

OLIVIER KOCH

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EDUCATION

- 2004 - present **Massachusetts Institute of Technology, Cambridge, MA, USA**
Computer Science and Artificial Intelligence Lab (CSAIL)
PhD Candidate, Computer Vision – Expected September 2009
Thesis Title: A Self-Calibrating Vision-based Method for Human-Oriented Navigation
- Feb 2007 **Massachusetts Institute of Technology, Cambridge, MA, USA**
Computer Science and Artificial Intelligence Lab (CSAIL)
Master of Science
Thesis Title: Wide-Area Egomotion from Omnidirectional Video and Coarse 3D Structure
Courses taken (Cumulative GPA 4.6/5)
6.866: Computer Vision 6.824: Distributed Systems
6.840: Theory of Computation 6.839: Computer Graphics
- 1999-2002 **Ecole Nationale Supérieure de Techniques Avancées, France**
Diplôme d'Ingénieur
Major: Operating systems/Parallel computing/Networks/Cryptography

EXPERIENCE

- Summer 2007 **Institut National de Recherche en Informatique et Automatique (INRIA), France**
Intern, Perception group (advisor Prof Peter Sturm)
Developed new methods for 3D patch reconstruction from known structure-from-motion algorithms.
- 2006-2007 **Massachusetts Institute of Technology, Cambridge, MA, USA**
Team member, DARPA Urban Challenge 2007
Developed applications for mission editing, satellite imagery and intelligent navigation in unknown urban environments. Team ranked four out of 35 participants.
- 2002-2004 **General Electric Healthcare, Buc, France**
Software Engineer, X-Ray Imaging System Innova 4100 Digital Leader Team
Designed and developed C++/CORBA applications for medical applications.
- Summer 2002 **Massachusetts Institute of Technology, Cambridge, MA, USA**
Intern, Lab for Computer Science, Computer Graphics Group, The City Scanning Project
Mapped C++ parallel algorithms onto IRIX cluster with MPI (speedup 15).
Assisted students on camera calibration and epipolar geometry problems.
- Summer 2001 **Université de Jussieu, Paris, France**
Intern, Lab for Dynamical Meteorology
Developed cluster analysis models for the Southern Hemisphere climate.

PUBLICATIONS

Olivier Koch, Seth Teller, *A Self-Calibrating, Vision-based Calibration Assistant*, ECCV Workshop on Computer Vision Applications for the Visually Impaired, October 2008, Marseille, France.

Olivier Koch, Seth Teller, *Wide-Area Egomotion Estimation from Known 3D Structure*, CVPR 2007, Minneapolis.

Olivier Koch, Seth Teller, *The City Scanning Project: Validation and Parallel Algorithms*, MIT LCS Technical Report, 2002

TEACHING

Spring 2008	6.01 Introduction to EECS 1, Teaching Assistant (Prof. L. Kaelbling, T. Lozano-Perez) An introduction to the main computer science concepts through robotics: software engineering, feedback and control, circuits, probability and planning. 300+ students! Very intensive class involving a lot of student-teacher interaction in labs.
2008/2009	6.092 Introduction to Software Engineering in Java, Instructor A hands-on introductory class to Java over four weeks in January. Two instructors, 60 students.

TECHNICAL SKILLS

Computers	Proficient in C/C++/Java/Matlab/Perl/Python/Bash scripting Operating systems: Windows 2000/XP, Linux Libraries: OpenGL, MPI, pthread, ImageMagick, OpenCV, IPP Camera Calibration: Matlab, EasyCalib Embedded systems: MINI-ITX
Languages	French: native; English: fluent; German: renewable; Spanish: basics
Committees	MIT Club Francophone, President (2006-07) MIT Nautical Association, Treasurer (2006) & Vice-President (2007) Total Regatta at MIT, President : 40 participants, \$10,000 budget (2006 & 2007) Sidney Pacific Jazz Band, trumpet (2004-2006)

REFERENCES

Upon request.