

## EXPERIENCE

- **University of Oulu** Oulu, Finland  
*Postdoctoral Fellow* *Jan 2020 - Now*
  - **Research Interest:** Communication-efficient distributed machine learning.
- **King Abdullah University of Science and Technology** Thuwal, KSA  
*Teaching Assistant* *Aug 2017 - December 2018*
  - **Probability and Random Processes:** Preparing/grading homeworks, quizzes and exams and giving tutorials.
- **King Abdullah University of Science and Technology** Thuwal, KSA  
*Graduation Project* *Feb - June 2013*
  - **Uncertainty Quantification in European Options:** Quantifying the effect of uncertainty in the volatility of the market on the price of European options as well as the Delta hedging strategy.
- **Société Magasin Général** Tunis, Tunisia  
*Engineer Intern* *Summer 2012*
  - **Retail Outlets Efficiency Analysis:** Analyzing the performance of the remodeled retail outlets using the Data Envelopment Analysis (DEA) method.

## EDUCATION

- **King Abdullah University of Science and Technology** Thuwal, KSA  
*Ph.D in Statistics* *Aug. 2015 – Dec. 2019*
  - **Thesis:** Proposing efficient importance sampling estimators for the accurate performance analysis of wireless communication systems.
  - **Advisor:** Prof. Mohamed-Slim Alouini.
  - **Relevant Coursework:** Computational Multivariate Statistics, Stochastic Methods in Engineering, Machine Learning, Linear Models.
- **King Abdullah University of Science and Technology** Thuwal, KSA  
*Master of Science in Applied Mathematics and Computational Science* *Aug. 2013 – May 2015*
  - **Thesis:** Implementing the Multilevel Monte Carlo (MLMC) method to accelerate the computation of the expected information gain in the context of Bayesian experimental design.
  - **Advisor:** Prof. Raul Tempone.
  - **Relevant Coursework:** Numerical Linear Algebra, Numerical Optimization, Numerical Methods for SDEs.
- **Ecole Polytechnique de Tunisie** La Marsa, Tunisia  
*Diplôme d'Ingénieur* *Sep. 2010 – June 2013*
  - **Relevant Coursework:** Econometrics, Operations research, Data Analysis, Databases.
  - **Rank:** 1/50.

## PUBLICATIONS

- Journals:
  - J8) A. Elgabli, J. Park, A. S. Bedi, C. Ben Issaid, M. Bennis, and V. Aggarwal, "Q-GADMM: Quantized Group ADMM for Communication Efficient Decentralized Machine Learning," in *IEEE Transactions on Communications*, Sep. 2020.
  - J7) A. Trichili, C. Ben Issaid, B. S. Ooi, and M.-S. Alouini, "A CNN Based Structured Light Communication Scheme for Internet of Underwater Things Applications," in *IEEE Internet of Things Journal*, 2020.
  - J6) C. B. Issaid and M.-S. Alouini, "Level Crossing Rate and Average Outage Duration of Free Space Optical Links," in *IEEE Transactions on Communications*, vol. 67, no. 9, pp. 6234-6242, June 2019.
  - J5) C. Ben Issaid, M.-S. Alouini and R. Tempone, "Efficient Monte Carlo Simulation of the Left Tail of Positive Gaussian Quadratic Forms", arXiv:1901.09174.

- J4) C. Ben Issaid, M.-S. Alouini and R. Tempone, "On the Fast and Precise Evaluation of the Outage Probability of Diversity Receivers Over  $\alpha - \mu$ ,  $\kappa - \mu$ , and  $\eta - \mu$  Fading Channels," in IEEE Transactions on Wireless Communications, vol. 17, no. 2, pp. 1255-1268, Feb. 2018.
- J3) C. B. Issaid, M.-S. Alouini and R. Tempone, "Efficient Simulation of the Outage Probability of Multihop Systems," in IEEE Photonics Journal, vol. 9, no. 6, pp. 1-8, Dec. 2017.
- J2) C. Ben Issaid, K. Park and M. Alouini, "A Generic Simulation Approach for the Fast and Accurate Estimation of the Outage Probability of Single Hop and Multihop FSO Links Subject to Generalized Pointing Errors," in IEEE Transactions on Wireless Communications, vol. 16, no. 10, pp. 6822-6837, Oct. 2017.
- J1) C. Ben Issaid, N. Ben Rached, A. Kammoun, M.-S. Alouini and R. Tempone, "On the Efficient Simulation of the Distribution of the Sum of Gamma-Gamma Variates With Application to the Outage Probability Evaluation Over Fading Channels," in IEEE Transactions on Communications, vol. 65, no. 4, pp. 1839-1848, April 2017.
- Conferences:
  - C4) A. Trichili, C. Ben Issaid, Y. Guo, T. K. Ng, Boon S. Ooi, M.-S. Alouini, "Detecting Underwater Laguerre Gaussian Modes using a Convolutional Neural Network", Accepted at 2019 Advanced Photonics Congress.
  - C3) C. Ben Issaid, M.-S. Alouini and R. Tempone, "Efficient outage probability evaluation of diversity receivers over  $\alpha - \mu$  fading channels," 2018 IEEE Wireless Communications and Networking Conference (WCNC), Barcelona, 2018, pp. 1-6.
  - C2) C. Ben Issaid, N. Ben Rached, A. Kammoun, M.-S. Alouini and R. Tempone, "On the sum of Gamma-Gamma variates with application to the fast outage probability evaluation over fading channels," 2016 IEEE Global Conference on Signal and Information Processing (GlobalSIP), Washington, DC, 2016, pp. 25-29.
  - C1) C. B. Issaid, K. Park, M.-S. Alouini and R. Tempone, "Fast Outage Probability Simulation for FSO Links with a Generalized Pointing Error Model," 2016 IEEE Global Communications Conference (GLOBECOM), Washington, DC, 2016, pp. 1-7.

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## ☰ COMPUTER SKILLS AND LANGUAGES

- **Computer Skills:** Python, SQL, Matlab, Command Line, Git, Keras, LaTeX.
- **Languages:** Native Arabic, Bilingual French, Fluent English.