

# OLIVIER KOCH

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## EDUCATION

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- 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'Ingenieur  
Major: Operating systems/Parallel computing/Networks/Cryptography

## EXPERIENCE

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- 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**

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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**

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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**

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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**

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Upon request.