

PHILIPPE GIGUÈRE

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System Specialist

**Machine Learning | Robotics | Telecommunication | Network
C++ | C | Real time | Embedded Systems | Matlab**

PROFILE System specialist. Looking for opportunities in scientific research or high-tech R&D. Multidisciplinary background combining engineering hands-on knowledge (electronics, control theory, sensors) and computer science (machine learning, mobile robotics, network, telecommunication, computer architecture.)

EDUCATION

Ph. D. Computer Science (2004-...)

McGill University, Montreal, Québec, Canada

Mobile and underwater robotics, embedded systems, machine learning.

Master Degree Computer Science (2000-2003)

Northeastern University, Boston, Massachusetts, USA

GPA: 4.0 / 4.0

Computer architecture, computer network, artificial intelligence.

Engineering Physics Bachelor Degree (1992-1996)

Université Laval, Sainte-Foy, Québec, Canada

GPA: 4.17 / 4.33

Instrumentation and systems, telecommunication.

SELECTED PUBLICATIONS

Philippe Giguère, G. Dudek. Clustering Sensor Data for Terrain Identification using a Windowless Algorithm. Robotics Science and System (RSS), Zurich, Switzerland, June 2008.

D. Marinakis, Philippe Giguère, and G. Dudek. Learning Network Topology from Simple Sensor Data. 20th Canadian Conference on Artificial Intelligence, Montreal, Canada, May 2007.

J. Sattar, Philippe Giguère and G. Dudek. Sensor-Based Behavior Control for an Autonomous Underwater Vehicle. International Journal of Robotics Research (IJRR) 2008.

WORK EXPERIENCE

1999-2003 NMS Communications, Framingham, Massachusetts, USA
SYSTEM ENGINEER

Worked on T.38 real-time fax-over-IP development (C++), on embedded DSP cards and host-based Windows NT. Design of a heterogeneous cluster manager for the myCaller™ high-availability computer telephony and Voice-over-IP platform. Implementation in C++ using the portable library ACE.

Accomplishment

- Patent application for T.38 buffering scheme.
- Technical presentations on T.38 and host media processing.
- Cluster manager project completed in time.
- Obtained a master degree in computer science while working.

1996-1998 CAE Électronique, Ville Saint-Laurent, Québec, Canada
FLIGHT CONTROLS SPECIALIST, COMMERCIAL DIVISION

Design and integration of flight controls simulation software (FORTRAN 77, C.) Tuning and calibration of hydraulic and electrical actuators. Modeling of mechanical (surface, actuators, cables, bell cranks, notches) and electrical (autopilot interconnect, stall computers) systems. FAA certifications. Tuning of system “feel” based on customer pilot inputs.

Accomplishment

- Modeling and verification for 4 flight simulators (Airbus A300-600R, McDonnell-Douglas MD-82), with FAA certification.
- Mechanical and electrical (LMM) schematics reading.
- Working knowledge of hydraulic and electrical actuators.
- Field trip (Asia/Europe/USA) for total duration of 9 months.

PATENT

U. S. Patent #7427220 **Amphibious robotic device**, issued October 2008.

References are available upon request.