

# Mathieu Aubry

## PERSONAL INFORMATION AND CONTACT

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Phone	+33 (0)1 39 63 57 11
Nationality	French
Birth date	May 1st, 1987
Birth place	Le Mans (72), France
Family situation	married, no children

## PROFESSIONAL EXPERIENCE

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**Sept 2014-present, Imagine team at École des Ponts ParisTech (ENPC, Champs-sur-Marne, France)**

Permanent researcher in Computer Vision.

**Sept 2011-expected Dec 2014, WILLOW team at INRIA-ENS (Paris, France) and CVPR group at TU München (Munich, Germany)**

PhD on the analysis of 3D shapes and their relationship to 2D depictions (including paintings and drawings).

**Oct 2011-Apr 2012, TU München (Munich, Germany)**

Associate researcher in the Computer Vision and Pattern Recognition group of Daniel Cremers, working on 3D shape descriptions and supervising a seminar on feature descriptors.

**Feb 2011-Sept 2011, Adobe System Inc. (Cambridge, MA, United States)**

Intern under the supervision of Sylvain Paris (Adobe) and Frédo Durand (MIT), working on detail manipulation in images and image statistics.

**Aug 2010-Dec 2010, TU München (Munich, Germany)**

Associate researcher in the Computer Vision and Pattern Recognition group of Daniel Cremers, working on camera calibration and 3D shape descriptions.

**Apr 2009-Aug 2009, University of California, Berkeley (Berkeley, CA, United States)**

Visiting scholar, working in the Linguistics department with Georges Lakoff on the mathematical understanding and representation of space (research internship for the École Polytechnique).

**Jul 2008-Aug 2008, OXFAM bookshop (York, United Kingdom)**

Volunteer in the bookshop (work experience internship for the École Polytechnique).

**Oct 2006-Apr 2007, Maison d'arrêt des Yvelines (Bois d'Arcy, France)**

Intern in a state prison in charge of projects concerning organization, training and education of guards and of detainees (human relations internship for the École Polytechnique).

## EDUCATION

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**PhD in Computer Science (expected December 2014).**

INRIA and TU München, delivered by Paris Diderot university (Paris, France)

**Master degree in Mathematics, Vision and Machine Learning.**

ENS Cachan (Cachan, France)

**Engineering degree (Mathematics and Informatics).**  
École des Ponts ParisTech (ENPC, Champs-sur-Marne, France)

**Engineering degree (Fundamental Physics and Biology).**  
École Polytechnique (Palaiseau, France)

## LANGUAGES

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French, English, German. Notions of Spanish, Latin and ancient Greek.

## PERSONAL INTERESTS

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History, art, photography, cognitive sciences, swimming.

## AWARDS AND RECOGNITION

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**2009:** Research Internship Prize from the École Polytechnique.

**2003:** French Olympiads in Mathematics, ranked 1 in the Orléans-Tours region, ranked 11 in France.

## PUBLICATIONS

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**Anisotropic Laplace-Beltrami operators for shape analysis**, M. Andreux, E. Rodolà, M. Aubry, D. Cremers, *European Conference on Computer Vision (ECCV) - Sixth workshop on Non-Rigid Shape Analysis and Deformable Image Alignment (NORDIA)*, 2014

**Seeing 3D chairs: exemplar part-based 2D-3D alignment using a large dataset of CAD models**, M. Aubry, D. Maturana, B. Russell, A. Efros and J. Sivic, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2014 (oral, 5.75% acceptance rate)

**Painting-to-3D Model Alignment Via Discriminative Visual Elements**, M. Aubry, B. Russell and J. Sivic, *ACM Transactions on Graphics*, 2014 (presented at SIGGRAPH 2014)

**A Super-resolution Framework for High-Accuracy Multiview Reconstruction**, B. Goldluecke, M. Aubry, K. Kolev, D. Cremers, *International Journal of Computer Vision (IJCV)*, 2014

**Fast Local Laplacian Filters: Theory and Applications**, M. Aubry, S. Paris, S. Hasinoff, J. Kautz, F. Durand, *ACM Transactions on Graphics*, 2014 (presented at SIGGRAPH 2014)

**The Wave Kernel Signature: A Quantum Mechanical Approach To Shape Analysis**, M. Aubry, U. Schlickewei, D. Cremers, *IEEE International Conference on Computer Vision (ICCV) - Workshop on Dynamic Shape Capture and Analysis (4DMOD)*, 2011, European patent, 2012

**Decoupling Photometry and Geometry in Dense Variational Camera Calibration**, M. Aubry, K. Kolev, B. Goldluecke, D. Cremers, *IEEE International Conference on Computer Vision (ICCV)*, 2011

**Pose-Consistent 3D Shape Segmentation Based on a Quantum Mechanical Feature Descriptor**, M. Aubry, U. Schlickewei, D. Cremers, *Pattern Recognition (Proc. DAGM)*, Springer, 2011