

Sirine H. Taleb, Ph.D.

CONTACT INFORMATION

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INTERESTS

Research, AI & Machine Learning, Women Empowerment, Data Mining, Data Science, Smart Buildings, Mobile Computing, Smartphone Sensing, Energy Efficiency, Context Awareness

EDUCATION

American University of Beirut, Beirut, Lebanon September 2012 - May 2017

Degree: **Ph.D.** in Electrical and Computer Engineering (GPA: 4.0/4.0)
Advisors: Professor Hazem Hajj and Professor Zaher Dawy
Dissertation Topic: “Context-Aware Dynamic Designs for Energy Efficient Mobile Sensing”
First Major: AI & Machine Learning - Second Major: Communications
Minor: Networking and Security

American University of Beirut, Beirut, Lebanon September 2014 - June 2016

Degree: Certificate in Financial Management (GPA: 4.0/4.0)

American University of Beirut, Beirut, Lebanon September 2008 - June 2012

Degree: B.E. in Computer and Communication Engineering (GPA: 3.9/4.0)
Minor in Mathematics
Senior Project: “Energy-Aware Heterogeneous Networks”

AWARDS AND SCHOLARSHIPS

N2Women Travel Grant to attend the 17th ACM Conference on Embedded Networked Sensor Systems (SenSys 2019) in New York 2019
Best poster award for my PhD Dissertation at the 6th Arab Women in Computing (ArabWIC) conference in Rabat, Morocco 2019
Travel grant from the Association for Computing Machinery (ACM) to attend the 6th Arab Women in Computing (ArabWIC) conference in Rabat, Morocco 2019
First PhD to graduate from the department with an accelerated PhD program 2017
MobiSys Student Travel Grant 2015
CNRS-L/AUB Doctoral Scholarship Award 2014
Dean’s scholarship to join the newly introduced accelerated PhD program where outstanding candidates can skip M.Sc. degree 2012
Best Paper Award at AUB 11th FEA Student Conference 2012
AUB Dean’s Honor List All semesters
The Lebanese Baccalaureate Merit Full Scholarship (CNRS/AUB) for getting the highest country-wide score on the official Baccalaureate exams in general sciences section: 18.2/20 2008

EXPERIENCE

American University of Beirut, Beirut, Lebanon

Lecturer June 2021 - Present
Supervising 30+ master’s students in the Masters in Business Analytics (MSBA) program towards completing their summer capstone project which has to be submitted in partial fulfillment of the requirements for the degree of MSBA at the Suliman S. Olayan School of Business.

Guiding students in their progress especially in the predictive analysis part which is machine learning based.

Cactus Communications Services Pte Ltd, Tokio Marine Centre, Singapore (Remote Work)

Scientific Editor Freelancer

December 2019 - Present

Perform a technical content review similar to a peer review carried out by journals and a detailed assessment in the form of a report.

American University of Beirut, Beirut, Lebanon

Postdoctoral Researcher - Research Associate

February 2018 - December 2020

Worked on a complex optimization problem to minimize the amount of solar rays in smart energy efficient buildings and thus changing the shape of future buildings to save energy.

Targeted the urban area of Beirut and the Mediterranean which will be pose a serious challenge for the Sustainable Development Goals (SDGs) in the Mediterranean basin and the Levant given the expected increase of urban population in the Mediterranean Basin.

Published work in top journals and conferences.

Phoenicia University, Zahrani, Lebanon

Part-time Instructor

October 2019 - September 2020

Developed the syllabus and material of data science and machine learning courses.

Teaching business and public health students how to build hands-on experience with data manipulation and analysis to finally present impressive results.

These courses are core to enhance decision-making activities, transforming the workplace into a data driven mini-society.

National Association for Science and Research (NASR), Beirut, Lebanon

Scientific Committee Coordinator

January 2019 - Present

NASR is a Lebanese non-governmental, non-profit organization that aims to foster innovation and technological creativity among youth. NASR is a leading institution in stimulating, supporting and embracing innovation to serve community and national needs.

As a volunteer in this organization, my duty is to coordinate the scientific committee which is composed of judges from universities, research centers and educational institutions throughout the nation.

The members of this scientific committee attend and judge the different projects presented in our annual event Mobarat El Oloum (Science Competition and Fair). Its objective is to advance inquiry level and sharpen skills of middle and high schools and undergraduate students.

Science to Data Science, CashFlows, London, United Kingdom

Data Scientist

August 2018 - September 2018

Joined an intense highly competitive five weeks program designed to transition analytical PhDs from academia to data science.

Attended lectures on Data Science topics (such as machine learning, git, SQL), as well as commercial knowledge through lectures on Strategy, Ethics and Data Regulation, Marketing, Finance and Economics.

Five week internship at CashFlows, a FinTech company that aims to maximise payment acceptance by allowing more first time sales and fewer declines.

Project involved the design and development of a risk management tool for incoming and outgoing Blockchain related transactions.

American University of Beirut, Beirut, Lebanon

Graduate Student

September 2012 - May 2017

Includes Ph.D. research, coursework and research/consulting projects.

Teaching Assistant September 2016 - January 2017
Assistant in Data Mining graduate level course. Duties included shared responsibility for exams, homework assignment, projects and grades.

Graduate Assistant September 2012 - June 2016
Assistant in Communications lab taken by junior/senior. Duties included explaining each lab, helping students during the lab, leading weekly lab exercises, preparing exams and projects.

Teaching Assistant February 2011 - June 2012
Assistant in Computer Networks course. Duties included grading homework assignments and quizzes.

Purdue University, West Lafayette, Indiana, U.S.A

Research Intern June 2011 - September 2011
Learned how to program using the 3D software Unity.
Programmed a complete application that can be used to facilitate communication between engineers and project managers on construction sites.
Performed networking tasks so that application users can communicate through a server.
Created a database to save all the required information.

Smart Solutions Company, Beirut, Lebanon

Software Engineering Intern Summers of 2009 and 2010
Worked as a programming and system administration assistant.
Learned the basics of creating video communication services.
Performed surveys concerning the efficiency of mobile communications in Lebanon.

SCIENTIFIC
PRODUCTION

S. Taleb, A. Yeretizian, R. Jabr, and H. Hajj, "Optimization of Building Form to Reduce Incident Solar Radiation", *Journal of Building Engineering* 28 (2020): 101025.

S. Taleb, A. Yeretizian, R. Jabr, and H. Hajj, "Energy Optimization of Climate Adapted Buildings in an Urban Context: The Case of Subtropical Climate," 35th PLEA Conference: Planning Post Carbon Cities, A Coruña, Spain, 2020.

S. Taleb, "Boosting Your Emotional Health as a Graduate Student", *Scientista*, July 2019.

S. Taleb, H. Hajj, and Z. Dawy, "EGO: An Energy-Efficient Ontology-Based Sensor Selection Framework to Exploit Synergy Among Applications", in *IEEE Transactions on Mobile Computing*, vol. 18, no. 11, pp. 2518-2535, 1 Nov. 2019.

S. Taleb, H. Hajj, and Z. Dawy, "VCAMS: Viterbi-based Context Aware Mobile Sensing to Trade-off Energy and Delay", in *IEEE Transactions on Mobile Computing*, vol. 17, no. 1, pp. 225-242, Jan. 1 2018.

S. Taleb, "Context-aware dynamic designs for energy efficient mobile sensing". Ph.D. Thesis, American University of Beirut, Beirut, Lebanon, 2017.

S. Taleb, A. Al Sallab, H. Hajj, Z. Dawy, R. Khanna and A. Keshavamurthy, "Deep learning with ensemble classification method for sensor sampling decisions," 2016 International Wireless Communications and Mobile Computing Conference (IWCMC), Paphos, 2016, pp. 114-119.

S. Taleb, H. Hajj, and Z. Dawy, "Entropy-based Optimization to Trade-off Energy and Accuracy for Activity Mobile Sensing", 4th IEEE International Conference on Energy Aware Computing Systems and Applications (ICEAC 2013), Istanbul, Turkey, December 2013.

S. Taleb, N. Abbas, H. Hajj, and Z. Dawy, “On Sensor Selection in Mobile Devices based on Energy, Application Accuracy, and Context Metrics”, 3rd International Conference on Communications and Information Technology (ICCIT 2013), Beirut, Lebanon, June 2013.

S. Taleb, M. Dia, J. Farhat, Z. Dawy, and H. Hajj, “On the Design of Energy-Aware 3G/WiFi Heterogeneous Networks Under Realistic Conditions”, 27th IEEE International Conference on Advanced Information Networking and Applications (AINA 2013) - Ninth International Workshop on Heterogeneous Wireless Networks (HWISE), Barcelona, Spain, March 2013.

N. Abbas, **S. Taleb**, H. Hajj, and Z. Dawy, “A Learning-Based Approach for Network Selection in WLAN/3G Heterogeneous Network”, 3rd International Conference on Communications and Information Technology (ICCIT 2013), Beirut, Lebanon, June 2013.

A. Nika, S. Scataglini and **S. Taleb**, “MobiSys 2015”, in IEEE Pervasive Computing, vol. 14, no. 4, pp. 80-83, Oct.-Dec. 2015.

K. Bakhit, **S. Taleb**, A. Kayssi, I. Elhajj and A. Chehab, “CAVE: Hybrid Approach for In-Network Content Caching”, IEEE 11th Intl Conf on Ubiquitous Intelligence and Computing and IEEE 14th Intl Conf on Scalable Computing and Communications (UTC-ATC-ScalCom), Bali, 2014, pp. 649-654.

RESEARCH
COMMITTEE

Defense Committee Member of:
Raslan Kain: “Holistic Approach to Energy Efficiency in Context Aware Mobile Sensing”, Master’s student at American University of Beirut, October 2018.

PROFESSIONAL
ACTIVITIES

Delivered a talk about my PhD thesis in GTALKS which is a global platform for PhD holders to share their research findings, in 7-minute presentations in English, The Lebanese American University, Beirut, October 2019. https://youtu.be/o_v-vYSZFUI

Delivered a lightning talk entitled “My Data Science Journey in London” to young Arab ladies to inspire them to join Data Science boot camps and have more international experiences, during Arab Women in Computing Conference, Morocco, March 2019.

Delivered a hands-on workshop entitled “Python for Data Science” to 60 attendees from different backgrounds and multiple professional levels, Beirut, January 2019.

Helped in the organization for the 2nd IEEE International Multidisciplinary Conference on Engineering Technology, November 2018.

Session chair and committee organizer, the 1st Women in Engineering Forum in Lebanon, November 2018.

Reviewer in top journals such as IEEE Transactions on Mobile Computing.

PC member of different conferences such as ArabWIC annual international conference on Arab Women in Computing.

CO-CURRICULAR
ACTIVITIES

Delegate at Young Diplomats Forum 2019 at Global Diplomatic Forum, Brussels

Treasurer of IEEE Women in Engineering (WIE) since 2013

Science Blogger at The Scientista Foundation

Leader at ArabWIC Lebanon Chapter since 2012

Member of Lebanese League for Women in Business

Member of IEEE (Institute of Electrical and Electronics Engineers)

Member of ACM (Association for Computing Machinery)

Volunteer in Children Cancer Center, St. Jude

COMPUTER SKILLS

- Programs: Anaconda, Microsoft Office, Orcad Pspice, LabVIEW, MATLAB, Eclipse (Android development), VMWare (iOS development), ArcGIS (geographic information system and maps), Latex
- Languages: Python, R, C++, Java, SQL, VHDL, C#, HTML
- Operating Systems: Mac OS, Unix/Linux, Windows.

CERTIFICATION

Communication Skills and Business Etiquette by Dr Hasan Youness. Certificate earned on March 2, 2019.

Introduction to Python for Data Science on Data Camp. Certificate earned on December 26, 2017.

Work Smarter, Not Harder: Time Management for Personal and Professional Productivity by University of California on Coursera. Certificate earner on December 25, 2017.

PERSONAL ATTRIBUTES

Enthusiastic, adaptive and fast-learning person.

Hard-worker who can work well both individually and within a team.

Lifelong learner who is curious to acquire new knowledge and sharpen my skills.

Enjoy collaborating with scientists from different disciplines to develop new skills.

Ability of creating new innovative solutions based on state of the art technologies.

Willing to motivate others and share knowledge.

Good communication skills (verbal and written).

Ability of submitting all my tasks before deadlines.

References available upon request.