Matthieu Guillaumin

Ph.D. in Mathematics and Computer Science
Postdoc in the CALVIN group of the Computer Vision laboratory at ETH Zürich

Born May 8th, 1982, Paris, France.
French citizenship
Single, no children

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Education

2007 – 2010   *Exploiting multimodal data for image understanding*, PhD thesis, Institut Polytechnique de Grenoble, France.

2003 – 2007   *École Normale Supérieure (ÉNS)*, Paris, France. Computer science and applied mathematics department.

2004 – 2006   *Master Parisien de Recherche en Informatique* from École Normale Supérieure, Paris, France. Research Master in Computer Science. Joint diploma with École Polytechnique and TELECOM ParisTech.

2003 – 2005   *Magistère de Mathématiques Fondamentales et Appliquées, et d'Informatique* from École Normale Supérieure. Pure and applied mathematics, and computer science diploma.

Awards and Grants

2009   *Google Student grant.* For travelling to ICCV in Kyoto.

2007   *3-year French Ministry of Research PhD grant.* Funding my doctoral work.

Research interests

► Learning from weak supervision.
► Modeling interaction between vision and language.
► Image and video understanding.
► Large-scale methods.

Past positions

2007 – 2010   **Ph.D. student** in the LEAR team (INRIA, Grenoble, France) in the field of computer vision, and machine learning for computer vision.
Advisors: Jakob Verbeek and Cordelia Schmid

2007 – 2010   **Teacher** at Grenoble University and Ensimag engineering school. Includes teaching networking, language and compiler theory.

2006   **Masters thesis internship** at INRIA Rhône-Alpes, Grenoble, France. *Automatic topic discovery for object recognition.*

2004 – 2005   **Internship** at the Department of Linguistics, UCLA, Los Angeles. *Translation algorithms between formal grammars of natural language.*

━━━━ Selected publications

International conference papers

2010   M. Guillaumin, J. Verbeek, C. Schmid.
Multimodal Semi-supervised Learning for Image Classification.
IEEE Conference on Computer Vision and Pattern Recognition (oral).

M. Guillaumin, J. Verbeek, C. Schmid.
Multiple Instance Metric Learning from Automatically Labeled Bags of Faces.
European Conference on Computer Vision.

J. Verbeek, M. Guillaumin, T. Mensink, C. Schmid.
Image Annotation with TagProp on the MIRFLICKR set.
ACM Multimedia Information Retrieval MIR.

2009   M. Guillaumin, T. Mensink, J. Verbeek, C. Schmid.
TagProp: Metric Learning in Nearest Neighbor Models for Image Auto-Annotation.
International Conference on Computer Vision (oral).

M. Guillaumin, J. Verbeek, C. Schmid.
Is That You? Metric Learning Approaches for Face Identification.
International Conference on Computer Vision.

2008   M. Guillaumin, T. Mensink, J. Verbeek, C. Schmid.
Automatic Face Naming with Caption-based Supervision.
IEEE Conference on Computer Vision and Pattern Recognition.

National conference papers

2010   M. Guillaumin, T. Mensink, J. Verbeek, C. Schmid.
Apprentissage de distance pour l'annotation d'images par plus proches voisins.
Reconnaissance des Formes et Intelligence Artificielle (oral).

Other publications

2009   M. Douze, M. Guillaumin, T. Mensink, C. Schmid, J. Verbeek.
INRIA-LEARs participation to ImageCLEF 2009.
Cross Language Evaluation Forum Workshop.

━━━━ Invited talks and research visits

2010   Mini-course on face naming from captions.
Fundação Getulio Vargas, Rio de Janeiro.

Learning visual classifiers from tagged images.
Computer Vision Laboratory, ETH, Zürich.

2009   Metric Learning and Nearest Neighbors for Image Auto-Annotation and Face Identification.
Xerox Research Center Europe, Grenoble.

Challenges and transfers

2010   Ongoing study for transferring our face recognition system to Technosens, a Grenoble-based company involved in simplifying the use of daily equipment. Their product automatically recognizes the user and adapt its interface.

2009   Participated to the ImageCLEF 2009 competition: 2nd / 19 participants in both the "Photo Annotation" and "Photo Retrieval" tasks.

Teaching

2007 – 2010   Ensimag, Grenoble. Networking, applied maths, language and compiler theory.

2006 – 2007   CCP Grenoble. Introduction to computer programming.

2005 – 2006   Lyçée Condorcet, Paris. Introduction to computer programming.

I participated in initiatives to introduce middle- and high-school students with maths and computer science research topics (game theory, combinatorics, geometry, programming, ...) with workshops called *Maths à Modeler* (solving mathematical games) and *Mobinet* (programming a physics-based computer game).

Supervision of students

2010   Kenneth Funes Mora (Erasmus Mundus), *Robust face descriptors in uncontrolled settings*, Masters thesis.

2009   Nicolas Breitner (Ensimag), *Image auto-annotation on the web*.

Skills

- **Language skills and living abroad:** native speaker of **French**. Fluent in **English**, lived 3 years in London (1987-1990) and travelled repeatedly to english-speaking countries. Basic knowledge of **German**, lived 1 year in Hamburg (1990-1991) and returned occasionally in German-speaking countries. Lived 7 years in Belgium (1991-1998).

- **Computer skills:** Proficient in many programming techniques and languages including C, Perl, Ocaml, Matlab. I am familiar with Windows and UNIX (Linux) environments, and with popular software (LaTeX, Office, Photoshop, GIMP, Inkscape).

- **Administration:** I organized the recruitment process of my research interns, defined research topics, analysed CVs and conducted technical interviews. Currently organizing group seminars for the LEAR team.

Other interests and activities

- Road cycling and touring, mountaineering.