travel to Lyon twice per year, and culminates with the defenses held in Lyon. A number of cohorts have already graduated with double hats, one of consultancy and organizational development and another of academic research nature.

The Faculty of Business and Management operates in the 'trust market' and is keen to make every academic encounter, class or experience rewarding both in the short and long term, for fresh graduates and mature learners.





**Dr. Youssef Bassim**

*Consultant to the President for Wellbeing and Healthcare*

## SAVING LIVES WITH HAYATI APPLICATION

A team of engineers and medical experts at the University of Balamand developed the Hayati Application in response to the COVID-19 outbreak. The platform comes complete with procedures to analyze the data collected and identify people at high risks for COVID-19.

Hayati Application depends on the full cooperation of people and their readiness to fill a health check questionnaire needed for COVID-19 high risk cases and for epidemiological surveillance. The submitted information helps to track infected people, and people at high risks, and helps in contact tracing.

### What is the Hayati Application? What is it used for?

As part of the commitment of the University of Balamand to serve the community and the country in response to the COVID-19 outbreak, the GIS Center at the Faculty of Engineering developed an application as a quick scan for COVID-19 symptoms. We aim through this app to build a comprehensive data that is geo-located. The collected data allows for a fast-screening and tracking of potential COVID-19 cases. It also identifies people at high risks (elderlies, pregnant, low immunity, people with chronic diseases), living in near proximity of potential COVID-19 cases.



### What are the main features of the App?

Hayati uses an advanced COVID-19 diagnosis calculator to compute the risk levels. I am heading a medical team that exclusively designed a medical calculator based on the recommendations of the World Health Organization (WHO), the Centre for Disease Control (CDC), and all Lebanese Medical Societies involved in the fight against Corona. The criteria used in the calculator are dynamically updated based on new reports from reliable health resources and the latest findings of WHO.

Advanced features related to location tracking for users include those who are in areas of infected people. Through digital enabled track and tracing, the app can detect COVID-19 cases, and once a suspect case has been detected, the University of Balamand sends the data to the relevant municipality to proceed with the PCR testing for people who flagged for possible COVID-19.

**What kind of personal information are people required to submit?**

Users are asked to fill their general profile like age, gender, location, and medical stats, key criteria needed to make a diagnosis.

**If a COVID-19 case has been confirmed. What are the steps taken?**

After tracing a suspicious case, the date and time the patient should conduct the PCR test is decided according to the recommendations of the WHO and the ministry of Health (MOH). If the case is confirmed, the patient should be confined, and followed up by the MOH surveillance team.

**Do you conduct PCR tests at the University's labs?**

The University of Balamand signed agreement with a number of municipalities to collect specimens for suspected COVID-19 cases and we provide training for personals on how to do the nasopharyngeal swab test at the Balamand Medical Simulation Center. Specific logistics measures are being taken in order to collect and deliver anonymously the samples to the University with proper labeling to avoid mismatching.

Consequently, testing clinical specimens from Persons for Coronavirus Disease 2019 (COVID-19) are conducted in the University of Balamand PCR labs, in the specimen collection and extraction area. It is worth noting that around 15500 persons are already registered on the Hayati Application, and around 9000 people were tested at the molecular lab at the University of Balamand by a team of experienced virologists.



### **How can you guarantee the accuracy of PCR tests? How can you avoid false positives and false negatives?**

First, when a person is suspected to have been in close contact with an infected person, he must be quarantined for at least five to seven days before the examination is performed, especially in the absence of symptoms.

Second, the Nasopharyngeal Swab nasal swab must be taken correctly by trained professionals.

Third, there should be an adequate preservation of scanning via a well-prepared virus transporter (VTM) especially when taken remotely and not in the laboratory.

Fourth, a suitable scientific protocol must be developed in medical laboratories for virus extraction and PCR amplification under the supervision of virologists.

### **How can we limit the spread of COVID-19?**

Applying quarantine is one way to limit the spread of COVID-19. Face masks; handwashing and physical distancing remain crucial measures at this time. As much as we do testing, as much as we can control the situation and provide timely results.

Unfortunately, as the COVID-19 outbreak continues to evolve, we are in a critical phase, in Lebanon, where most of the positive cases nowadays are through local transmission of COVID-19, and not anymore through transmission imported from incoming travelers.



**Mrs. Maha Hurayki**

*Chief Information and Data Officer*

## LEVERAGING TECHNOLOGY IN HIGHER EDUCATION

Following a long career in Information Technology, Data Analytics and Institutional Research in Higher Education in the Gulf, Mrs. Maha Hurayki joined the University of Balamand in January 2019 as Chief Information and Data Officer.

Originally from the Koura region, Mrs. Hurayki fondly recalls childhood memories of Balamand as a beautiful convent, on Palm Sundays and family celebrations. However, visiting the university for the first time in years, Mrs. Hurayki was stunned to discover a state-of-the-art campus set in an exquisite landscape, and was most impressed by the institution friendly community and ambition to attain the highest levels of academic achievement and innovation. With a background in electrical engineering and a more recent Master's degree in Big Data and Analytics, Mrs. Hurayki is a firm believer in leveraging technology in the higher education field to improve teaching, learning and research. She advocates that "in recent years, the role of IT has evolved from process enabler to process driver" and that "IT is a key factor in improving work efficiencies in a fast moving, highly competitive world".

Her vision for the University of Balamand is to have ubiquitous technology on campus, from full wireless internet coverage to smart classrooms, to implementing automated and streamlined academic and administrative processes aiming at a paperless environment, never losing focus that the end users requirements come first. She stresses that IT creativity, agility, and teamwork are essential to facilitate work processes and devise innovative solutions across all aspects of university activities.


On the other hand, given the highly connected world we live in, and the expectations of the "21st century student", Maha believes that universities should grow beyond the limitations of their physical borders, to deliver education anytime, anywhere: she stated in a recent article that "the COVID-19 crisis had one major silver lining: achieving massive scale digital transformation of teaching and learning at UOB in record time", given that in a matter of a few weeks into the confinement, the IT department succeeded in coaching more than 75% of UOB faculty to deliver their classes virtually. From another perspective, Mrs. Hurayki is committed to positively disrupt the university by establishing a culture of informed-based decisions and promoting strategic planning initiatives.

This can be only achieved through the implementation of best practices in institutional data management and data governance to ensure that any disseminated information about the University's environment and performance is accurate, timely, and unified.

A strong advocate for data analytics, Ms. Hurayki states that data is an institutional asset, to be continuously mined to assess academic and administrative performance, collect feedback and improve processes. Data is also essential to inform strategic planning, to objectively evaluate performance through measurable key performance indicators, and to benchmark with local and international peer and aspiring institutions. As chair of the ranking committee, Ms. Hurayki stated that "understanding the university data, improving its collection, enriching it and following an appropriate reporting methodology have had a significant impact on the latest leap in QS ranking".

She further added that "this year's progress in QS ranking is largely attributed to a strategic and pro-active decision by President Elias Warrak to mandate a dedicated Ranking Committee with the development of a ranking strategy and to establish the Office of Data and Institutional Research to assess, benchmark and improve the University performance".

Fast-paced and committed in everything she does, Ms. Hurayki hopes to make a long-lasting difference at the University of Balamand.



Universities should grow beyond the limitations of their physical borders, to deliver education anytime, anywhere.





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**Professor Joseph J. Assaad**

*Professor of Civil Engineering  
Chairperson of the Department of Civil  
and Environmental Engineering  
Faculty of Engineering*

### LEADING IN CIVIL ENGINEERING RESEARCH

Professor Joseph Assaad joined the Faculty of Engineering at the University of Balamand back in 2018. He was appointed Chairperson of the Department of Civil and Environmental Engineering in 2019. Since his arrival, Dr. Assaad has placed sustained emphasis on students' welfare while focusing on further enhancing the research culture and capabilities of the department. As a Chairperson, he oversees the affairs of a successful and busy department encouraging academic and industrial collaborations including MOUs to foster exchange of expertise and joint scholarly efforts.

Dr. Assaad earned his Ph.D in Civil Engineering in 2004 from the University of Sherbrooke, Quebec, Canada with Distinction. Prior to joining the University of Balamand, he worked for about 14 years in the construction materials industry as Manager of R&D and Quality Control at Holderchem Building Chemicals. Dr. Assaad played a key role in introducing and commercializing high-performance concrete related materials in the Lebanese as well as Gulf markets, which contributed to the improved quality and durability of the civil and infrastructural works. His vision to sustainable materials and new innovations distinguished him in the Cement and Concrete industries. His areas of interests include grinding aids for modern cement clinkers, chemical admixtures for specialty concrete, composite materials for repair and injection, rheology, durability, and performance of structural members.

Dr. Assaad's research activities including his collaboration with industrialists and academics are numerous, which allowed him to publish (as per July 2020) over 120 technical papers in the most prestigious and internationally refereed journals with a Scopus h-index of 24. In 2019, he played a key role for finalizing and signing an MOU with Missouri University of Science and Technology, USA, for conducting research activities and jointly supervising Ph.D students. In 2009, Dr. Assaad completed a book published by VDM Publishing House discussing the thixotropic properties of highly flowable concrete. In 2017, he completed a second book published by Lambert Academic Publishing discussing a new methodology for concrete proportioning and applicability of geotechnical equipment to test freshly mixed cementitious materials. Dr. Assaad is recipient of two prestigious Research Excellence Awards by the "CNRS-Lebanon" in 2014, and "Société de la Légion d'Honneur Franco-Libanais / Institut Français au Liban" in 2016.

**"universities should develop cutting-edge equipment to validate teaching theories, expand testing services, and perform high-quality research investigations"**

Dr. Assaad is convinced that peer-reviewing and editorial memberships are among the piers for academic work, allowing researchers to establish themselves as well-known experts in their fields and gaining large platforms to introduce ideas and remain updated with current research trends and activities. With this in mind, he built over the years good connections with most prestigious journals specialized in Materials & Structures, and actively participated in peer-reviewing and editing of submitted manuscripts. As of July 2020, he has over 450 verified reviews listed in [www.publons.com](http://www.publons.com), which allowed him having yearly recognitions and peer-review awards.

Dr. Assaad believes that universities should develop cutting-edge equipment to validate teaching theories, expand testing services, and perform high-quality research investigations. For instance, the CEE Department recently acquired high-tech equipment for cement production, steel reaction frame for seismic analysis, and universal versatile machine for testing real-scale beams and columns. He argues that the mission of the CEE Program is to equip students with critical thinking inside the classroom, and validate what they have learned through experiments.

Dr. Assaad intends to further expand the laboratories space areas to accommodate more testing; "This move will be taken as part of the Program strategic plan to boost research", explains Dr. Assaad. In June 2020, the CEE laboratories have been granted the ISO 9001:2015 certification. The scope of ISO activities, he explains, include "student education through teaching, testing and research as well as various R&D and testing services for internal and external parties".

Dr. Assaad appreciates the commitment that the University of Balamand has established towards the continuous improvement and excellence in academic work, and believes that the CEE department is responding to this vision by fostering the best teaching programs and promoting high-quality research activities.



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**Professor Nissrine El Hassan**

*Professor of Chemical Engineering  
Faculty of Engineering*

## NANOMATERIALS FOR ENERGY PRODUCTION

Professor Nissrine El Hassan joined the Department of Chemical Engineering at the Faculty of Engineering at the University of Balamand in 2009 as Assistant Professor. Since then, she has taught nine different courses and contributed to the launching of a laboratory for catalyst preparation, characterization, and gas phase catalytic reactions. She stresses that today the Chemical Engineering Department is home to state of the art equipment and facilities.

Dr. El Hassan obtained her PhD in Chemical Process Engineering from Sorbonne University (University Pierre and Marie Curie, Paris 6), France. Then she served as a Post-Doctoral Research Engineer at the French Alternative Energies and Atomic Energy Commission (CEA).

Since joining the University of Balamand, she has been involved in research on catalysis on nanomaterials applied to reforming of natural gas and biomass, conversion of waste into energy, as well as other methane related reactions such as combined steam and dry reforming.

One of her recent projects, Solar assisted catalytic reforming: an hybrid process to transform municipal waste into energy (SOL-CARE) was funded from Horizon 2020 under EraNetMed (FP7-initiative) in partnership with: France (University Paris 6), Lebanon (INDEVCO and Lebanese University), Spain (University Of Zaragoza), Italy (Politecnico di Torino), and Portugal (IST). This multidisciplinary project aimed to convert waste into energy on nanomaterials.

The impact of Dr. El-Hassan's publications has led her to be classified amongst the top four researchers worldwide on the challenging topic of mesoporous catalysts for dry reforming of methane according to Scopus. With justified pride, she informs us that she co-directed three PhD students with Sorbonne University and co-supervised a fourth PhD with both Sorbonne University and the Lebanese University.

"the approach to academics should revolve around a focus on research, and adapting skills to meet rapidly evolving technologies"

The collaborative work between the University of Balamand and Sorbonne University, she explains, is based on the complementarity between these two universities in terms of equipment and competences. The Department of Chemical Engineering acquired state of the art equipment for the synthesis, characterization and testing of catalytic materials that are complemented by advanced characterizations in France.

Dr. El Hassan further explains that in addition to lab-scale catalyst synthesis, her team has developed a first of its kind semi-pilot scale unit in which the synthesis of large quantities of mesoporous materials can take place. For the characterization, it is equipped with nitrogen physisorption, chemisorption and X-Ray diffraction. Most importantly, the team has successfully installed two gas phase catalytic reactors and uses them for high temperature, high pressure and long term activity testing.

Dr. Nissrine El Hassan has recently been invited to guest edit a special issue of the prestigious journal *Catalysts*. This special issue is entitled: "Metal Dispersed on Porous Supports for Methane-related reactions". The focus will be the stabilization of active phase in or on porous supports since such strategies enable, at the same time, stabilization against sintering and minimization of carbon derivatives deposition in these reactions, she explains. "This Special Issue will be attractive to researchers whose activities belong to the areas of physical chemistry, materials science, or applied catalysis and are focused on the studies of catalysts for methane and/or carbon dioxide valorization", she argues.

Dr. El Hassan believes that an academic should focus on critical thinking and on integrating recent research in educational curricula, especially at the graduate studies level, and not merely on a simple transmission of knowledge, considering that all sorts of information are currently only one click away.

She praises the growing quality of research at the University of Balamand and stresses that academics should adopt an approach that focuses on ongoing research and capacity building to be able to make use of rapidly evolving technology. She also values the enormous support of the University of Balamand and especially that of the Vice President for Internationalization & Engagement and Dean of Faculty of Engineering, Professor Rami Abboud, for his continuous support and motivation.



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**Dr. Issam Tawk**

*Associate Professor of Aeronautical  
Engineering  
Faculty of Engineering*

### IN THE AERONAUTICAL FIELD

Following his career in France, as a stress engineer at Airbus, Dr. Tawk decided to return to Lebanon in 2010 and chose to join the University of Balamand prompted by the reputation of its Faculty of Engineering.

“When offered a position at the University of Balamand, I did not hesitate, I was excited to work in the aeronautical field in Lebanon, in a university that is home to such a leading program in the region in aeronautical engineering”, he says.

Dr. Tawk has made great strides in aeronautical and mechanical engineering. His background combines solid professional experience and distinguished academic achievements. Working for one of the largest aeronautical companies Airbus, Dr. Tawk was responsible for stress calculation of the central part of the main landing gear bay (MLGB team) on the design of the latest airplane at the time, the A350XWB. He was responsible for managing and guiding a calculation team (Risk Sharing Partners), initiating, monitoring and validating studies by subcontractors.

Prior to joining the University of Balamand, Dr. Tawk taught at ISAE, and at Université Paul Sabatier (Toulouse, France). He holds a PhD in mechanical engineering from Université de Toulouse III. His PhD was within a partnership between ISAE Supaero, Université Paul Sabatier, and Eurocopter, and was entitled: “Contribution à la modélisation à l’impact de pales d’hélicoptère”. “My dissertation aimed at studying modeling of impact on complex composite structures, like helicopter blades which can be exposed to impact from ice, birds, branches, and metallic debris”, he explains. “I also contributed to the manufacturing process of sections of helicopter blades”, he says. His dissertation encompassed an experimental study with tests of high speed impact on helicopter blades, in order to understand the different modes of damage in this type of composite structure (cracks and delamination) and to compare it to a numerical model.

Dr. Tawk’s passion for teaching and research, particularly in the field of composite structures, has lead him to develop a new composite materials laboratory at the Faculty of Engineering. This lab is both a teaching and a research facility. Students have the possibility to design and manufacture by applying three different processes: hand layup, infusion and autoclave, meeting the industrial needs.



"when I was offered a full time position at the University of Balamand, I did not hesitate, because I was excited to work in the aeronautical field in Lebanon"

Among the different projects he supervised, Dr Tawk lists, the "design and fabrication of a carbon fiber flare magazine" project, which won the 1st prize at the 10th annual conference for engineering and architectural graduates in north Lebanon in 2018, which was organized by the scientific committee at the Order of Engineers and Architects in Tripoli.

His main research topics include composites structures, vertical axis wind turbines, and steel girders. He has previously supervised PhD theses, and is currently co-supervising a PhD thesis with Université Paul Sabatier, Toulouse, which involves proposing a combination of different materials to protect the body vehicle when subjected to high speed impact.

Dr. Tawk was also a member of an EU Tempus project titled: "A sustainable framework for Higher education in Aeronautical Technologies", which was coordinated by the University of Balamand and involved a partnership within 15 organizations in Lebanon and Europe.

In addition to his engineering career, Dr. Tawk is interested in music and plays the oriental luth or "oud". While a faculty member at Balamand, he was also an active member of 'Soundz Good' band, where he performed many concerts on campus and during international festivals.

He even recently supervised a project during the course Composites Processes and Applications (Fall 2019) for the design and fabrication of an "oud" from Carbon Fibers. "This project can be developed in future research to study and optimize the quality of the sound", he says.

His background in mechanical engineering has also inspired him to design and develop a production line of natural apple juice, creating new opportunities for farmers mainly in Bsharri and North Lebanon to sell their produce. Dr. Tawk concludes that during those challenging times, he is a proud Balamandian and is committed to fostering the international outreach and reputation of the university.



Mechanical Engineering graduate students Mary Choucair and Ayla Abou Haydar fabricated an “OUD” (an oriental musical instrument) from Carbon Fiber during the course Composites Processes and Applications (Fall 2019) under the supervision of Dr. Issam Tawk. This fabrication promises to enable the study of different configurations and study the variation of the shape on the sound quality.

Unlike the wood OUD, the Carbon Fiber Oud can endure high temperature and moisture without any effect to the sound quality. It has the potential for enduring high mechanical shock all while being lightweight. The thickness of the soundboard is actually less than 1mm which has great effects on the sound quality. The Oud is also corrosion resistant and chemically resistive.



**Dr. Amal Iaaly**

*Director of the GIS Center  
Faculty of Engineering*

## IN THE GIS WORLD

In today's rapidly changing world, Geographic Information Systems (GIS) make life better, easier, and more efficient. The use of GIS technologies can help contribute to well-being of societies especially in e-governance, community resilience, disaster management, and research. The GIS Center at the University of Balamand lives up to this mission. To that end, the center thrives on the energy and drive of its director, Assistant Professor at the Faculty of Engineering, Dr. Amal Iaaly.

Dr. Iaaly has transformed the GIS Center at UOB to its current status as a leading center of excellence in its field with national, regional, and international recognition. This has enabled the center to sign key partnerships with prestigious organizations worldwide. At the moment, Dr. Iaaly aspires to create an academy within the center that will be unique to the University of Balamand on the global scale. The academy will equip students and professionals with essential knowledge and in demand skills in the field of GIS. This academy will be established in partnership with the leading GIS technology provider ESRI through ESRI Lebanon.

Dr. Iaaly explains that collecting and using data from field surveying and remote sensing helps promote effective decision making through intelligent maps. These maps can be used in a variety of applications. In this context, the GIS center was actively engaged in nationwide efforts in response to the COVID-19 crisis. The center pioneered, designed and developed a number of novel applications. Examples of such efforts include the development of the Salamati App with SKL-International for a door to door diagnostic check for COVID-19, along with the development of the Oumniyati App for local and sustainable development, in addition to the development of the Hayati App for crowd sourced diagnostic check for COVID-19, and sea water and sediment sampling around Beirut port supported by GIS location intelligence to model the seawater pollution after the Beirut explosion. Currently, the GIS center joined forces with many volunteering initiatives to promote sharing open source data through an online GIS hub for humanitarian work after the Beirut Port explosion.

Another example is the design and development of the University of Balamand Online Proctoring System (UOB-OPS) for online exams, explains Dr. Iaaly: "This was a successful experience, where we put time and effort in order to develop our own novel proctoring online system at the University of Balamand, through the use of advanced technology that monitors the students' environment, the computer screen and identifies their location".


A holder of a Doctorate in Business Administration from Grenoble School of Management GEM, Grenoble, France, Dr. Iaaly's dissertation dealt with e-government, GIS, the management of information system and its adoption. "I believe in a multidisciplinary approach and as such I was interested to complement my electrical engineering degree with business administration to use my engineering skills and knowledge to address complex management problems especially in the field of smart government, crisis management and local development. I became determined to research the extent of GIS usage and its effectiveness in e-government".

To achieve these developments, Dr. Iaaly stated that our main mission is to build the capacity of our students and give them tools that are needed in the market, by focusing on service learning and engaging students in project based learning. The second axis of GIS, she added, is community outreach. "We work closely with the community to help build capacity and support sustainable development through the use of GIS".

Fast paced and committed in everything she does, Dr. Iaaly is an advocate of capacity building and empowerment, stating that "you succeed if you empower the team you work with to become a pioneer in the GIS industry". She also believes in applying the learning objectives students acquire in the classroom to real-life and complex situations.

Dr. Iaaly praises the full support of Dr. Elias Warrak and Professor Rami Abboud as a key ingredient for the success of her initiatives. She underlines the university culture of learning, innovation, open-mindedness and inquisitiveness as an integral part of what makes this place home.

When asked to briefly speculate on the future of GIS, Dr. Amal Iaaly concluded that "the future of GIS is now". The pace of change in GIS is faster than ever before, and today several new developments are underway. She hopes that the work she and her team are doing, will communicate scientific knowledge that promotes effective decision making that truly benefits the society.



**We work closely with the community to help build capacity and support sustainable development through the use of GIS.**



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**Professor Chafic Mokbel**

*Professor of Computer Engineering  
Faculty of Engineering*

## ON ARTIFICIAL INTELLIGENCE

Since joining the University of Balamand 20 years ago, Dr. Chafic Mokbel has been dedicated to research and teaching. Fast-paced and committed in everything he does, Dr. Mokbel argues that machine learning has been a domain of intense study during the past decades. Recently, it has become a vector of development under the title “artificial intelligence” (AI), he explains. Part of his responsibility at the University of Balamand is having first-hand involvement in a series of projects. These projects include research on artificial intelligence usage and machine learning at the University of Balamand.

Dr. Mokbel has supervised more than 30 MSc and BS projects, several DEA (MSc) projects, and about 15 PhDs.

Another work Dr. Mokbel is supervising is research on Parkinson’s disease detection using non-invasive multimodal signals.

Author of 2 patents with France Télécom – CNET about robust speech recognition, Dr. Mokbel has more than 120 publications including a number of publications in peer-reviewed journals, and international conferences. He participated in free software development distributed under Cecile license: <http://perso.telecom-paristech.fr/~chollet/becars/index.php>. This software, he explains, implements Gaussian Mixture Models (GMM) and more particularly in the context of speaker recognition. Other free software have been developed at the University of Balamand, he says. The algorithms developed during the years, explains Dr. Mokbel, have been tested in international evaluation campaigns organized by NIST, IAPR, within European projects or in other contexts. “Our systems have often been classified among the best ones and in some cases as the most performing ones”, he concluded.

A holder of a PhD in Signal Processing from l’Ecole Nationale Supérieure des Télécommunications (ENST-Paris), Dr. Mokbel is largely engaged in research on machine learning, adaptive learning, speech and speaker recognition, handwriting recognition, machine translation, and natural language processing. An advocate of multidisciplinary work, Dr. Mokbel has been involved in research on brain computer interface using brain imaging of the electrical activity on the cortical surface.



His philosophy is that computational linguistics has been able to build machines capable of learning and using languages, where learning can be continuous and adaptive. Huge progress has been noted in domains like simple language modelling, machine translation, indexing, summarization, text to speech, speech recognition, speaker recognition, dialogue and other domains, he explains. This, he argues, challenges drastically the assertions that mastering languages is reserved to human being. "Search engines and machine translation performances today exceed all expectations. If the natural usage of language is the sign of intelligence, then the learning machines are certainly intelligent", he says.

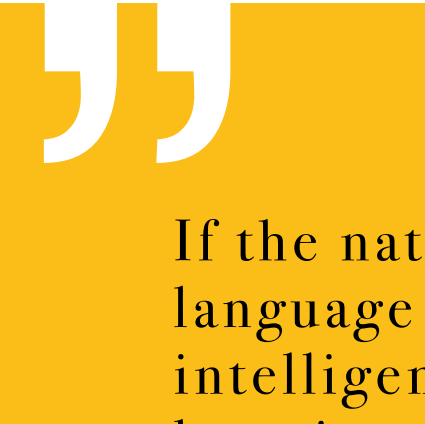
Dr. Mokbel further added that all scientists are watching today two major barriers falling; the barriers between memory and intelligence and, the barriers separating the different disciplines.

The approach to academics at the university level, says Dr. Mokbel, is to teach students critical thinking, to be adaptable to progress, and to have an enquiry mind.

He believes that classical studies treated separately intelligence and learning. However, he argues that an entity capable of learning is undoubtedly intelligent.

To him, artificial intelligence is the future, and he bets on human knowledge and capital to teach machines to fit our needs from algorithms.

Dr. Mokbel concludes that the real race is the race on data, which has brought new challenges and developments.



If the natural usage of language is the sign of intelligence, then the learning machines are certainly intelligent.



### **Dr. George Mitri**

*Associate Professor and Director of Land and Natural Resources Program at the Institute of the Environment*

## **MANAGING WILDFIRE RISKS: A LEADING INITIATIVE AT THE UNIVERSITY OF BALAMAND**



The Land and Natural Resources Program at the Institute of the Environment has become a reference in forest fire research in Lebanon. It is a leading program working in a comprehensive approach to address fire risk in a country experiencing an increasing number of fires and burned areas.

### **What are the measures undertaken to a better management of wildfire risks?**

Wildfire prevention measures remain an essential step towards reducing future fire risk in Lebanon. These measures include developing and implementing forest management plans, improving the monitoring of fire danger, and ensuring law enforcement coupled with awareness raising.

### **What are the most prominent results and tools of conducted projects in forest fire risk management?**

Firelab (<http://ioe-firelab.balamand.edu.lb>) is a very promising tool not only for fire danger forecast but also for assessing and monitoring forest fires in Lebanon. Firelab can be used by various stakeholders to extract a lot of information of relevance to fire risk all over the country. In addition, Firelab features Lebanon's annual fire reports from 2008 until present.

"we developed a fire danger forecast system as part of Firelab, which is a web-based informative platform on wildfires in Lebanon, to closely monitor fire danger at the municipality/town level across the country"

**Can you tell us more about the objectives of the fire danger forecast system in Lebanon?**

The fire danger forecast module in Firelab is a very user-friendly tool that is available for use by the public at large. The objectives of the tool include checking the spatial distribution of fire danger well in advance (i.e., up to 9 days before) and accordingly, taking all necessary measures to avoid the use of any source of fire during critical periods.

More specifically, the daily maps produced by the fire danger forecast system could help local authorities being informed about where to deploy municipal guards who could assess fire risk in real time. It could also help the civil defense and the Lebanese Air Forces to know where they should direct fire-fighting equipment.

Local authorities such as municipalities are invited to make full use of Firelab especially during a fire season. No special training is needed for its use. However, more people should be aware of its availability for use as needed to support fire prevention efforts.

**The newly developed system takes into account fire hazard and vulnerability in addition to a fire weather index derived daily by the European Forest Fire Information System . Can you please brief us about the guidelines of this system?**

Our fire danger forecast system generates forecast maps over a period of 3 to 9 days. These maps are automatically produced every day by modeling Lebanon's fire risk data in combination with a fire weather index (as provided by the European Forest Fire Information System) which is derived from weather forecasts. Users can access the system at any time through a web-interface to browse fire danger at the local, regional, and national level (<http://firelab.balamand.edu.lb/FireLabWeb/FireDanger>). Also, the daily updated fire danger bulletin of Lebanon can be downloaded and printed by all users. Firelab is continuously improved and upgraded. We always thrive to provide fire danger forecast data that are as accurate and precise as possible.

**What are the reasons of wildfire? Is it climate change?**

All fires in Lebanon are human-caused events. We do not have natural causes of fire in Lebanon. People can start a fire either on purpose or accidentally. However, the increasing number of large fires has been closely related to the lack of implementing forest management plans in addition to the frequent occurrence of extreme weather events. The large scale fires of October 2019 burned in dense pine forests while prevailing weather conditions were unusual to the month of October (i.e., temperature well above the monthly average,

"the objectives of the fire danger forecast module in Firelab include checking the spatial distribution of fire danger well in advance (i.e., up to 9 days before) and accordingly, taking all necessary measures to avoid the use of any source of fire during critical periods"

very dry and strong wind). We have frequently warned that October's forest fires are part of a larger trend that has been unfolding in recent decades, in which fires are getting worse, bigger and more intense and frequent.

Our scientific evidences clearly show that climate extremes are exacerbating Lebanon's wildfires in different ways:

- Higher temperatures dry out vegetation and soil, creating more ready-to-burn wildfire fuel.
- Climate change is shortening rainy seasons in Lebanon, thus extending the dry season which is getting longer and hotter .
- In a business-as-usual scenario, the more increasing trends in global warming, the worse Lebanon's wildfires will become.

Forest fires have always been occurring in Lebanon, but in the past decade, we have started seeing extended drought conditions and more frequent weather extremes. The landscape is so dry from multiple years of gradual change leading to an increase in the frequency and intensity of fires. The fact that fires reached for the cedars for the first time on record is a real warning sign that we urgently need to protect and manage our forests in light of existing and projected socio-economic and environmental changes.

### **Can we anticipate wildfire risks?**

Unlike many other natural disasters, yes we can forecast fire danger and that is why we developed a fire danger forecast system as part of Firelab, which is a web-based informative platform on wildfires in Lebanon, to closely monitor fire danger at the municipality/town level across the country.

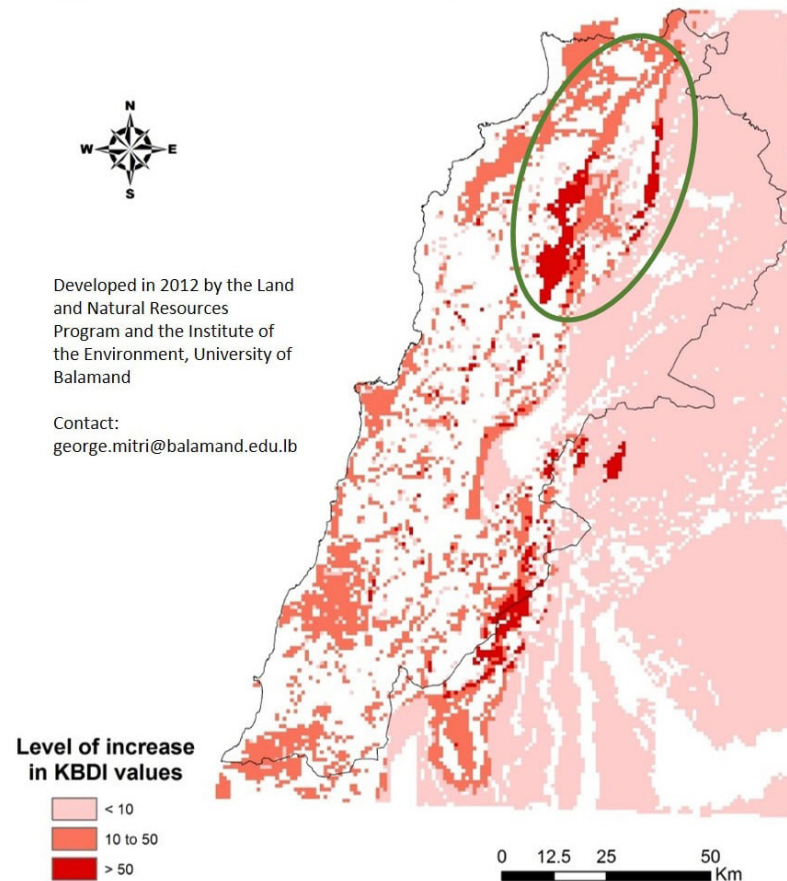
A climate-fire risk model created in 2012 by our research team at the Land and Natural Resources Program projected that in 2020, climatic shifts would put our forests in high mountainous areas at an increased risk of fire damage. Our prediction has so far proved to be accurate. More than 400 hectares of vegetation have already been burnt across Lebanon this year, mostly at high altitudes especially in the Akkar region.

It is worth mentioning that Lebanon's forests in high mountains are mostly composed of cedar, fir and juniper trees most of which are hundreds of years old and cannot easily recover after fires.

More specifically, these trees, unlike other species, do not naturally regenerate after fires. This year, the ecological cost of fires at these high altitudes has been unfortunately enormous.

"more than 400 hectares of vegetation have already been burnt across Lebanon this year, mostly at high altitudes especially in the Akkar region"

### AREAS OF INCREASE IN FIRE POTENTIAL 2010 VERSUS 2020



#### Which season is commonly referred as the fire season?

Fire seasonality is very variable from one year to another. This variability depends mainly on the length of dry season and prevailing meteorological conditions. A regular fire season starts in April and ends in October. An unusually long fire season can start as early as February-March and ends as late as December. In fact, one of our previous studies found that the average length of the fire season in Lebanon reached 150 days.

#### What are the areas of the Lebanese territory that are vulnerable to fire danger?

Fire vulnerability is defined by potential environmental, economic and demographic losses in case of a fire event. Large parts of Lebanon are vulnerable towards forest fires. The fires that happened last October provided a proof on high fire vulnerability in the area of Shouf for example where houses, infrastructure and large pine forests were set on fire. However, fire risk is a product of fire hazard (i.e., presence of vegetation fuel that can burn) and vulnerability (i.e., environmental and demographic).

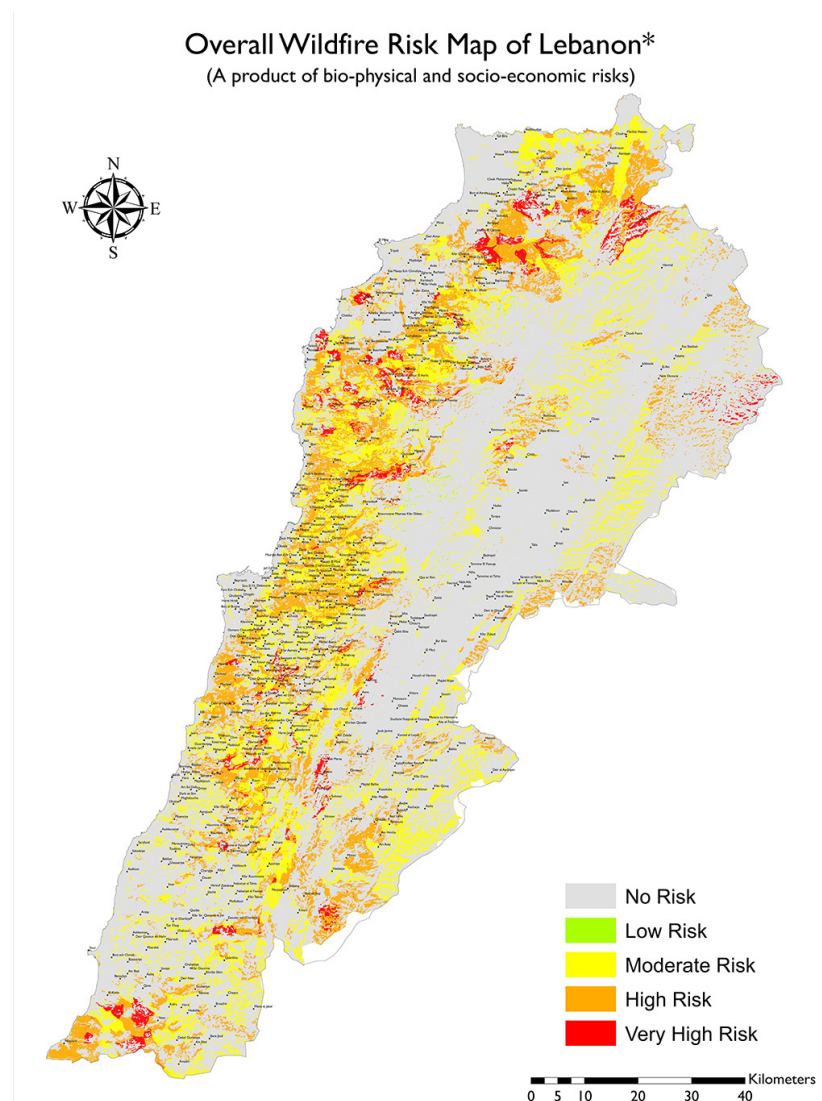


"our project: "Towards a better assessment and management of Wildfire risk in the Wildland-Urban Interface in Lebanon: gaining from the US experience" is funded by the USAID and supported by the partnerships for enhanced engagement in research (Peer) in agreement with the US National Academies of Science (NAS)"

We, at the LNR-IOE produced a detailed fire risk map of Lebanon in function of fire hazard and vulnerability. Accordingly, around 33% of Lebanon's territory was classified as moderate to very high fire risk. Fires in Lebanon have been increasingly burning in areas characterized by high hazard and vulnerability.

**Can you brief us about your project: "Towards a better assessment and management of wildfire risk in the Wildland-Urban Interface (WUI) in Lebanon: gaining from the US experience"?**

Interactions between changing land-use, fuel conditions and a warming climate are increasing the risk and hazard of wildfire in many parts of the world, especially where residential development expands into wildland areas. In Lebanon, land-use and forest management are leading to increased fuel accumulation in the Wildland Urban Interface (WUI) where populations continue to grow. This situation poses great challenges for urban planners, forest and fire managers tasked with managing forests and protecting populations from wildfire.



Our project: “Towards a better assessment and management of wildfire risk in the Wildland-Urban Interface (WUI) in Lebanon: gaining from the US experience” was implemented between 2012 and 2016. It aimed to provide information for municipalities and land managers to better anticipate and mitigate wildfire risk and hazard in the WUI of Lebanon.

The primary objective of the project was to use models to identify areas most vulnerable to wildfire risk due to changing fuel conditions, land-use and climate warming. The project resulted in extensive datasets and tools for improved fire risk management in the future.


#### **Where did you present your results of your project?**

The results of the project were published in peer-reviewed journals and international conference proceedings. The Firelab tool was presented and discussed in various national workshops and conferences. In addition, a booklet entitled: “Managing Wildfire Risk in Lebanon” was published and made available on the website of the project ([ioe-firelab.balamand.edu.lb](http://ioe-firelab.balamand.edu.lb)).

#### **How can you contribute to better legislative measures in the forestry sector? And what are the measures that should be undertaken?**

Updating the existing forest law is a necessity to ensure better wildfire risk management in the future. In addition, updating and implementing the existing national strategy for forest fire management (previously endorsed by the Council of Ministers in 2009) is considered as an important step towards reducing future fire risk, responding better to fire events and recovering quickly after fires. In this context, we have put a lot of efforts to produce scientific information for use in better management of the forest sector in Lebanon.

This has been translated in the large number of scientific and peer-reviewed publications. Updating the existing forest law can significantly benefit from the produced science in the forestry and forest fires sectors.



Graduate students were directly engaged in projects related to assessing fire risk, monitoring drought conditions, assessing post-fire impact on vegetation, monitoring post-fire regeneration, and calculating greenhouse gas emissions from fires among others.

“satellite remote sensing imagery in combination with field data were employed to assess losses in different land cover types, map fire severity, survey fire affected areas, and accordingly develop restoration and rehabilitation plans”

**How did students at the Department of Environmental Sciences contribute to fire risk management?**

Students at the Department of Environmental Sciences – Faculty of Arts and Sciences contributed to our research on fire risk management in different ways. Graduate students were directly engaged in projects related to assessing fire risk, monitoring drought conditions, assessing post-fire impact on vegetation, monitoring post-fire regeneration, and calculating greenhouse gas emissions from fires among others.

One of our courses at the Department of Environmental Sciences addresses forest resources management. In this course students have the opportunity to gain hands-on experience in developing forest management plans taking advantage of the presence of a relatively large forest cover at UOB campus in Koura to practice their knowledge in the field.

**What are your most recent and planned projects in the Land and Natural Resources Program at the Institute of the Environment in relation to fire risk assessment and management?**

Under the “Livelihoods in Forestry” (LIF) project funded by the United States Agency for International Development (USAID) implemented by Lebanon Reforestation Initiative (LRI), the Land and Natural Resources Program mapped the burned areas (i.e., above 0.1 ha) of 2019 including the disastrous fires of October 2019. Satellite remote sensing imagery in combination with field data were employed to assess losses in different land cover types, map fire severity, survey fire affected areas, and accordingly develop restoration and rehabilitation plans. Summarized mapping results indicated 117 main fires covering a total of 2,679 ha and affecting 103 towns across the country.

Our preliminary assessment of the 2020 fires showed the occurrence of a relatively large number of fires affecting a total area of 7,132 ha of land (i.e., approximately 7 times the annual average). More specifically, a total of 2,977 ha was burned in forest and shrubland (including 54 ha in vulnerable cedar, fir and juniper forests). In addition, a total of 1,242 ha was burned in agricultural lands resulting in big socio-economic losses. Also, a total of 1,036 ha of land was burned in Key Biodiversity Areas (KBA). These numbers make the year 2020 the worst on record in terms of wildfires. We will continue our efforts to monitor and report the impact of forest fires in Lebanon.

Given the increasing risk of large scale fires in Lebanon, the program established plans to develop further Firelab. These include developing additional modules for improving fire risk preparedness, fire response and post-fire assessment at the national level. In addition, the program partnered

**“increasing drought conditions will worsen fire risk in the country and will lead to more record-breaking fires, like those that have ravaged our Lebanese mountains in the last two years”**

with Lebanon Reforestation Initiative to access Firelab through a smart-phone application.

The Program continues to produce the annual fire reports in partnership with the Ministry of Environment. Accordingly, the users can download these reports including all associated statistics from the webpage of Firelab. Overall, the program runs different projects and activities of relevance to fire risk management. These include the following themes: monitoring land cover/land use change, mapping land degradation, investigating grazing behavior, and implementing forest landscape restoration projects among others.

#### **What is your message about the future of fire risk in Lebanon?**

As wildfires sweep across Lebanon, threatening more and more lives, destroying private and public properties and infrastructure, our research and studies have shown a very dire message: this could be Lebanon's new normal.

We expect an increase of 1.2°C by mid-century compared to the baseline period of 1986-2005. A decrease in precipitation of 4% is projected with drier conditions. Temperature and precipitation extremes will also intensify eventually causing the seasonal prolongation and geographical expansion of drought periods. Increasing drought conditions will worsen fire risk in the country and will lead to more record-breaking fires, like those that have ravaged our Lebanese mountains in the last two years.

The 2019 and 2020 fire seasons have been so far among the worst on record in Lebanon. While direct annual damage from drought in Lebanon is currently estimated at 320 million dollars, it is expected to reach a 2.8 billion dollars in 2040. We've now come to the stage where people know this is an emergency.

We need to design a better future and manage our forests in a smarter and innovative way and not just accept what's coming.



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**Dr. Rodrigue El Balaa**

*Assistant Professor and  
Chairperson of the Department of  
Agricultural Engineering Technology at  
the Issam Fares Faculty of  
Technology (IFFT)*

## ON AGRICULTURE AND PRECISION FARMING

Border closures, quarantines, market, supply chain and trade disruptions are restricting people's access to sufficient, diverse and nutritious sources of food, especially in countries hit hard by the coronavirus or already affected by high levels of food insecurity. As such, expanding on agricultural practices plays a valuable role in our daily lives, to provide the basic essentials for living. Thus, in order to keep agriculture on the cutting edge, many farmers implement a variety of technologies.

### **Can you define the concept of food hygiene and food security?**

Food hygiene and food security should be guaranteed along the supply chain, to slow down the progression of microorganisms that can be detrimental. Microorganisms are the cause of many diseases in humans, animals, and plants. Disease-causing microorganisms are called pathogens. A pathogen, or the substances it produces, invade the human, animal, or plant body to cause illness. While many diseases are transmissible from person to person or from animals to humans, only a few are transmitted through foods. As such, we live with microorganisms in the same conditions, so the good conditions for the human life are the same good conditions for microorganisms. So, the point is to decrease the speed of microorganisms increasing numbers along the value chain.

### **What is a food supply value chain?**

A food supply chain or food system refers to the processes that describe how food from a farm ends up on our tables (Farm to Fork concept). The processes include production, processing, distribution, consumption and disposal, preferably recycling.

In the food supply chain, food moves from producers to consumers via the processes of production, processing, distribution, and consumption. Thus, the food moves from the farmer to consumer through a process. Therefore, the stocking and transport conditions should be stable.

For instance, the producer can produce the best product ever, but the problem arises in transportation.

So, as the food moves from the producer to the consumer, we need to optimize transportation performance, improving product traceability, to guarantee that the food shipment is not in danger of spoiling as it makes its way to the consumer.



**What are the agricultural problems we are facing today in Lebanon ?**

One of the problems we face in Lebanon is cost in animal production, since we don't produce feed in large quantities. According to the Food and Agriculture Organization (FAO), feed represents up to 70 % of the cost of poultry.

For example, when you import feed, the cost is extremely high, which will influence the cost of milk production, and which accordingly will influence the cost of milk along the value chain.

Another problem is the uncontrolled use of pesticides used in agricultural lands which might cause negative health effects. Residues of pesticides can be found in a great variety of everyday foods and beverages. Water quality can also affect the agricultural practices.

**How do you apply technology in agriculture?**

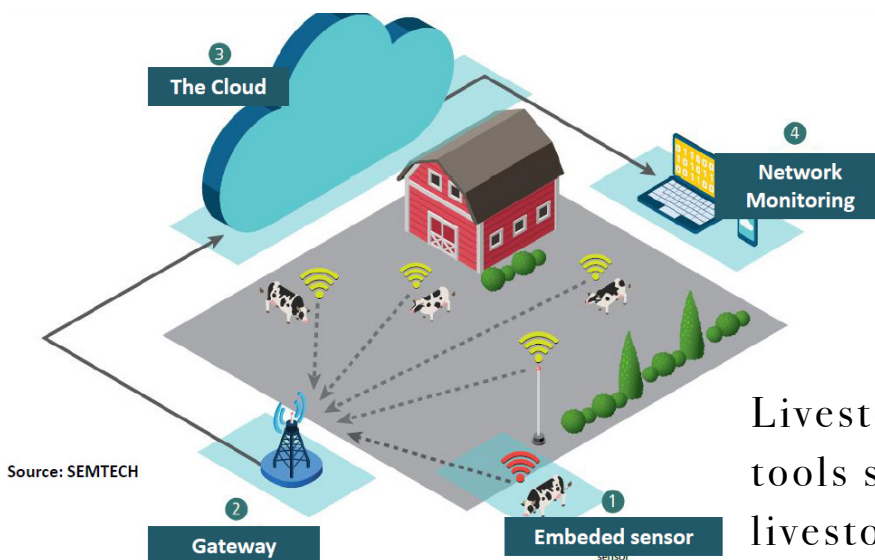
Agriculture and technology are one of the latest trends. Agriculture and technology includes a range of tools, including: cheap and improved sensors and actuators, low cost microprocessors, high bandwidth cellular communication, cloud based ICT systems, big data analytics as part of the Agriculture 4.0 era.



Developments in sensor technology which have taken place will make an impact on precision farming.

For instance, farmers and agriculture service professionals can use aerial vehicles, to monitor the health of crops.

Developments in sensor technology which have taken place will make an impact on precision farming. Each year, farmers lose significant amounts of profits due to animal diseases. As a result, there are many ways in which IOT enabled livestock management solutions can promote better livestock health. These tools include connected sensors livestock wearables, in which data is streamed to the cloud directly from wearables which allows farmers to identify and address issues like diseases and feeding irregularities before they significantly impact the herd's health.



Source: SEMTECH

Livestock monitoring includes tools such as connected sensors livestock wearables, in which data is streamed to the cloud directly from wearables.

#### Will such intelligent IoT systems make all human workforce redundant?

IOT would rather enhance human intelligence. We need a new “breed” of agricultural specialists who are able to use the new technology. Softwares are there, we just need to know how to use them.

In addition to primary agriculture production, the agriculture sector is a key contributor to Lebanon's important agri-food industry which contributes an additional 5 percent of GDP and constitutes a major and growing employer in the economy.

"we need a new breed of agricultural specialists who are able to use the new technology. Softwares are there, we just need to know how to use them"

**What is the mission of the Agriculture and Food Engineering Technology program?**

The mission of this program is to provide students with a multidimensional approach to local and regional agricultural and food industry practices based on value added products, labeling schemes, local production valorization (terroir products) and professionally managed agricultural entrepreneurship.

This program enables young graduates to succeed in a highly competitive environment by providing them with required tools and know-how.

**The mission of the Issam Fares Faculty of Technology is to prepare students to innovate in producing solutions to problems we face in our local communities and to contribute to national development. How is the IFFT contributing to rural development?**

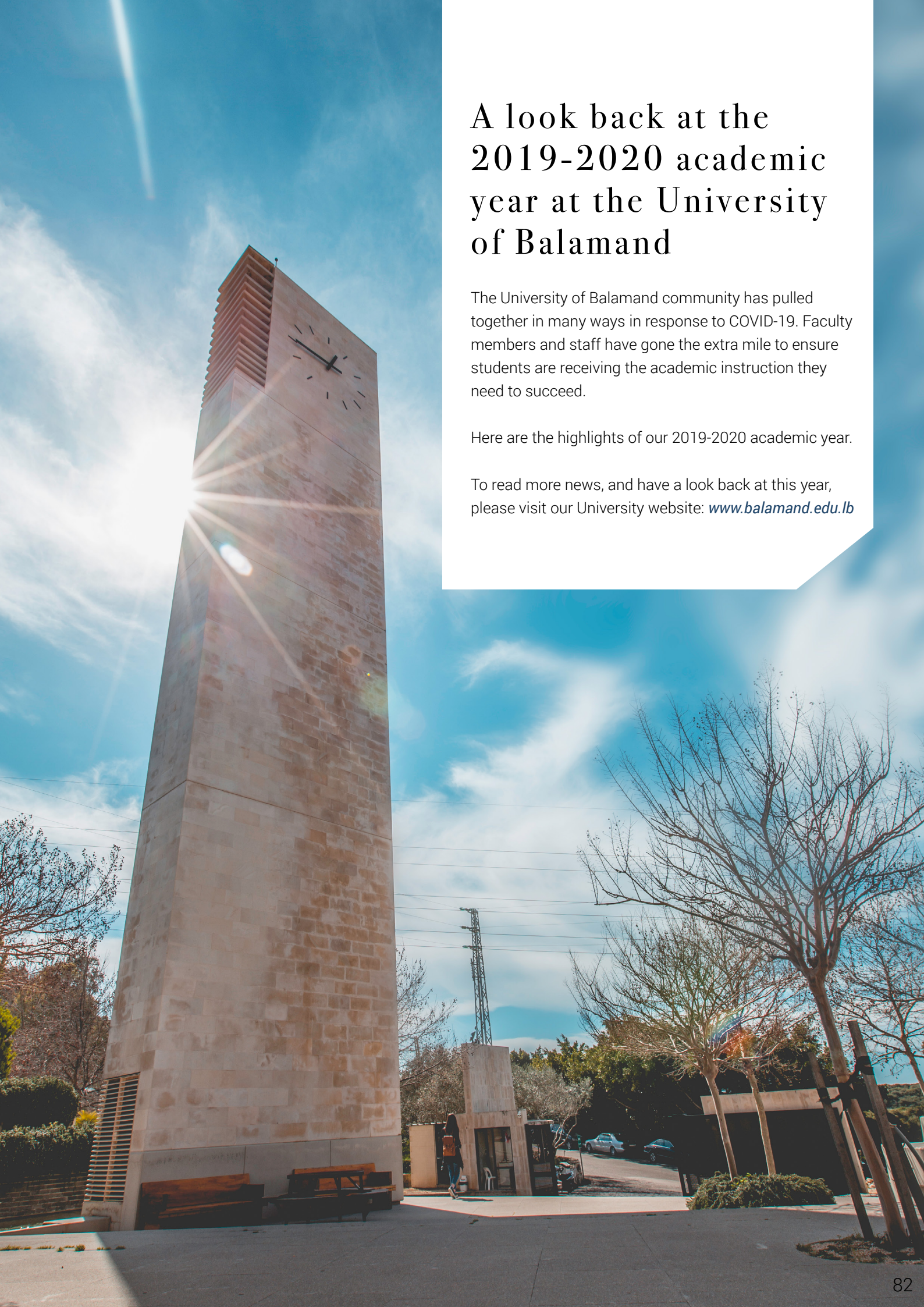
Our main objective is to develop the North and improve the quality of life and economic well-being of people living in this area. Thus, this is how IFFT can contribute to rural development. In addition, the Department of Agriculture recently received a vehicle as the first phase of a mobile lab destined to agricultural research activities, in line with the collaboration between the University of Balamand and Paris 11 University.

The grant is provided by the Ile de France region and implemented by the University of Paris 11 and also includes equipment for precision farming, a drone, a farm robot, soil and water testing, animal and veterinary equipment.

The first project implemented through this grant is a study on mastitis incidence at the Akkar region's dairy farms and its relation with farming conditions and hygiene.

Another project we were involved in is the deployment of a smart plant nursery, to provide agricultural input support for farmers through the production of seedling to be provided to farmers in production cost. The nursery's monthly production capacity is around 100,000 seedlings, which is considered as a much needed support for the agricultural sector.





# A look back at the 2019-2020 academic year at the University of Balamand

The University of Balamand community has pulled together in many ways in response to COVID-19. Faculty members and staff have gone the extra mile to ensure students are receiving the academic instruction they need to succeed.

Here are the highlights of our 2019-2020 academic year.

To read more news, and have a look back at this year, please visit our University website: [www.balamand.edu.lb](http://www.balamand.edu.lb)



## THE UNIVERSITY OF BALAMAND SIGNS AGREEMENT WITH MOUNT LEBANON HOSPITAL



Along with its vision to provide innovative and high quality care for all patients and in line with continuous development, Mount Lebanon Hospital (MLH) took the commitment, challenge and privilege of becoming a university medical center through its affiliation with one of the top universities in Lebanon, the University of Balamand (UOB), in order to deliver professional healthcare services in the context of the utmost scientific and academic environment.

The signing of the agreement took place in Mount Lebanon Hospital, on July 20.

This collaboration between MLH and UOB has been established in the spirit of uplifting the Lebanese healthcare system and advancing the university medical program trainings. This affiliation will be unique in its potential and objectives. The mutual commitment towards excellence in medical care and clinical clerkship is the ultimate mission of both partners.

It is in the perspective of building windmills in high winds and not raising protective walls that both institutions decided to stand up strong, facing the unprecedented challenges during this global crisis.



Mount Lebanon Hospital (MLH) is a tertiary medical center that includes over 800 professionals and more than 250 physicians. An ongoing expansion will lift the total number of beds to 440, of which over 50 are exclusively dedicated for Intensive Care (ICU).

MLH has been accredited by the Joint Commission International (JCI) since 2016 and re-accredited in 2019.

MLH's mission aims at improving the health of patients through the development of modern and effective models of care, based on education, innovation and research.

The University of Balamand has been accredited by multiple international agencies for their quality of academic standards in higher education. It has one of the most credible and praised faculty of medicine in Lebanon, with more than a hundred MD graduates yearly. The residency training program comprises more than 200 residents, in nearly 30 specialty programs.



## THE UNIVERSITY OF BALAMAND LEADS WITH ONLINE ASSESSMENT



In times of crisis, higher education institutions had only one choice: to innovate solutions to salvage the academic semester while upholding their quality standards. As such, the University of Balamand successfully responded to the challenge of the sudden shift to online education within the particularly challenging Lebanese context through innovating new ways for teaching and assessment online. After all, an integral part of quality education is quality assessment.

President Warrak, a staunch supporter of online education and assessment in time of unorthodox situations, formed an Online Assessment Task Force headed by Vice President for Internationalization and Engagement and Dean of the Faculty of Engineering Prof. Abboud tasked with designing and delivering an optimal solution that enables the administering of fair and transparent assessment for all university courses.

The solution came from the GIS Center at the Faculty of Engineering. The online live proctoring system uses advanced technology that monitors the students, the computer screen and identifies their location. Through this platform, the University of Balamand made use of its experience in

GIS to create a solution that enables proctoring exams in real time while students take them online in a safe, transparent and robust environment. This online proctoring service restricts students from accessing programs and applications, browsing the internet, printing, copying, accessing other websites, and using instant messaging programs until they complete the exam. During the spring and summer semesters 10370 individual exam sessions in 719 class sections were conducted using this system with minimal complications.

The UOB experience in this respect was quite successful. Students, faculty members, and staff worked together in true Balamandian spirit to salvage the semester while delivering unyielding quality. In this context, Prof. Rami Abboud delivered a keynote lecture at the opening session of an International Web Conference entitled "The Evaluation of Distance Education Experiences at the time of COVID-19: Effects, Challenges and Perspectives" in June.

Where he shared the pioneering Balamand experience in online assessment. Professor Abboud articulated the structure and the team effort put into the design, delivery, and administration of the online assessment, which highlights innovation in online live proctoring promoting ingenuity and teamwork as a better option for success that money cannot buy.

Prof. Abboud indicated this assessment system was developed in response to a crisis. "We are very proud to say that we are pioneers in developing such a novel assessment system that is unique to the University of Balamand on the global scale. We simply could not sit on our laurels and we had to do something exceptional to save our valued students their Spring Semester. I am heartened with the success of our system that was developed and tested in less than one month and with the support of many faculty and staff members from across the university that went beyond their contractual obligations to make sure that we succeed" he indicated. The University of Balamand remains open to share its experiences in online assessment with Lebanese and global educational institutions.

## DEPLOYMENT OF AN ARTIFICIAL REEF IN BARBARA REGION



The Coastal Resources Program (MCR), Institute of the Environment (IOE), University of Balamand (UOB) is implementing the project "Artificial Reef 2018" project funded by the European Union (EU) and aims at enhancing the protection and sustainability of marine biological resources in Lebanon through the design and deployment of a model Artificial Reef (AR) based on international environmental criteria, and through capacity building and increased community and public awareness. The AR was deployed in the Barbara - Madfoun area, 1 km off-shore, at a depth of 25 m. Monitoring of its colonization will continue up to at least six months from its deployment, based on international scientific criteria.

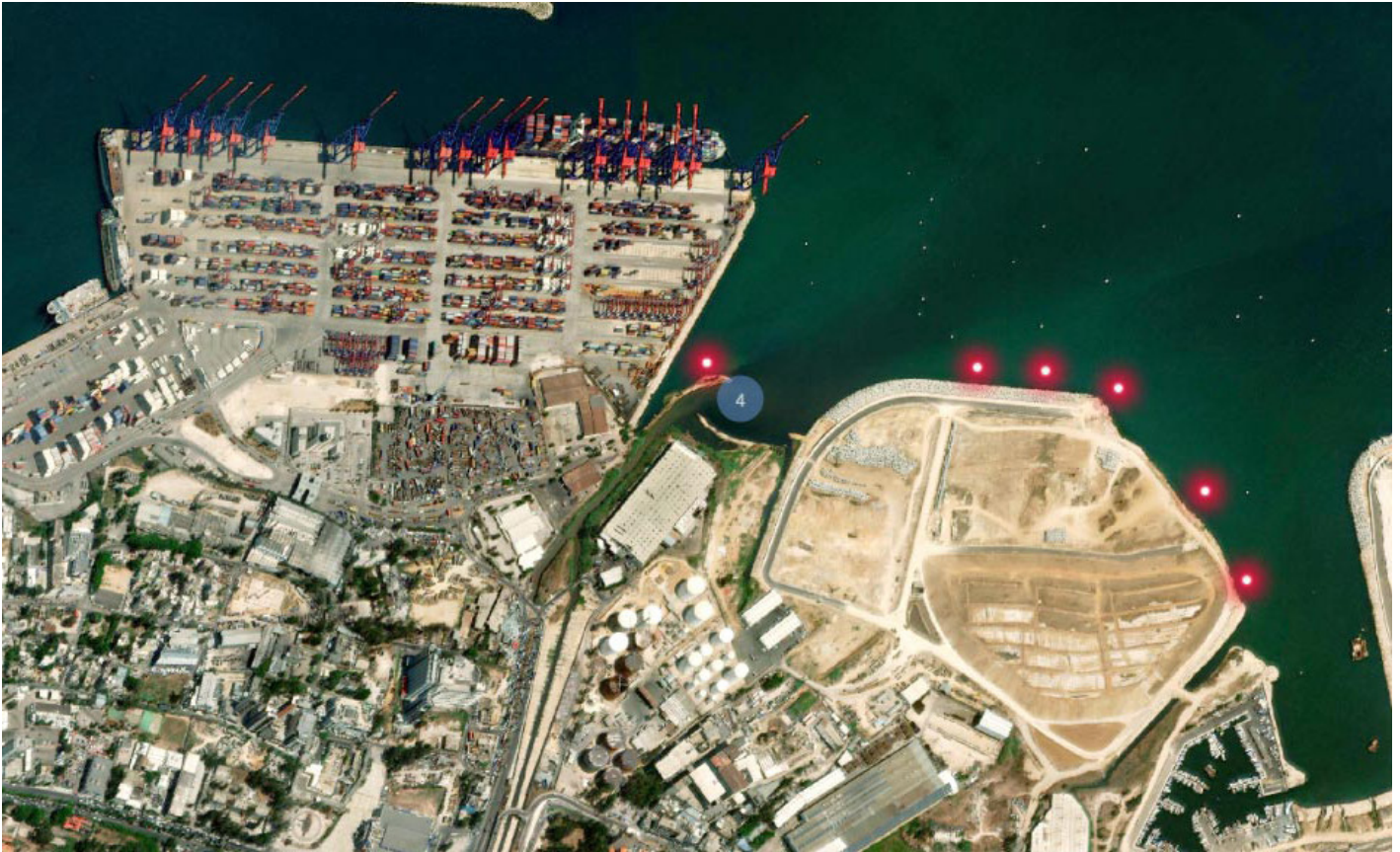
ARs support marine life in otherwise extremely stressed, barren and/or unproductive areas where there is a lack of stable marine substrate to support an abundance of sea life. In addition, ARs provide an added value to fisheries, ecotourism and education by creating suitable shelters and feeding and spawning habitats for marine life therefore enhancing fishing success in addition to providing scuba-diving attractions.

Within this context, Dr. Manal Nader, Director of the IOE pointed out that the Lebanese marine ecosystem has come under an increasing series of diverse and complex natural and anthropogenic stresses that have led to serious detrimental changes in its natural environment, resulting in habitat destruction and a tremendous decrease in marine biological resources.

He further emphasized that the establishment of stable and sustainable habitats in the form of ARs constitutes a positive step for fisheries, marine ecotourism and the propagation of marine life, as it provides suitable shelters and breeding habitats for marine organisms. Such initiatives greatly contribute to the sustainability of fishing activities in addition to providing attractive diving sites.



## SEAWATER SAMPLING AROUND BEIRUT



In light of one of the most devastating explosions in the history of mankind hitting Beirut, the Faculty of Engineering at the University of Balamand put together a team of experts to study the environmental impact on the city and its surroundings. The team is headed by Vice President for Internationalization and Engagement and Dean of the Faculty of Engineering Professor Rami Abboud and consists of: Dr. Marianne Saba, Dr. Amal Iaaly and Dr. Rima Manneh.

The team has come together to assess the sea water pollution caused by the massive and without any doubt poisonous explosion. After less than 72 Hrs of the explosion, Dr. Marianne Saba of the Environmental Engineering Laboratory at the Faculty of Engineering conducted a sea water sampling campaign around the Beirut Port to analyze the sea water quality. An assessment of the major cations and anions in the water as well as the heavy metals will be done to relate the impact of the explosion on the water quality of the sea.



Additionally, sediment sampling around the port region (explosion site) in Beirut is carried out to analyze the concentration of Polycyclic Aromatic Hydrocarbons (PAHs) and heavy metals. Samples from other locations across the shore from Tripoli to Tyre has also been collated. Exact location of water extraction was supported by live GIS location to model the sea water pollution caused by the explosion and measure its impact. The findings are hoped to guide national water and sea life resources after this unprecedented contamination. The results will be published as soon as the analysis is completed (<https://arcg.is/15yvO>). This work compliments another University of Balamand team that is investigating dust and air pollution in the most affected area of the capital.

Professor Abboud stated: "what happened is surreal, unprecedented and shocking to say the least. Our hearts and souls are with the families that were directly affected and unfairly lost loved ones. Our thoughts are with the injured wishing them a quick recovery. Our work is to try and help, from an environmental perspective, to detect any hidden environmental risk factors to protect our fellow countrymen and women in Beirut ending up from suffering from more misery".

## **BEIRUT BLAST: RESPONDING IN THE AFTERMATH**



On Friday 20th of August 2020, a team from the Faculty of Engineering at the University of Balamand consisting of Dr. Joseph Assaad, Dr. Amal Iaaly, and Mr. Nicolas Murr conducted a site visit in collaboration with Frontline Engineers led by Architect Jad Ajib to mark the beginning of a multidisciplinary collaboration regarding the catastrophic blast that devastated Beirut. The collaboration will be along three themes in which UOB experts can make a positive impact: GIS technologies, concrete recycling, and building assessment & rehabilitation. Through this collaboration, additional experts from the Faculty will provide technical assistance in mapping in addition to capacity building in the field of structural assessment and issues related to sustainability and waste management.

Frontline Engineers is a team of Lebanese experts that was established to create a platform of engineers and architects from Lebanon to come together to rebuild what has been damaged in Beirut. Frontline Engineers are working with UNDP and the EU in data collection for environmental assessment to better manage the construction and demolition waste.

In this context, Vice President for Internationalization and Engagement and Dean of the Faculty of Engineering Prof. Rami Abboud assured: "The University of Balamand is committed to supporting all the volunteer initiatives and mobilize its experts to help in any way we can in the reconstruction of our beloved capital, Beirut, after the devastating explosion."



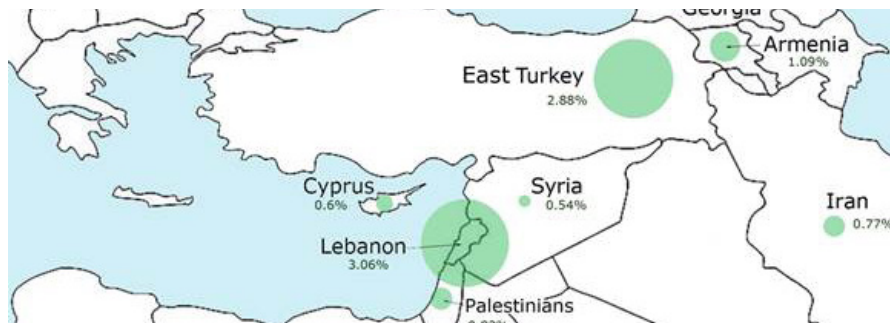
**Prof. Pierre Zalloua**

*Director of the Institute of Genomics*

## **AUTOSOMAL GENETICS AND Y-HAPLOGROUP DISTRIBUTION REVEAL THE ORIGINS OF THE FIRST INHABITANTS OF MOUNT LEBANON**

An international team of researchers from Lebanon, New Zealand, Spain and the USA have traced the origins and migratory patterns that have led to the genetic isolation and clustering in the communities of Mount Lebanon, providing important results that suggest that the North Mountain Maronite Community possesses an ancestral genetic component distinct from other populations in the region.

In a paper just published in the journal: European Journal of Human Genetics Professor Pierre Zalloua of the University of Balamand, and his colleagues identified the origins of the first inhabitants of Mount Lebanon using evidence from DNA analyses. Their results indicate that a group carrying a specific Y-chromosome signature, that they referred to as the Levantine L1b, split from a Caucasus ancestral group around 7,300 years ago and migrated to the North Lebanese Mountains in the Levant. Migration from the Caucasus, the study suggests, was likely triggered by the amelioration of the climate and induced migratory events by groups in search of better habitats throughout the North Levant.



In this study, researchers show that the differential cultural adaptation by populations from North Lebanese Mountains are clearly aligned with the L1b haplotype STR haplogroup clusters, indicating pre-existing and persistent cultural barriers marked by the transmission of L1b lineages.

They also found out that L1b immigration marks one of possibly several layers of immigrations into an otherwise genetically highly isolated population.

Professor Zalloua says that: "the team's finding highlights the value of genetic investigations in elucidating historical events, especially among isolated populations".

Prof. Zalloua will be heading the newly established Genomics Institute at the University of Balamand where in collaboration with other UOB faculty and students they will carry out a series of data rich multidisciplinary research projects with direct impact on the local and regional communities.



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**Mr. Ghaleb Halimi**

*Senior Director for Athletics, Wellness and Recreation*

## TRANSFORMING UOB ATHLETICS

Senior Director for Athletics, Wellness and Recreation, Mr. Ghaleb Halimi announced that the University of Balamand will be soon launching a new Athletics Center, currently under construction at the University of Balamand.

The new center which will be completed by January 2021 will provide athletic training, and well-being facilities for students, faculty, staff, alumni, and all of the UOB community.

“We aim through this center to create an educational and fitness atmosphere”, stated Mr. Halimi. This center, he added, is a tangible example of the commitment of the University of Balamand in fostering a sense of spirit, enthusiasm, and pride in the University, further promoting its image and reputation in Lebanon, throughout the region, and beyond”.



### Health is Wealth

Studies show that there are strong links between physical fitness and reduced stress, improved memory, and mindfulness. The Fitness Center at the University of Balamand is a state-of-the-art facility equipped to tone muscle, maximize fat loss, promote overall health and wellness, and is accessible to users of all skills, abilities and interests, explains Mr. Halimi.

Conveniently situated in the middle of the Campus, surrounded by the Faculty of Engineering and the Green Field, the two floor building overlooks the beautiful view of the valley.

### **Key features of the Athletics Center**

The first floor hubs equipment for your preferred type of work out. The cardiovascular equipment includes treadmills with TVs, cross-trainers, recumbent and upright bikes, cycling bikes, and rowing machines.

The resistance equipment features ample free weights, a complete set of benches and racks, selectolized machines, cable and crossover stations, as well as chest press, shoulder press, lower back machine, pectoral fly, and a chin dip assist. Lower body machines include leg extension, leg press, hip adductor/abductor and abdominal.

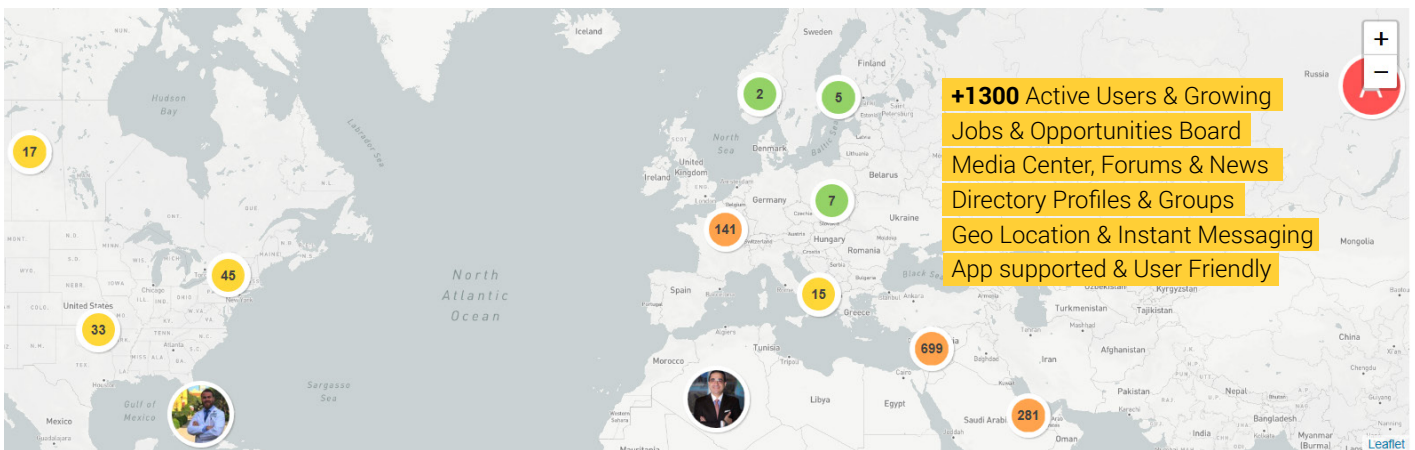
A complete set of functional training supplies in the multi-purpose activity room is also available for instructional classes and sports specific training modalities.

Ancillary services including physiotherapy, storage areas, lockers, showers, and toilets are located at the basement floor for both genders males and females.

The Center opens daily from 7:00am till 10:00pm during week days, from 9:00am till 8:00pm on Saturdays, and from 10:00am till 6:00pm on Sundays.



## BALAMAND ALUMNI NETWORK



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