



**AMERICAN  
UNIVERSITY  
OF BEIRUT**

2023 Commencement Exercise

**Dina Katabi**

Beirut, Saturday, June 10, 2023

Ladies and gentlemen, esteemed faculty, distinguished guests, and most importantly, the unstoppable Class of 2023 at the American University of Beirut,

It is my greatest honor to be here tonight to deliver this commencement speech. Let me start by admitting that when I received the invitation to deliver this speech, I panicked. However, I also felt a profound sense of happiness and pride. AUB always held a special place in my heart. I have many friends, colleagues, and students who graduated from AUB. Although I didn't pursue my undergraduate or graduate studies here, yesterday, I received an honorary doctorate degree from AUB. So perhaps, with a bit of a stretch, I can claim that I am now part of the alumni.

Class of 2023, today we're here to celebrate you. Your dedication, sleep-deprived nights, the gallons of coffee consumed, and the towering stack of problem sets solved. As you stride out of this campus and into the world, remember this: the education you've received at AUB is your secret weapon. It has prepared you to seize opportunities, tackle challenges, and excel in every pursuit.

I tell you this from experience. As a professor at MIT, I supervise Ph.D. students who come from the top universities in the US and abroad. I was fortunate to supervise two students who, like yourselves, completed their bachelor's degree at AUB: Fadel Adib and Haitham Hassanieh. Given their performance, it is clear that students who graduate from this university receive a strong education, are capable of independent and innovative thinking, and can solve the most difficult

technical problems and succeed anywhere. Today, Fadel and Haitham are both professors. Fadel at MIT and Haitham at EPFL. I believe each one of you possesses great potential, and I trust each of you will deliver on that potential.

I wish you all a successful career; but more than that, I hope you find a passion that makes your work feel invigorating. Whether your next step is to go to grad school, work in the industry, or start your own business, I hope you enjoy every moment of it, and that you pursue it with passion. For life is full of uncertainties and challenges; but if you're committed to your passion, you'll navigate your way.

This brings me to my journey. I come from a family of medical doctors. I was destined to go to med school. I completed my baccalaureat in Syria. In Syria, baccalaureat is a national exam, based on which the top students get matched to the best schools. I joined med school and was the top of my batch. After one year, I decided I couldn't live the rest of my life without mathematics. So, to the shock of my parents and everyone I knew, I dropped med school and switched to electrical engineering, which is essentially applied math. I still don't know whether this was a good decision or a bad one; but it was my decision.

I always knew I wanted to do research. So, once I graduated, I applied for grad school in the US and was admitted to MIT. I suspect the MIT admissions committee didn't know much about Damascus University and took a chance on me. MIT is a haven for nerds. It felt like the right place for me. When I graduated, I was offered a faculty position at MIT, which I accepted.

Being a professor in a top school is one of the best jobs you can have. It gives you the freedom to think, innovate, and continue to learn. I work with radio signals, like WiFi and cellular, etc. When I started at MIT, I worked on improving WiFi to make it faster and more robust. Then it occurred to me that those radio signals can be used to sense the environment and people around us. Radio signals travel in space, traverse walls and occlusions, and reflect off the human body because our bodies are made of water. If we can analyze these reflections, we can begin to see people through walls, track their movements, their breathing, and every beat of their hearts. This is exactly what we did in my lab at MIT. We invented a device that looks like a WiFi box, sits in the background of the home, and uses machine learning to analyze radio signals to monitor breathing, heartbeat, motion, and sleep. Today, our radio device is

used by patients who have Parkinson's, Alzheimer's, ALS, Lupus, Crohn's, and many other diseases. Medical doctors and pharmaceutical companies use the data to help them understand diseases and develop new drugs.

I started in medicine, and today, I find myself back reading medical research. I am excited about the intersection of radio signals, AI, and biomedicine. I think the future of healthcare will be data-driven; that is, we will be able to continuously monitor patients in their homes to track the evolution of their symptoms, detect exacerbation early, and intervene to avoid hospitalization.

As I stand before you, the graduating class of the American University of Beirut, I cannot help but reflect on the journey you are about to embark upon. A journey that is filled with opportunities, challenges, but more importantly, potential – potential that is embodied within each and every one of you.

The world you're entering is intriguing. There are many challenges, including economic instability, political unrest, and climate change. But there are also many opportunities from advancements in technology, science, and medicine. In these complex times, demands and expectations will push you to the edges of your capabilities. You will be expected to navigate the complexities of our world and contribute positively to our shared future. In this journey, never forget the lessons you've learned here at AUB. The experiences you've had, the friendships you've formed, and the knowledge you've gained - all of these will guide you as you traverse the path towards your future.

Each one of you, in your own unique way, is prepared to make a meaningful difference in this world. A difference that benefits not just you or those immediately around you, but humanity as a whole.

Congratulations, Class of 2023! Your journey is just beginning, and I eagerly anticipate witnessing the great contributions you will bring to our world. My best wishes to all of you.