

Karim Ali

Avenue de Cour 105, 1007, Lausanne, Switzerland
+41.78.809.1955 – karim.ali@epfl.ch
<http://cvlab.epfl.ch/~ali>

EDUCATION

- PhD in Computer Science** 2007-present
EPFL – Computer Vision Lab.
 - Awarded Quebec's FQRNT scholarship (60 000\$)
 - Expected Graduation: March 2012
- Master's of Engineering** 2002-2005
McGill University - Telecommunications & Signal Processing Lab.
CGPA: 3.68/4.0.
 - Thesis evaluation: Excellent/Very Good
 - Awarded FCAR scholarship (20 000\$)
 - Awarded Graduate excellence scholarship (2500\$)
- Bachelor of Engineering** 1998-2002
McGill University - Honours Electrical Engineering, Minor in Mathematics.
CGPA: 3.57/4.0.
 - Full McConnell scholarship, 4 year recipient, (8000\$)
 - McGill Excellence Bursaries, 2 year recipient (1200\$)
 - Winter semester 2001 in INSA de Lyon, France under a study-abroad Fellowship (5000\$)

LANGUAGES

- Spoken and written fluently: English, French.
- Conversational: Arabic, Spanish.

WORK EXPERIENCE

- Research Engineer** 2007-present
CSEM – Sensory Information Processing
 - Worked in a part-time capacity, 20%, while completing doctoral studies on the training of embedded vision systems.
 - Consulted on a coffee capsule recognition system for a multinational client and a road ice detection system for the EU.
- Business Analyst** 2005 - 2007
Accenture Ltd. – Business and System Integration Consulting
 - Trained in Accenture consulting methodology. Successfully met support and project development needs of Alcan, a major multinational client for 2 years.
 - Worked with the client to identify needs, analyze, build and implement business processes and develop new functionality for their global financial system.
 - Lead support team from October 2006 through daily activities and successfully resolved a complete failure of the client's global financial system.

TEACHING EXPERIENCE

- Teaching Assistant** 2009-2011
EPFL, School of Computer and Communication Sciences
 - Managed student assistants for first and second year C/C++ course.
 - Delivered lectures to classes of 120 for first year C/C++ course.
 - Supervised laboratory experiments for groups of 10 students for second year C/C++ course.

Teaching Assistant

2002-2004

McGill University, Electrical Engineering Department

- Managed fellow teacher assistants, assigning tasks while resolving conflicting schedules.
- Delivered lectures to classes of 120 and tutorials to groups of 50 students.
- Supervised laboratory experiments for groups of 10 students.

RESEARCH EXPERIENCE

Machine Learning (Current Research – PhD)

Developed a framework for the training of visual detectors.

Signal Processing (Master's Thesis)

Developed a framework for the implementation of Belief Propagation on general Bayesian Networks.

Information Theory (Honour's Thesis)

Derived the Capacity of CDMA soft-decision wireless systems in noisy environments via Information Theoretical concepts.

Telecommunication (Undergraduate Research Assistant)

Simulated a wireless SS/CDMA network to study its performance in terms of achievable rates under possible allocations of terminals to base stations.

Photonics (Undergraduate Research Assistant)

Implemented a known method for the acquisition of highly accurate surface profiles (in the nanometer scale) by the analysis of light fringes.

Medical Imaging (Internship at the MEM Research Institute for Biomechanics)

Developed a method that allows surgeons to extract critical 3D information for diagnosis from standard 2D hip x-rays.

SELECTED PUBLICATIONS

- A Real-Time Deformable Detector
K. Ali, F. Fleuret, David Hasler and P.Fua.
IEEE Transactions on Pattern Analysis and Machine Intelligence, 2012
- FlowBoost - Appearance Learning from Sparsely Annotated Video.
K. Ali, D. Hasler and F. Fleuret.
IEEE Conference on Computer Vision and Pattern Recognition, 2011 (oral)
- Joint Pose Estimator and Feature Learning for Object Detection
K. Ali, F. Fleuret, David Hasler and P.Fua.
IEEE International Conference on Computer Vision, 2009
- Joint Source-Channel Decoding of Entropy Coded Sources
K. Ali and F. Labeau.
IEEE Vehicular Technology Conference, 2005. (oral)

SPECIALIZED SKILLS

Programming Languages/ Operating Systems

- C, C++
- Matlab, Bash
- Linux

INTERESTS

Performance Arts

- Performed in 4 plays, and performed and co-directed one in McGill's Player's Theatre.
- Co-directed the play Shaytaan's Corner in the McGill Drama Festival
- Directed a play with EPFL GSA.