



Name: Dr. Michel Nahas

Rank: Assistant Professor – Electrical & Electronics Engineering

Title: Manager – Laboratory

Personal Information

Nationality: French

AU Joining Date: 19 Sep 2016

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Professional Information

Education:	Qualification: Doctorate Major: Electrical engineering College/University: Telecom Paris Tech, Paris, France Year: 2007-2010
	Qualification: Masters Major: Electrical engineering College/University: Telecom ParisTech (ENST) and UPMC (Paris 6), France Year: 2006-2007
	Qualification: Bachelor Major: Electrical engineering College/University: Lebanese University, Faculty of Engineering, Lebanon Year: 2001-2006
Specialization:	Electrical and Electronics Engineering – Emphasis on Communications and Computer Science
Current Academic Position:	Assistant Professor – Electrical & Electronics Engineering
Current Professional Positions:	Laboratory Manager – College of Engineering – Australian University September 2021 – present
Previous Administrative Position Held:	NA
Previous Academic Positions Held:	NA
Fellowships And Honors:	- IEEE membership - Order of Engineers, Tripoli, Lebanon

	- Telecom ParisTech Alumni
Teaching Experience:	- (2016 – Present) - Assistant Professor in the College of Engineering - Australian University, Safat, Kuwait (Full Time) - (2011 – 2016) - Assistant Professor in the School of Engineering - Lebanese International University, Beirut, Lebanon (Full Time)
Industrial And Technical Experience:	- 2010 – 2011: Consultant and Study Engineer- ALTEN TELECOM, Paris, France (Full Time) - 2007 – 2010: Research and Development Engineer, Orange Labs, Paris, France - 2007: Master's Training, Orange Labs, Paris, France - 2006: Engineer – Trainee, LORIA (INRIA), Nancy, France
Research Interest:	- Renewable energy and energy efficiency - Wireless and optical networks - Engineering education - Telecommunication Systems and Circuits - Signal and Image Processing
Research Grants:	- 2021: Safe Water Temperature Monitoring System using Optical Fibers. AU Research Grant (KD1500), Co-Investigator. - 2021: Development of a Hybrid Renewable Energy System Optimized for Kuwait Environment, KFAS (KD 5250), Principal Investigator. - 2020: Real Time Spatial Measurements for Bridge Structures Using Fiber Optics Techniques, KFAS (KD 5500) Co-Investigator. - 2019: Comprehensive Design of a Cell Phone Tower Powered by Different Renewable Energy Sources, AU Research Grant (KD 1170), Principal Investigator. - 2019: Enhancement of Student Learning and Interaction in Engineering Programs at Australian University, Kuwait by Using Audience Response Systems, AU Research Grant (KD 1125), Co-Investigator. - 2017: Improving Energy Efficiency in University Buildings Using Building Information Modeling (BIM), AU Research Grant (KD 1080), Co-Investigator. - 2015: Dense Area Networks: Fairness and QoE metrics, hotspot selection, handover decisions - University of King Abdulaziz, Saudi Arabia. (Consultant) - 2013: Coordinated Tethering over Cellular Networks: Clustering protocols, handover scenarios and signaling - University of King Abdulaziz, Saudi Arabia and Stanford University, United States. (Consultant)
Research and Publications including Journal and Books:	Conference papers: - M. Farhat, M. H. Yassin, M. Nahas and A. Bilal, "Fiber Bragg Grating Sensors vs Strain Gauges for Static Bridge Monitoring System," 2024 IEEE International Instrumentation and Measurement Technology Conference (I2MTC), Glasgow, United Kingdom, 2024, pp. 1-6, doi: 10.1109/I2MTC60896.2024.10560727. - M. Farhat, K. Munisami, M. Nahas, "Safe Water Temperature Monitoring System Using Optical Fibers," 2023 IEEE International Instrumentation and Measurement Technology Conference (I2MTC),

Kuala Lumpur, Malaysia, 2023, pp. 01-05, doi: 10.1109/I2MTC53148.2023.10175996.

- M. Nahas, M. Farhat, S. Asaad, M. A. Mannah, "Assessment of a Hybrid Renewable Energy System: The Case of Kuwait", International Conference on Electrical and Computing Technologies and Applications (ICECTA'2022), Ras Al Khaimah, UAE, November 23-25, 2022.
- M. A. Mannah, M. Nahas, A. Haddad, A. Merheb, "Evaluation of the Effectiveness of Standalone Hybrid Systems for Small Residential Units: Case Study Lebanon", IEEE 3rd International Multidisciplinary Conference on Engineering Technology (IMCET 2021), Beirut, Lebanon, December 8-10, 2021.
- M. Farhat, M. Nahas, H. Salti, "Implementation and evaluation of a new PBL Assessment mechanism", 17th International CDIO Conference, Thanyaburi, Bangkok, Thailand, pp.507-515, June 21-23, 2021.
- Majdi Alomari, Nafesah Alshdaifat, Michel Nahas, Mohamad Farhat, "Assessment of occupants' energy conserving behaviors in the Kuwaiti academic buildings", 4th International Conference on Green Energy Technology (ICGET 2019), Rome, Italy, 16-18 July, 2019.
- M. Nahas, M. Sabati, R. Kalso, M. Azziz, "Proactive Algorithm to Reduce Power Consumption and Handovers in Heterogeneous Mobile Networks", Proceedings of the 8th IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (IEEE UEMCON 2017), New York, USA, October 2017.
- I. Shaykha, A. Menkara, M. Nahas, M. Ghantous, "FEER: Non-Intrusive Facial Expression and Emotional Recognition for Driver's Vigilance Monitoring", Proceedings of IEEE 57th International Symposium ELMAR, Croatia, September 2015.
- K. Al Haj Ismail, J. L. Vicario, A. Morell and M. Nahas; "On Positioning Techniques in LTE Cellular Systems," Proceedings of 21st LAAS International Science Conference (LAAS 2015), Beirut, Lebanon, April 2015.
- M. Nahas, Milad Ghantous, K. Al Haj Ismail and B. Assaf; "For Better Energy Consumption and Management in Future Cellular Networks," Proceedings of International Conference on Renewable Energies for Developing countries (REDEC 2014), Beirut, Lebanon, November 2014.
- M. Ghantous, M. Nahas, M. Ghamloush and M. Rida, "An Android Application for the Assistance of the Visually Impaired," Proceedings of International Conference on Advanced Machine Learning Technologies and Applications (AMLTA2014), Cairo, Egypt, November 2014.
- K. Al Haj Ismail, B. Assaf, M. Ghantous and M. Nahas; "Reducing Power Consumption of Cellular Networks by Using Various Cell Types and Cell Zooming," Proceedings of International Conference on e-Technologies and Networks for Development (ICeND 2014), Beirut, Lebanon, April 2014.
- M. Nahas, M. Mjalled, Z. Zohbi, Z. Merhi and M. Ghantous; "Enhancing LTE - WiFi Interoperability Using Context Aware Criteria for Handover Decision," Proceedings of International Conference on Microelectronics, Beirut, Lebanon, December 2013.

- Z. Merhi, M. Nahas, S. Abdul-Nabi, A. Haj-Ali and M. Bayoumi; "RSSI Range Estimation for Indoor Anchor Based Localization for Wireless Sensor Networks," Proceedings of International Conference on Microelectronics, Beirut, Lebanon, December 2013.
- Z. El-Bazzal, M. Nahas, M. Raad, M. Ghareeb, and A. Haj-Ali; "Improving the Performance of the Transport Control Protocol over 802.11 Wireless Networks," Proceedings of International Conference on Microelectronics (ICM 2013), Beirut, Lebanon, December 2013.
- M. Nahas; "Use of Delay Tolerant Space Time Codes to Combat Synchronization Errors in Cooperative Networks," Proceedings of International Conference on Microelectronics (ICM 2013), Beirut, Lebanon, December 2013.
- M. Ghantous, M. Nahas, M. Mannah and R. El Khoury, "Integration of Mobile Application Development in Computer Engineering Curricula," Proceedings of the 9th World Congress on Engineering Education (WCEE 2013), Beirut, Lebanon, October 2013.
- M. Mannah, M. Nahas and M. Ghantous, "A Three-Pillar Engineering Educational System: Student - Faculty Member - Academic Institution," Proceedings of the 9th World Congress on Engineering Education (WCEE 2013), Beirut, Lebanon, October 2013.
- N. Akkari, G. Al-Dabbagh, M. Nahas, B. Bawazeer, J. Cioffi and H. Tabrizi; "Coordinated Tethering over Cellular Networks: Handover Scenarios and Signaling," Proceedings of IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC 2013), London, United Kingdom, September 2013.
- M. Nahas, Z. El-Bazzal and N. Akkari; "Improving Relay Selection in Cellular Networks," Proceedings of Mediterranean Microwave Symposium (MMS'2013), Saida, Lebanon, September 2013.
- A. Saadani, M. El Tabach, A. Pizzinat, M. Nahas, P. Pagnoux, S. Purges and Y. Bao; "Digital Radio over Fiber for LTE-Advanced: Opportunities and Challenges," Proceedings of International Conference on Optical Network Design and Modeling, Brest, France, April 2013.
- M. Nahas, A. Haj-Ali, T. Chakerian and M. Rihani, "Asynchronous Relay Selection Protocol for Distributed Cooperative Networks," Proceedings of International Symposium on Wireless Communication Systems (ISWCS'12), Paris, France, August 2012.
- M. Nahas, S. Abdul-Nabi, L. Bouchnak and F. Sabeh, "Reducing Energy Consumption in Cellular Networks by Adjusting Transmitted Power of Base Stations," Proceedings of the 3rd Symposium on Broadband Networks and Fast Internet Proceedings, Baabda, Lebanon, May 2012.
- M. Nahas, A. Saadani, J-P. Charles and Z. El-Bazzal, "Base Stations Evolution: Toward 4G Technology," Proceedings of International Conference on Telecommunications (ICT 2012), Jounieh Lebanon, April 2012.
- Z. El-Bazzal, K. Ahmadieh, Z. Merhi, M. Nahas and A. Haj-Ali, "A Cross Layered Routing Protocol for Ad hoc Networks," Proceedings of International Conference on Information Technology and e-Services (ICITeS'2012), Sousse, Tunisia, March 2012.

- M. Nahas, A. Saadani, R. Hatoum, "Low Complexity Decoding Methods for Asynchronous Space Time Block Codes," Proceedings of IEEE International Workshop on Signal Processing Advances for Wireless Communications (SPAWC 2011), San Francisco, USA, June 2011.
- M. Nahas, A. Saadani and G. Rekaya, "General Construction Method of Bounded Delay-Tolerant Space Time Block Codes," Proceedings of IEEE Global Communications Conference (GLOBECOM 2010), Miami, USA, December 2010.
- M. Nahas, A. Saadani and G. Rekaya, "Bounded Delay-Tolerant Space Time Codes with Optimal Rates for Two Cooperative Antennas"; Proceedings of IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC 2010), Istanbul, Turkey, September 2010.
- M. Nahas, A. Saadani and G. Rekaya, "Asynchronous Full-Diversity High-Rate Coding Scheme for Cooperative Relay Networks"; Proceedings of IEEE International Workshop on Signal Processing Advances for Wireless Communications (SPAWC 2010), Marrakech, Morocco, June 2010.
- M. Nahas, A. Saadani and W. Hachem, "Outage Probability and Power Optimization for Asynchronous Cooperative Networks"; Proceedings of International Conference on Telecommunications (ICT 2010), Doha, Qatar, April 2010.
- M. Nahas, A. Saadani and W. Hachem, "Performance of Asynchronous Amplify-and-Forward Cooperative Relay Networks"; Proceedings of IEEE Global Communications Conference (GLOBECOM 2009), Hawaii, USA, December 2009.
- M. Nahas, A. Saadani and W. Hachem, "On the Outage Probability of Asynchronous Wireless Cooperative Networks"; Proceedings of IEEE Vehicular Technology Conference (VTC2008-Fall), Calgary, Canada, September 2008.

Journal papers:

- Mohamad Farhat, Michel Nahas, Nader Ghareeb, Kevin Munisami. "Enhancing technical and interpersonal skills in engineering education through audience response system in project-based learning". International journal of engineering pedagogy, Volume 9 Issue 4 April 2025.
- Yassin, M.H., Mohamad Farhat, Soleimanpour, R., Michel Nahas. "Fiber Bragg grating (FBG)-based sensors: a review of technology and recent applications in structural health monitoring (SHM) of civil engineering structures". Discov Civ Eng 1, 151 (2024). <https://doi.org/10.1007/s44290-024-00141-4>
- Mohammad Hany Yassin, Mohamad Farhat, Michel Nahas, Ahmad Said Saad, Investigation of fiber Bragg grating sensor measurability in concrete beams under static load conditions, Heliyon, Volume 10, Issue 22, 2024, <https://doi.org/10.1016/j.heliyon.2024.e4010>
- M. Farhat, M. Nahas, N Ghareeb, R. El Khoury, "Enhancement of student learning and interaction in engineering programs using an

	audience response system”, World Transactions on Engineering and Technology Education, Vol.19, No.2, 2021. - M. Farhat, M. Abdul-Niby, M. Nahas, M. Alomari “Compact Tri-Band Bandpass Filter with High Out-of-Band Rejection”, ETASR - Engineering, Technology & Applied Science Research, Vol 7, No 4, 2017. - M. Farhat, J. Munisami, M. Abdul-Niby, M. Nahas, “Compact Quint-Band Bandpass Filter Based on Stub-Loaded Resonators”, ETASR - Engineering, Technology & Applied Science Research, Vol 7, No 3, 2017. - N. Akkari, G. Al-Dabbagh, M. Nahas, J. Cioffi and H. Tabrizi; “Dynamic Clustering Protocol for Coordinated Tethering over Cellular Networks,” Elsevier International Journal for the Computer and Telecommunications Industry (Computer Communications), May 2013. - M. Nahas, A. Saadani, and G. Rekaya, “Bounded Delay-Tolerant Space Time Block Codes for Asynchronous Cooperative Networks,” IEEE Transactions on Wireless Communications, vol. 10, no. 10, pp. 3288 - 3297, October 2011. - M. Nahas, A. Saadani, and W. Hachem, “Performance of Asynchronous Two-Relay Two-Hop Wireless Cooperative Networks”, IEEE Transactions on Wireless Communications, vol. 9, no. 3, pp. 1086 – 1096, March 2010. Book: - M. Nahas, Asynchronous Cooperative Networks: Performance Analysis and Code Design, Amazon edition (createspace.com), ISBN: 1463742371. Patents: - A. Saadani, M. Nahas, and G. Rekaya, “Transmission process of a numerical signal for a distributed system, with corresponding software product and relays device,” filed by Orange Labs on 13 January 2010, number 1050200. - M. Nahas, A. Saadani, and G. Rekaya, “Transmission process implemented by a node in a cooperative communication system constituted by a plurality of nodes,” filed by Orange Labs on 31 March 2010, number 1052426.
Paper Presentations at Professional Conferences:	- IEEE Vehicular Technology Conference (VTC2008 Fall), Calgary, Canada, September 2008 - IEEE Global Communications Conference (GLOBECOM 2009), Hawaii, USA, December 2009 - International Conference on Telecommunications (ICT 2010), Doha, Qatar, April 2010 - IEEE International Workshop on Signal Processing Advances for Wireless Communications (SPAWC 2010), Marrakech, Morocco, June 2010 - IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC 2010), Istanbul, Turkey, September 2010 - International Conference on Telecommunications (ICT 2012), Jounieh Lebanon, April 2012

	- 3rd Symposium on Broadband Networks and Fast Internet Proceedings, Baabda, Lebanon, May 2012 - Mediterranean Microwave Symposium (MMS'2013), Saida, Lebanon, September 2013 - 9th World Congress on Engineering Education (WCEE 2013), Beirut, Lebanon, October 2013 - International Conference on Microelectronics (ICM 2013), Beirut, Lebanon, December 2013 - International Conference on e-Technologies and Networks for Development (ICeND 2014), Beirut, Lebanon, April 2014 - International Conference on Renewable Energies for Developing countries (REDEC 2014), Beirut, Lebanon, November 2014 - 8th IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (IEEE UEMCON 2017), New York, USA, October 2017. - International Conference on Electrical and Computing Technologies and Applications (ICECTA'2022), Ras Al Khaimah, UAE, November 2022.
College Service including committee Membership:	College of Engineering - Electrical & Electronics Engineering: - Labs Committee – Head - Teaching, Learning, Validation & Moderation Committee – Member - Students Appeals and Complaints Committee – Member - Project Based Learning Committee – Member - Disciplinary Committee – Member - Quality Management Committee – Member
National Service:	NA
College Committees:	College of Engineering: - Labs and Workshops Committee - Member