MOHAMMAD HOSSEIN ASKARI HEMMAT

Personal Information

✉ m.h.askari.hemmat@gmail.com
http://hossein1387.github.io/
https://github.com/hossein1387/

Research Interest

- Making Deep Neural Networks more computationally efficient
- Deep Learning Acceleration

Education

- **Ph.D. student** in Electrical and Computer Engineering 2018-
  Polytechnique Montreal, Montreal, Quebec, Canada,
  IFT6135 Representation Learning (Deep Learning) (A-)
  ELE8307 Rapid prototyping of digital systems
- **Master of Applied Science** in Electrical and Computer Engineering 2013-2015
  Concordia University, Montreal, Quebec, Canada
  Total GPA: 4.15/4.3
- **Bachelor of Science** in Electrical Engineering 2008-2012
  Shahid Bahonar University of Kerman, Iran
  Total GPA: 3.2/4

Publications

- Towards code generation for ARM Cortex-M MCUs from SysML activity diagrams **M. H. Askari-Hemmat**, O. A. Mohamed and M. Boukadoum, ISCAS - International Symposium on Circuits and Systems 2016, Montreal
- Formal Modeling, Verification and Implementation of a Train Control System **M. H. Askari-Hemmat**, O. A. Mohamed and M. Boukadoum, ICM 2015 - 27th International Conference on Microelectronics
- Automatic Mapping of AF3 specifications to ARM Cortex-M based FRDM platform **M. H. Askari-Hemmat**, O. A. Mohamed and M. Boukadoum, ICM 2014 - 26th International Conference on Microelectronics
- Duplication Avoidance for Energy Efficient Wireless Sensor Networks A.Mahani, **M. H. Askari-Hemmat** and Yousef S. Kavian, 8th International Symposium on Communication Systems, Networks & Digital Signal Processing (CSNDSP), 2012

Honors and Awards:

- Graduate Student Support Program (GSSP) scholarship Apr 2014
- ReSMiQ Scholarship for M.SC students Feb 2014
- Partial Tuition Scholarship for International Students May 2013
- Graduate Student Support Program (GSSP) scholarship May 2013
- ReSMiQ Scholarship for M.SC students Jan 2013

Work Experience

- **Deep Learning Research Engineer** at DeepLite (June 2018-)
  - Implementing Deep Learning Models such as CNNs on FPGAs
  - Developing new methods for accelerating models on a hardware platform

- **ASIC Verification Engineer** at Microsemi (June 2016 to June 2018)
  - Working on next generation of Optical Transport Network (OTN) processors
  - Writing tests in SystemVerilog using UVM methodology
  - Developing Ethernet traffic generator in C++
  - Developing scripts for analyzing test outputs

- **Software Engineer** at TRU Simulation + Training (2015-2016)
  - Developing software drivers for various high speed avionic protocols in C++: Airbus VCOM, AFDX, A429
  - Building custom linux kernels as well as maintaining linux machines for the hosts

and re-hosts of the test station
- Developing scripts for running various avionic simulation packages

Languages English (Fluent), Persian (Native), French (B2)

Computer Skills:

- Machine Learning Frameworks: PyTorch
- Programming Languages: C/C++, Python, Scala, Bash
- Hardware Description Languages: SystemVerilog, Chisel, SystemC
- Version Control Management: Git, SVN

References

- **Jean Pierre David** (PhD Supervisor)
  Electrical and Computer Engineering Department
  Ecole Polytechnique de Montral
  Montreal, Quebec, Canada
  E-mail: JPDavid@polymtl.ca

- **Dr. Otmane Ait Mohamed** (Master Thesis Supervisor)
  Electrical and Computer Engineering Department
  Concordia University
  Montreal, Quebec, Canada
  E-mail: otmane.aitmohamed@concordia.ca

- **Dr. Sofiene Tahar**
  Electrical and Computer Engineering Department
  Concordia University
  Montreal, Quebec, Canada
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