



37 years old, French.
Married, four children.

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Profile

Emmanuel Prados leads the STEEP research group at INRIA Grenoble - Rhône-Alpes Research Center.

Created in 2010, STEEP (Sustainability Transition, Environment, Economy and local Policy) is an INRIA/LJK team dedicated to the modeling of the interactions between environment, economy and society at local scales. Its competences in mathematics and computer science are in particular applied to the analysis of the urban development and questions related to transport, energy and land use. STEEP works specifically on the calibration, validation and management of the uncertainties of LUTI models.

Between 2006 and 2010, Emmanuel Prados worked in the Perception group (INRIA Rhône-Alpes). He was a post-doctoral researcher with Stefano Soatto at UCLA (2005). He graduated as a Ph.D. (2004) working with Professor Olivier Faugeras in the Odyssee Lab. (laboratory of Computer and Biological Vision of the INRIA/ENS/ENPC) at INRIA Sophia Antipolis.

From 2006

- **INRIA Scientist researcher** (National Institute for Research in Computer Science and Control)
 - Since Jan. 2010: **Head of the STEEP research group** of INRIA Rhône-Alpes.
 - Dec. 2007 to Dec. 2009: **CR1 position** (Experienced research scientist) in the PERCEPTION group, INRIA Rhône-Alpes.
 - Dec. 2005 to Dec. 2007: **CR2 position** (Junior research scientist) in the MOVI/PERCEPTION, INRIA Rhône-Alpes.

My **skills and research activities** involve various topics of **Applied Mathematics, Computer Science** and **Computational sustainability**:

- 1) *parameter estimation, validation and management of the uncertainties*
- 2) *socio-economic models at local scales; LUTI models; energy-environment models; coupling*
- 3) *optimization, variational methods*
- 4) *optimal control, differential games*
- 5) *theoretical and numerical analysis of Partial Differential Equations,*
- 6) *Hamilton-Jacobi equations, characterization of the solutions, singular solutions*
- 7) *deformable models, level-set methods, meshes, fast marching methods.*

*I apply these skills in particular to **land use, transport models, energy, environment models** and to the **mathematical modelling of sustainable development.***

Before, I applied my skills to computer vision and my research activities involved in particular 3D scene reconstruction from monocular or multiview images / video sequences, Illumination, reflectance modeling and image formation, characterization of ambiguities, image and surface segmentation...

2012

- **Habilitation à Diriger des Recherches in Computer Science and Applied Mathematics** (French post-doctoral degree allowing its holder to supervise PhD students).
At the University of Grenoble.
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- **Postdoctoral Researcher**

Location: **University of California at Los Angeles (UCLA) - USA**
Dept.: Computer Science.
Advisor: **Stefano Soatto**.

2004-2005

◇ *I mainly worked on four topics:*

1) “Fast Marching” methods and optimal control theory

[applied math.]

2) brain connectivity mapping from diffusion tensor images (DT MRI),

[biomedical]

3) shape descriptors and non-rigid shape prior segmentation

[computer vision]

4) multiview stereovision

[computer vision]

- **PhD Thesis in Applied Mathematics, Computer Science and Image Processing** (University of Nice - Sophia Antipolis). I have worked in the ROBOTVIS/ODYSSEE lab., at **INRIA** Sophia Antipolis, under the management of **Olivier Faugeras**.

2001-2004

Award: Accessit of the SPECIF Prize in 2005 (Best French PhD Thesis in Computer Science).

◇ *I have been working on “Shape From Shading” and numerical methods for resolving nonlinear Partial Differential Equations. I have studied in depth Hamilton-Jacobi equations and the notion of viscosity solutions. There are many applications of these theories to image processing and computer vision (“Shape from Shading”, Stereo, Motion, Segmentation, Diffusion MRI, etc) and in a number of areas such as computer animation, geometric optics...*

2000-2001

- **Master’s Degree in Image Processing and Computer Vision** (DEA SIC Image-Vision).
At the University of Nice and Sophia-Antipolis. Top in my year and with **highest honors**.
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Awards

1. Accessit of the SPECIF Prize in 2005 (Prize for the Best French PhD Thesis in Computer Science).
2. CRS Industrial Prize awarded at BMVC’08.
3. One of my PhD students, Amaël Delaunoy, won AFRIF 2011 Prize. AFRIF Prize rewards the best PhD thesis in computer vision and pattern recognition in France.

Publications

Almost all my publications are available on my Web page or on HAL [<http://hal.archives-ouvertes.fr/>].
First are listed my publications in my new field of research: computational sustainability. I slowly started a transition from computer vision to computational sustainability in 2009.

Publications in Computational Sustainability

International Journal :

1. **Calibration of an Integrated Land Use and Transportation Model Using Maximum Likelihood Estimation** (Parikshit Dutta, Elise Arnaud, Emmanuel Prados, Mathieu Saujot). Submitted to **IEEE, Transactions on Computers**.

Book Chapters :

2. **“Quelle durabilité pour la ville et son territoire ? La modélisation intégrée pour l’aide à la décision”** (P.Y. Longaretti, E. Arnaud, J.Y. Courtonne, S. Lavorel, E. Prados, P. Sturm, J. Alapetite, D. Dupré, C. Byczek, C. Vannier, P. Criqui, H. Gallée). Submitted for a book chapter in **Écologies urbaines 2**

Refereed International Conference Publications :

3. **Sensitivity Analysis of a Large Scale Integrated Land Use and Transportation System** (Parikshit Dutta, Mathieu Saujot, Elise Arnaud, Benoit Lefèvre and Emmanuel Prados). **CompSust’12, 3rd International Conference on Computational Sustainability, Copenhagen, Denmark, July 5-6, 2012.**
4. **Study of cereals flows at local scales: Examples in the Rhône-Alpes région, the Isère département and the SCOT de Grenoble** (Jean-Yves Courtonne, Julien Alapetite, Pierre-Yves Longaretti, Denis Dupré, Elise Arnaud and Emmanuel Prados). **CompSust’12, 3rd International Conference on Computational Sustainability, Copenhagen, Denmark, July 5-6, 2012.**
5. **Uncertainty Propagation and Sensitivity Analysis During Calibration of TRANUS, an Integrated Land Use and Transport Model** (Parikshit Dutta, Mathieu Saujot, Elise Arnaud, Benoit Lefèvre and Emmanuel Prados). In Proceedings of **ICURPT 2012 : International Conference on Urban, Regional Planning and Transportation, Amsterdam, Netherlands, May 13-14, 2012, vol. 65, paper no. 59.**

Other Conferences and Research Reports :

6. **Modelling for local scale sustainability and decision-making support: Reflections and difficulties** (Elise Arnaud, Pierre-Yves Longaretti, Emmanuel Prados, Peter Sturm). To appear In **Proceeding of the conference on “Flows modeling for urban planning”**, IFSTTAR Edition, 2013.
7. **Integrated Urban Modelling for Sustainable Policies: Considerations and Difficulties** (E. Prados, P.-Y. Longaretti, E. Arnaud, P. Criqui, D. Dupré, B. Lefèvre, M. Saujot, P. Sturm, J.-Y. Courtonne and J. Alapetite). **Conference on “Flow modeling for urban development”**, Lille, France, June, 2012.
8. **Mathematical and numerical analyses of local integrated models** (Emmanuel Prados, Elise Arnaud, Pierre-Yves Longaretti and François Mancebo). **Workshop on Decision Analysis and Sustainable Development**, Montréal, Canada, September 27-28, 2010.

“Popularization” :

9. **Quel développement durable?** (Emmanuel Prados and Elise Arnaud). **La Recherche**, October 2010, Number 445.
10. **Des outils informatiques d’aide à la décision en faveur du développement durable** (Emmanuel Prados and Elise Arnaud). **Actu-Environnement**, October, 2010.
http://www.actu-environnement.com/v_nws.php4?id=11117

Publications in Computer Vision, Image Processing and Applied Math.

Here is the list of my publications in my previous research fields.

The International Journal of Computer Vision has regularly the Top-Ranked 5-Year Impact Factor in Artificial Intelligence! [5-Year Impact Factor = 10.328 in 2010]

Dissertations :

11. **Habilitation à diriger des Recherches:** (Emmanuel Prados). “Recherches en reconstruction 3D photométrique”, University of Grenoble, France, April 2012.
12. **PhD Thesis:** (Emmanuel Prados). “Application of the theory of the viscosity solutions to the Shape From Shading problem”, University of Nice-Sophia Antipolis, France, October 2004.
Award: [Accessit of the SPECIF Prize in 2005](#) (Prize of the Best French PhD Thesis in Computer Science).

Book, Proceedings, Preface :

13. **Proceedings of the First international workshop on "Photometric Analysis for Computer Vision" - PACV'07** - with K. Ikeuchi, S. Soatto, P. Belhumeur, and Peter Sturm. October 14th, 2007. Publisher: INRIA, **ISBN: 2-7261-1297 8**, <http://hal.inria.fr/PACV2007/en>.
14. **Editorial for the Special Issue on Photometric Analysis for Computer Vision** - with K. Ikeuchi, S. Soatto, P. Belhumeur, and Peter Sturm. **International Journal of Computer Vision, Springer**, Volume 86 , Issue 2-3 (January 2010) , pages 125–126, 2010.

Book Chapters :

15. **“Shape From Shading”** (Emmanuel Prados and Olivier Faugeras). Book chapter in **Mathematical Models of Computer Vision: The Handbook** - page 375-388, chapter 23; Editors: N. Paragios, Y. Chen and O. Faugeras; Springer, 2006.
16. **“Viscosity Solution”** (Fabio Camilli and Emmanuel Prados). Entry in the **Encyclopedia of Computer Vision**; Editor-in-Chief: Katsushi Ikeuchi; Springer, 2012.

International Journal :

17. **Gradient Flows for Optimizing Triangular Mesh-based Surfaces: Applications to 3D Reconstruction Problems dealing with Visibility** (Amael Delaunoy and Emmanuel Prados). The **International Journal of Computer Vision**, Volume 95, Number 2, 100-123, November 2011.

18. **Joint Estimation of Shape and Reflectance using Multiple Images with Known Illumination Conditions** (Kuk-Jin Yoon, Emmanuel Prados, Peter Sturm). *The International Journal of Computer Vision*, Volume 86, Number 2-3, pages 192–210, 2010.
19. **Photoconsistency optimization in multi-view stereo with complete visibility reasoning** (Pau Gargallo, Emmanuel Prados and Peter Sturm). Submitted to the *International Journal of Computer Vision* - 2009.
20. **Brain Connectivity Mapping Connectivity using Riemannian Geometry, Control Theory and PDEs** (Christophe Lenglet, Emmanuel Prados, Jean-Philippe Pons, Rachid Deriche and Olivier Faugeras). *SIAM Journal on Imaging Sciences (SIIMS)*, Volume 2, Number 2, page 285–322, 2009.
21. **3-D Reconstruction of Shaded Objects from Multiple Images Under Unknown Illumination** (Hailin Jin, Daniel Cremers, Dejun Wang, Emmanuel Prados, Anthony Yezzi and Stefano Soatto). *the International Journal of Computer Vision*, Volume 76, Number 3, March 2008.
22. **A viscosity solution method for Shape-from-Shading without boundary data** (Emmanuel Prados, Fabio Camilli and Olivier Faugeras). *Mathematical Modelling and Numerical Analysis (M2AN)*, Volume 40, Number 2, page 393-412, 2006.
23. **Shape-from-Shading with discontinuous image brightness** (Fabio Camilli and Emmanuel Prados). *Applied Numerical Mathematics*, Volume 56, Number 9, page 1225–1237, sept 2006.
24. **A unifying and rigorous Shape From Shading method adapted to realistic data and applications** (Emmanuel Prados, Fabio Camilli and Olivier Faugeras). *the Journal of Mathematical Imaging and Vision*, Volume 25, Number 3, Pages 307-328, 2006.
25. **A rigorous method for the Lambertian Shape From Shading problem with orthographic and pinhole camera** (Emmanuel Prados and Olivier Faugeras). *the International Journal of Computer Vision*, vol 65 (1/2), pages 97-125, November 2005.

Refereed International Conference Publications :

26. **Towards Full 3D Multi-view Helmholtz Stereo** (Amael Delaunoy, Emmanuel Prados and Peter Belhumeur). **ACCV'2010, Queenstown, New Zealand, Nov. 2010.**
27. **Colour Dynamic Photometric Stereo for Textured Surfaces** (Zsolt Janko, Amael Delaunoy, and Emmanuel Prados). **ACCV'2010, Queenstown, New Zealand, Nov. 2010.**
28. **Convex Multi-Region Segmentation on Manifolds** (Amael Delaunoy, Ketut Fundana, Emmanuel Prados and Anders Heyden). **ICCV'2009, Kyoto, Japon, sept 2009.**
29. **3D and Appearance Modeling from Images** (Peter Sturm, Amaël Delaunoy, Pau Gargallo, Emmanuel Prados and Kuk-Jin Yoon). **CIARP 2009, Guadalajara, Jalisco, México, November 2009.**
30. **Generic Scene Recovery using Multiple Images** (Kuk-Jin Yoon, Emmanuel Prados and Peter Sturm). **SSVM'2009, Voss, Norway, June, 2009.**
31. **A Non-Local Approach to Shape From Ambient Shading** (Emmanuel Prados, Nitin Jindal and Stefano Soatto). **SSVM'2009, Voss, Norway, June, 2009.**
32. **Minimizing the multi-view stereo reprojection error for triangular surface meshes** (Amael Delaunoy, Emmanuel Prados, Pau Gargallo, Jean-Philippe Pons and Peter Sturm). **BMVC'2008, Leeds, UK, September 2008.**
Award: CRS Industrial Prize (one of the three best papers of BMVC).
33. **Minimizing the Reprojection Error in Surface Reconstruction from Images** (Pau Gargallo, Emmanuel Prados and Peter Sturm), **ICCV'2007**, International Conference on Computer Vision, Rio de Janeiro, Brazil, October 2007.

34. **Control Theory and Fast Marching Methods for Brain Connectivity Mapping** (Emmanuel Prados, Christophe Lenglet, Jean-Philippe Pons, Nicolas Wotawa, Rachid Deriche, Olivier Faugeras and Stefano Soatto). **CVPR'2006**, International Conference on Computer Vision and Pattern Recognition , New York, USA, June 2006.
35. **Shape Representation based on Integral Kernels: Application to Image Matching and Segmentation** (Byung-Woo Hong, Emmanuel Prados, Luminita Aura Vese and Stefano Soatto). **CVPR'2006**, International Conference on Computer Vision and Pattern Recognition , New York, USA, June 2006.
36. **Towards robust and physically plausible shaded stereoscopic segmentation** (Dejun Wang, Emmanuel Prados and Stefano Soatto). **IEEE Workshop on Three-Dimensional Cinematography – 3DCINE'06**, in conjunction with the International Conference on Computer Vision and Pattern Recognition **CVPR'2006**, New York, USA, June 2006..
37. **Shape from Shading: a well-posed problem?** (Emmanuel Prados and Olivier Faugeras). **CVPR'2005**, International Conference on Computer Vision and Pattern Recognition , San Diego, CA, USA, June 2005.
38. **Fast Marching Method for Generic Shape From Shading** (Emmanuel Prados and Stefano Soatto). **VLSM'05**, Beijing, China, October 2005.
39. **Unifying approaches and removing unrealistic assumptions in Shape From Shading: Mathematics can help** (Emmanuel Prados and Olivier Faugeras). **ECCV'2004**, European Conference on Computer Vision, Prague, Czech Republic, May 2004.
40. **Perspective Shape from shading and viscosity solutions** (Emmanuel Prados and Olivier Faugeras). **ICCV'2003**, International Conference on Computer Vision, Nice, France, October 2003.
41. **Shape from shading and viscosity solutions** (Emmanuel Prados, Olivier Faugeras, Elisabeth Rouy). **ECCV'2002**, European Conference on Computer Vision, Copenhagen, Denmark, June 2002.

Other Conferences and Research Reports :

42. **A non-local approach to shape from ambient shading** (Emmanuel Prados, Nitin Jindal and Stefano Soatto). **INRIA Research Report**, No RR-7783, November 2011.
43. **Segmentation convexe multi-région de données sur les surfaces** (Amaël Delaunoy, Emmanuel Prados, Ketut Fundana and Anders Heyden). **RFIA'2010**, Caen, France, January 2010.
44. **Stéréo multi-vues : erreur de reprojection et maillages triangulaires** (Amaël Delaunoy, Emmanuel Prados, Pau Gargallo, Jean-Philippe Pons et Peter Sturm). **ORASIS 2009**, Trégastel, France, June 2009.
45. **Shape and Reflectance Recovery using Multiple Images with Known Illumination Conditions** (Kuk-Jin Yoon, Emmanuel Prados, Peter Sturm, Amaël Delaunoy and Pau Gargallo). **INRIA Research Report**, No RR-6309, September 2007.
46. **Minimiser l'erreur de reprojection en reconstruction de surfaces basée images** (Pau Gargallo, Emmanuel Prados et Peter Sturm). **RFIA'2008**, Amiens, France, January 2008.
47. **Anatomical connections in the human visual cortex: validation and new insights using a DTI Geodesic Connectivity Mapping method** (Nicolas Wotawa, Christophe Lenglet, Emmanuel Prados, Rachid Deriche et Olivier Faugeras). **INRIA Research Report** No RR-6176, May 2007.
48. **Méthode de “Fast Marching” générique pour le “Shape From Shading”** (Emmanuel Prados and Stefano Soatto). **RFIA'2006**, 15th AFRIF-AFIA French-speaking Congress: Object Recognition and Artificial Intelligence, 2006.
49. **Rôle clé de la Modélisation en “Shape From Shading”** (Emmanuel Prados and Olivier Faugeras). **RFIA'2006**, 15th AFRIF-AFIA French-speaking Congress: Object Recognition and Artificial Intelligence, 2006.

50. **Control Theory and Fast Marching Methods for Brain Connectivity Mapping** (E. Prados, C. Lenglet, J.P. Pons, N. Wotawa, R. Deriche, O. Faugeras and S. Soatto). **UCLA Technical Report**, UCLA CSD-TR 060004, February, 2006.
51. **Shape Representation based on Integral Kernels: Application to Image Matching and Segmentation** (Byung-Woo Hong, Emmanuel Prados, Luminita Aura Vese and Stefano Soatto). **UCLA Technical Report**, UCLA CSD Technical Report TR050044, October, 2005.
52. **Toward robust and physically plausible shaded stereoscopic segmentation** (Dejun Wang, Emmanuel Prados and Stefano Soatto). **UCLA Technical Report**, UCLA Research Report CSD-TR050013, April, 2005.
53. **A mathematical framework unifying various Shape from Shading approaches** (Emmanuel Prados, Olivier Faugeras and Fabio Camilli). Mathematics and Image Analysis - **MIA 2004**, Paris, France, September, 2004.
54. **Viscosity solutions for realistic Shape-From-Shading** (Emmanuel Prados and Olivier Faugeras). **Workshop on Numerical Methods for Viscosity Solutions and Applications**, Rome, Italy, September 2004.
55. **De nouvelles solutions au problème du Shape from Shading** (Emmanuel Prados, Fabio Camilli and Olivier Faugeras). **CANUM'2004**, 36ème Congrès national d'Analyse NUMérique, Obernai, France, May 2004.
56. **Reconstruction photogrammétrique des formes 3D; nouveaux résultats théoriques et nouveaux algorithmes pour des projections orthographique et en perspective** (Emmanuel Prados and Olivier Faugeras). **RFIA'2004**, 14th AFRIF-AFIA French-speaking Congress: Object Recognition and Artificial Intelligence, Toulouse, France, January 2004.
57. **Shape from Shading: a well-posed problem?** (Emmanuel Prados, Olivier Faugeras and Fabio Camilli) **INRIA Research Report**, No RR-5297, August 2004.
58. **A viscosity method for Shape From Shading without boundary data** (Emmanuel Prados, Fabio Camilli and Olivier Faugeras) **INRIA Research Report**, No RR-5296, August 2004.
59. **A rigorous and realistic Shape From Shading method and some of its applications** (Emmanuel Prados and Olivier Faugeras) **INRIA Research Report** No RR-5133, March 2004.
60. **A mathematical and algorithmic study of the Lambertian SFS problem for orthographic and pinhole cameras** (Emmanuel Prados and Olivier Faugeras). **INRIA Research Report** No RR-5005, September 2003.
61. **Approximations numériques des solutions de viscosité de divers EDPs provenant du Shape from Shading** (Emmanuel Prados and Olivier Faugeras). **CANUM'2003**, 35th French Congress of Numerical Analysis, La Grande Motte, France, June 2003.
62. **Shape from Shading and viscosity solutions** (Emmanuel Prados, Olivier Faugeras, Elisabeth Rouy). **INRIA Research Report** No RR-4638, November 2002.
63. **Masters Thesis: "Une approche du Shape from shading par solutions de viscosité"** (Emmanuel Prados). University of Nice-Sophia Antipolis, France, September 2001.

Invited Talks:

1. **IXXI Seminar Days: special "Computational Sustainability"** "*Modèles socio-économiques pour la soutenabilité territoriale : et si les mathématiques et l'informatique s'invitaient ?*", Lyon, France, April 4, 2013. Organizer: IXXI.

2. **Journée des Mathématiques - Conférence d'introduction** "*Modélisation de systèmes socio-économiques pour le développement durable et l'environnement*", Grenoble, France, March 18, 2013. Organizer: Rectorat de Grenoble.
3. **Semovi seminar** (Séminaire Rhône-Alpin de Modélisation du Vivant / Rhône-Alpe seminars on Life Modeling), "*Socio-economic models for local sustainability: what if mathematics and computer science came in ?*", Lyon, France, March 13, 2013. Organizer: Semovi.
4. **Keynote Speakers at the Conference "Flow modeling for urban development"**, "*Integrated Urban Modelling, Principles and Practices*", Lille, France, June 14, 2012. Organizer: GIS Modélisation Urbaine.
5. **Seminar at the "Deterministic Models and Algorithms Department"** of Jean Kuntzmann Laboratory : "*Systemic modelling of the interactions between environment, economy and society at local scales: problems and bottlenecks.* ", Grenoble, France, April 19th, 2011. Organizer: Nicolas Papadakis.
6. **MCDA72**, 72nd meeting of the European Working Group "Multiple Criteria Decision Aiding" , Paris, France, October 7-9, 2010. Organizer: Vincent Mousseau, Ecole Centrale Paris.
7. **BABEL's franco-canadian conference : "Are sustainable urban policies going to be reduced to global warming issues"**, Grenoble, France, November 18-19th, 2009. Organizer: François Mancebo.
8. **Workshop "mathematical methods for image analysis"**, Orléans, France, April 2008. Organizer: Maïtine Bergounioux.
9. **SciCADE 2007**, Saint-Malo, France, 9-13 July 2007, Organizer: Philippe Chartier.
10. **"GdR ISIS: 3D modelling from images"**, ENST, Paris, France, November 15th, 2006. Organizer: Peter Sturm.
11. **LMC Seminar**. Grenoble, France, November 16th, 2006. Organizer: LMC (Laboratoire de Modélisation et Calcul de Grenoble).
12. **Front propagation and applications CERMICS's Seminar**. Marne la Vallée, France, March 7th, 2006. Organizer: Régis MONNEAU (CERMICS).
13. **"SPECIF Congress 2006"**. Saint-Étienne, France, 12-13 January 2006.
14. **"Optimization Methods in Computer Vision"**. Les Houches, France, March 2006. Organizers: VISION-TRAIN.
15. **Mathematics and Image Analysis 2004 (MIA'04)**. Paris, France, September 6-9, 2004. Organizer: Laurent Cohen (Ceremade).
16. Seminary "Probability, Optimisation and Control". Paris, France, October 28, 2004. Organizer: Maxplus Lab. (INRIA).
17. GRAVIR seminar, Grenoble, France, March 3rd, 2005.
18. **IPAM Seminar**. UCLA, USA, June 2005. Organizer: Luminita Vese.
19. Invitations/Seminars 2004/2005: Projet Magritte, LORIA (Marie Odile Berger), Projet Anubis, INRIA Future, Bordeaux (Jacques Henry), Projet MIRAGES, INRIA Rocquencourt (André GAGALOWICZ).

Program Committees and Conference Organization

- **IJCAI 2013 (International Joint Conference on Artificial Intelligence): Senior Program Committee.** Beijing, China, August 3-9 2013.
- **SOCLE3 Conference** (Organizer and scientific program): at the “Institut d’Etudes Politiques Grenoble”, France on Feb. 3rd, 2010.
- **Sustainable Development day at INRIA** (Organizer and scientific program), France on Mar. 22th, 2010.
- **ECCV 2008 Tutorials Chair:** 10th European Conference on Computer Vision - Marseille, France, October 12 - 18, 2008.
- **3DFP’08 program committee (Workshop in 3D Face Processing)** : in conjunction with CVPR 2008 - Anchorage, Alaska on June 27th 2008.
- **SciCADE 2007 (International Conference on SCientific Computation And Differential Equations) Symposium Organizer:** “PDEs and image processing”, Saint-Malo, France, 9-13 July 2007.
- **Congrès SMAI 2007 Symposium Organizer:** “variational and PDE methods for computer vision and image processing”, Praz sur Arly, France, 4-8 June 2007.
- **PACV’07 Organizer & General Co-Chair:** First international workshop on "Photometric Analysis for Computer Vision" - in conjunction with ICCV’07; Rio de Janeiro, Brazil, October 14, 2007; with K. Ikeuchi, S. Soatto, P. Belhumeur, and Peter Sturm.
- **SSVM’07 program committee (Scale Space and Variational Methods Conference)** : first joint Scale-Space and Variational Methods Conference - Ischia, Italy, May 30 - June 2, 2007.
- **Program committee of the thematic school “Optimization Methods in Computer Vision”, 2006** - Marie Curie Research Training Network VISIONTRAIN. (<http://visiontrain.inrialpes.fr/?page=school1>).
- **VLSM’05 program committee:** 3rd IEEE Workshop on Variational, Geometric and Level Set Methods in Computer Vision - In Conjunction with the 10th IEEE International Conference in Computer Vision - Beijing, China, October 16, 2005.

Editorial Activities

- **Guest Editor for Special Journal Issues** : with P. Belhumeur, K. Ikeuchi, S. Soatto, P. Sturm. Special issue of International Journal of Computer Vision on Photometric Analysis for Computer Vision **International Journal of Computer Vision, Springer**, Volume 86 , Issue 2-3 January 2010.
- **Reviewer** for various international journals: (*International Journal Of Computer Vision, IEEE Transactions on Pattern Analysis and Machine Intelligence IEEE Transactions on Image Processing, Journal of Mathematical Imaging and Vision, Computer Vision and Image Understanding, Image and Vision Computing Journal, Pattern Recognition Letters, Europhysics Letters...*) and international conferences (*CVPR’05, ICCV’05, VLSM’05, ICPR’06, CVPR’06, CVPR’07, Eurographics’07, ICCV’07, Eurographics’08, ECCV’08, 3DFP’08* ...).

Member of evaluation and scientific committees

- Member of the **scientific and technical Committee** (“*Comité Scientifique et Technique*”) of the GIS μ : **Groupement d’intérêt scientifique “Modélisation urbaine”** : since January 2012.
- Member of the **Steering Committee of the FRB** (“*Fondation pour la Recherche sur la Biodiversité*”) program “*Modelling and scenarios for the biodiversity*”: From June 2010 to June 2012.

Member of PhD committees

- **Visesh Chari**, University of Grenoble (November 2012).
- **Amaël Delaunoy**, University of Grenoble (December 2011) [Prize for the best thesis AFRIF].
- **Mickael Péchaud**, University Paris Diderot - Ecole Normale Supérieure - Ecole Nationale des Ponts et Chaussées, (October 2009).
- **Pau Gargallo**, University of Grenoble (January 2007).

Student Advising

- **Martin Crespo**, Internship (2012) [in collaboration with P. Sturm]. .
- **Franco Pestarini**, Internship (2012).
- **Subhash Mallah**, Post-doc (2011-2012) [in collaboration with LEPII/EDDEN].
- **Parikshit Dutta**, Post-doc (2011-2013) [in collaboration with E. Arnaud].
- **Alejandro Deymonnaz**, Internship (2011).
Now at **Google**.
- **Hugo Luis Manterola**, Internship (2011) [in collaboration with E. Arnaud].
- **Mariano Fernandez**, Internship (2011) [in collaboration with E. Arnaud].
- **Anthony Tschirhard**, M1 Internship (2011) [in collaboration with E. Arnaud].
Now **PhD student** in **STEEP**, Grenoble, France.
- **Amael Delaunoy**, PhD (2007-2011) and MSc project (2007) [in collaboration with Peter Sturm].
Amael won **AFRIF Prize** in 2011 (AFRIF Prize rewards the best french PhD thesis in computer vision and pattern recognition).
Now **Post-doc** at ETH Zurich, Switzerland, with Marc Pollefeys.
- **Enzo Ferrante**, M2 Internship (2010) [in collaboration with E. Arnaud and P.-Y. Longaretti].
Now **PhD student** at the **Center for Visual Computing of Ecole Centrale de Paris & Ecole des Ponts - ParisTech**, Paris, France.
- **Emmanuel Iarussi**, M2 Internship (2010) [in collaboration with E. Arnaud and P.-Y. Longaretti].
- **Marie Chevalier**, L3 Internship (2010) [in collaboration with Elise Arnaud].
- **Chao Wang**, M1 Internship (2010) [in collaboration with Elise Arnaud].
- **Abhishek Upadhyay**, Master 1 Internship (2010) [in collaboration with Elise Arnaud].
- **Claude Mergen**, DRT (2009-2010) [in collaboration with Enerdata].
- **Zsolt Janko**, post-doc (2009) [in collaboration with CERTIS].
Now **Assistant Professor** at the **Computer and Automation Research Institute in Budapest**, Hungary.
- **Kuk-Jin Yoon**, Post-doc (2006-2008) [in collaboration with Peter Sturm].
Now **Assistant Professor** at the **Gwangju Institute** of Science and Technology, Korea.
- **Julie Escoda**, MSc project (2008).
Now **PhD student** at the “Centre de Morphologie Mathématique”, **MINES - ParisTech**, France.

- **Ravi Garg**, Internship (2008).
Now **PhD student** at the Department of Computer Science at **Queen Mary, University of London, England**.
- **Pau Gargallo**, PhD 2007 [20%, in collaboration with Peter Sturm].
Now **Researcher** in Barcelona Media, at Barcelona, Spain.
- **Nitin Jindal**, MSc project (2007) and Internship (2006).
Now **Co-Director of Beadcore Infotech Private Limited (www.beadcore.co.in)**, India.
- **Gaurav Bubna**, Internship (2007).
Now **researcher at Morgan Stanley** in Mumbai, India.

Funding, Grants and Contracts

- **Coordinator of CITiES [Calibrage et validation de modèles Transport - usage des Sols]: ANR program "Numerical models", 2012.**
Grants amounts: 980 000 Euro.
Partners: INRIA (STEEP/MOISE), IRTES-SeT, IFSTTAR-DEST, LET, IDDRI, LVMT, Vinci, IAU île-de-France.
- **TRACER [TRanus, Analyse de la Calibration et des Erreurs, Retours sur Grenoble et Caracas]: ECOS-NORD Program (2011-2014).**
Partners: IDDRI, Modelistica, INRIA.
- **ESNET: "Modelling and Scenarios of Biodiversity" flagship program of the FRB, 2011..**
Partners: LECA, LEPII, Cemagref, PACTE, ERIC, STEEP (project financed by ONEMA).
Grants amounts: \cong 200 000 Euro.
- **SOCLE³: PIRVE 2009**, "Soutenabilité, Organisation Collective Locale, Environnement, Economie, Energie: Vers des espaces urbains et périurbains durables", (2009/2010).
Grants amounts: 20 000 Euro.
Partners: LEPII, LGGE, OSUG, PACTE, INRIA.
- **Coordinator of Flamenco: ANR MDCA program** (French Research Funding Agency), (2007-2010).
Grants amounts: 340 000 Euro.
Partners: the CERTIS (the Computer Science lab. of the Ecole Nationale des Ponts et Chaussées) and the Perception Lab. of INRIA.

Various Professional Activities at INRIA

- In charge of the evacuation of premises of INRIA: wing G - (since Nov. 2008)
- CMI INRIA of the équipe PERCEPTION (Sept. 2006 - Oct. 2009).
- In charge of the lending activity of AGOS for the "big equipments" (Sept. 2007 - Oct. 2009).

Teaching

Between 2001 and 2004, I have taught at the University of Nice and Sophia-Antipolis:

- 2002-2004 : **Image Synthesis and C++** (ESSI, 2nd year),
- 2002-2004 : **Variational methods in computer vision** (ESSI, 3rd year),
- 2001-2003 : **Java Programming** (DEUG).

Language skills

- **French** : native language.
- **English** : I am the author of several scientific papers written in English; I have made a Post-doc at UCLA (one year).
- **Spanish** : basic knowledge (seven year courses).

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