

## Adrien Bartoli

Professor at Université Clermont Auvergne, ERC grantee, member of Institut Universitaire de France  
Leader of the EnCoV group at Institut Pascal, CNRS, UCA and CHU de Clermont-Ferrand

## Curriculum Vitae

April 2018

Faculté de Médecine, Bâtiment 3C  
28, place Henri Dunant  
BP38  
63001 Clermont-Ferrand cedex

Email: Adrien.Bartoli@gmail.com  
Landline: 04 73 17 81 23  
Mobile: 06 74 87 85 01  
Web homepage: [igt.ip.uca.fr/~ab](http://igt.ip.uca.fr/~ab)

Université Clermont Auvergne is a merger of Université d'Auvergne and Université Blaise Pascal in 2017.

### Personal Details

Born on the 9th of April 1977, in Grenoble; French citizen; single, two children.

### Education

- 2008 **Habilitation in Computer Vision** ; « Habilitation à Diriger des Recherches », Université Blaise Pascal  
Thesis: *Contributions to Image Registration and to the 3D Reconstruction of Rigid and Deformable Scenes*
  - 2003 **PhD in Computer Vision** ; Grenoble INP (Institut National Polytechnique)  
Thesis: *Reconstruction and Alignment in 3D Vision: Points, Lines, Planes and Cameras*
  - 2000 **MSc in Computer Vision, Graphics, Robotics** ; Grenoble INP (Institut National Polytechnique), ranked first  
Thesis: *Modeling, Detection and 3D Reconstruction of Piecewise Planar Scenes from Two Images*
  - 2000 **'Magistère' in Computer Science** (fifth year degree of excellence), Université de Grenoble ; ranked first
  - 1998 **Bachelor in Computer Science** (third year degree), Université de Grenoble ; ranked first
- Note: I was qualified to apply to "Maître de Conférences" between 2004-2008 and Full Professor positions between 2008-2012.

### Main Responsibilities

- 2009/now **Founder and head of EnCoV** (Endoscopy and Computer Vision) with M. Canis  
research group with 6 permanent scholars / hospital practitioners (3.55 FTE) of Institut Pascal  
marked A+ by AERES in May 2011, renewed by HCERES in December 2015
- 2009/now **Responsible of the Structure-from-Motion group at CNRS GDR-ISIS** with P. Sturm, C. Démonceaux
- 2006/2009 **Head of ComSee** (Computers that See) with T. Chateau  
research group with 9 permanent scholars (4.5 FTE) of Institut Pascal

### Work Experience

- 2018/2019 **ERC Grantee** – Proof-of-Concept grant from the European Research Council
- 2016/2021 **Junior member of Institut Universitaire de France**
- 2013/2018 **ERC Grantee** – Consolidator grant from the European Research Council (one-year extension granted in June 2017)
- 2009/today **Professor at Université d'Auvergne** (promoted first class in 2016)
- 2004/2009 **Research Scientist at CNRS** (ranked first at the recruitment examination)  
LASMEA (UMR 6602 CNRS/UBP), Clermont-Ferrand
- 2006/2009 **Visiting Professor at DIKU** (Department of Computer Science)  
University of Copenhagen, regular stays of approximately 3 months in total
- 2003/2004 **Postdoctoral Researcher**, University of Oxford, the Visual Geometry Group  
Supervisor: Prof. Andrew Zisserman
- 2000/2003 **Doctoral Student**, INRIA, the Perception team, GRAVIR UMR 5527 CNRS/INRIA/UJF/INPG  
Supervisors: Prof. Peter Sturm and Prof. Radu Horaud
- Summer 2000 **Intern**, University of Oxford, the Visual Geometry Group, under Prof. Andrew Zisserman
- 1999/2003 **Teaching Assistant in Computer Science**, Université Joseph Fourier, Grenoble

### Personal Awards

- 2015 – Outstanding reviewer award at CVPR (International Conference on Computer Vision and Pattern Recognition)
- 2010 – Outstanding reviewer award at CVPR (International Conference on Computer Vision and Pattern Recognition)
- 2008 – "Médaille de Bronze" from CNRS (Centre National de la Recherche Scientifique)
- 2008 – Outstanding reviewer award at ECCV (European Conference on Computer Vision)
- 2004 – PhD thesis prize from Grenoble INP (Institut National Polytechnique)

### Group and Shared Awards

- 2017 – Computer-aided surgery innovation prize from the National Academy of Surgery for our experimental tumor model
- 2017 – Gédéon Richter award from CNGOF (Collège national des gynécologues et obstétriciens Français) for our work on Augmented Reality aided myomectomy
- 2017 – Junior research award from CHU de Clermont-Ferrand (University Hospital) for our 2017 Surgical Endoscopy paper
- 2016 – Research award from Uda (Université d'Auvergne) for our 2015 PAMI paper on Shape-from-Template

2015 – Second-best paper award at CARE (International Workshop on Computer-Assisted and Robotic Endoscopy) at MICCAI  
2012 – Best paper award at IPCAI (International Conference on Information Processing in Computer-Assisted Interventions)  
2007 – Best paper award at CORESA (Compression et Représentation des Signaux Audiovisuels)

## Professional Activities

### Keynotes (9)

- Swiss Medical Image Computing Day, 2018
- ORASIS - Congrès des jeunes chercheurs en Vision par Ordinateur, 2015
- Taking AR to the Next Level Workshop, 2014
- European Workshop on Deformable Object Manipulation, 2014
- BMVA Technical Meeting on Reconstructing a Dynamic World, 2013
- Annual Meeting, CNRS GdR IM (CS and Mathematics), 2011
- NASA Solar Image Processing Conference, 2008
- Topics in Automatic 3D Modeling and Processing Workshop, 2006
- IAAC – AARG International Aerial Archaeology Conference, 2004 (with Rog Palmer and Irwin Scollar)

### Invited Presentations in Conferences and Workshops (9)

- Medical Computer Vision workshop, CVPR 2018
- Beyond Gynecologic Surgery conference, 2018
- FLI-WP3 Interventional Imaging Workshop, 2016
- DRCI Research Workshop – CHU Clermont-Ferrand, 2016
- Workshop on 3D Reconstruction for Dynamic and Non-Rigid Scenes, 2015
- SurVis – First International Workshop on Surgical Vision, ICRA 2013
- AVIESAN – Alliance Nationale pour les Sciences de la Vie et de la Santé, Meeting, 2012
- Workshop on 3D Modeling, CNRS GdR ISIS, 2006
- Workshop on Realtime Visual Tracking, CNRS GdR ISIS, 2006

### Invited Tutorials and Short Courses (18)

- PhD level lectures at Université de Montpellier, 2005, 2007, 2010, 2018 (3h)
- Hamlyn Winter School on Surgical Imaging and Vision, Imperial College Saint Mary's Hospital, London, 2017 (2h)
- Tutorial on Visual Tracking and 3D Reconstruction for Computer-Assisted Interventions, MICCAI 2013 (1h)
- Joint GdR ISIS/IG Meeting AC3D (Acquiring and Compressing 3D Objects), 2013 (2h)
- LabEx CIMI's first image processing summer school, Saint-Lary, 2013 (2h)
- Tutorial on Optical Techniques for 3D Surface Reconstruction in Computer-Assisted Laparoscopic Surgery, MICCAI 2011 (1h)
- MSc and PhD level lecture at Universidad Rey Juan Carlos, Madrid, 2011 (2h)
- CNRS spring school on new mathematical tools for image analysis and computer vision, Figeac, 2009 (4h)
- Summer school on Image and Robotics, Clermont-Ferrand, 2008 (2h)
- MSc level lecture at Université Blaise Pascal, 2005, 2006, 2007, 2008 (2h)
- MSc level lecture at the Technical University of Munich, 2006, 2007 (2h)

### Invited Seminars in Research Institutes (42)

- UCL, London, 2017
- INRIA Grenoble, 2017
- IRPHE, Université Aix-Marseille, 2016
- Le2i, Université de Bourgogne, 2015
- Institut Clément Ader, Université de Toulouse, 2015
- Faculty of Engineering (LTH), University of Lund, 2014
- Department of Computer Science, University of Copenhagen (DIKU), 2014
- Institut de Recherche en Informatique de Toulouse (IRIT), 2014, half-day workshop on computer vision
- Université de Limoges, Maths-Computer Science Colloquium, 2013
- Institut Camille Jordan, Lyon, 2013
- Ecole Polytechnique Fédérale de Lausanne (EPFL), CVLab group, 2012
- INRIA Paris, Willow group, 2012
- NHE (Nouvel Hôpital d'Estaing), Clermont-Ferrand, 2011
- Bilkent University, Ankara, 2011
- Institut de Mécanique des Fluides de Toulouse (IMFT), 2010

- Institut de Mécanique des Fluides de Toulouse (IMFT), 2009
- Chair for Computer Aided Medical Procedures, Technical University of Munich (TUM), 2009
- Department of Computer Science, University of Copenhagen (DIKU), 2009
- Department of Computer Science, Queen Mary College, University of London, 2008
- Department of Computer Science, VIPS, University of Verona, 2008
- INRIA Rhône-Alpes, Grenoble, 2008
- Institut de Recherche en Informatique de Toulouse (IRIT), 2007
- Australian National University, Canberra, 2007
- Department of Computer Science, University of Copenhagen (DIKU), 2007
- Laboratoire d'Algorithmique et Image de Clermont (LAIC), 2007
- Chair for Computer Aided Medical Procedures, Technical University of Munich (TUM), 2007
- Ecole Polytechnique Fédérale de Lausanne (EPFL), CVLab group, 2006
- Institut de Recherche en Informatique de Toulouse (IRIT), 2006
- Department of Computer Science, University of Copenhagen (DIKU), 2006
- Faculty of Engineering (LTH), University of Lund, 2006
- Informatics and Mathematical Modeling, Technical University of Denmark (DTU), 2006
- Division of Mathematics, Malmoe University, 2006
- Chair for Computer Aided Medical Procedures, Technical University of Munich (TUM), 2006
- Humboldt University, Berlin, 2005
- INRIA Rhône-Alpes, Grenoble, 2005
- Chair for Computer Aided Medical Procedures, Technical University of Munich (TUM), 2005
- Department of Mathematics, Université Blaise Pascal, Clermont-Ferrand, 2005
- LASMEA, Clermont-Ferrand, 2004
- INRIA Rhône-Alpes, Grenoble, 2004
- INRIA Rhône-Alpes, Grenoble, 2004
- LASMEA, Clermont-Ferrand, 2004
- University of Oxford, Visual Geometry Group, 2003
- LASMEA, Clermont-Ferrand, 2002

## Editorial and Chairing Activity

### Journal Editorial Board Memberships

- Associate Editor of the *International Journal of Computer Vision* (IJCV), since March 2018
- Associate Editor of the *Electronic Letters in Computer Vision and Image Analysis* (ELCVIA), since July 2013
- Associate Editor of the *IET Computer Vision Journal*, since January 2012
- Guest Editor of the *International Journal of Computer Vision* (IJCV), special issue from 3DPVT'10

### Area Chairing

- 3DV 2018, Verona
- 3DV 2017, Qingdao
- SCIA 2017, Tromsø
- 3DV 2016, Stanford
- ISMAR 2015, Fukuoka
- ICCV 2015, Santiago
- SCIA 2015, Copenhagen
- SCIA 2011, Ystad

### Conference and Workshop Chairing

- Co-organizer of the *First Congress Beyond Gynecologic Surgery*, Clermont-Ferrand, April 2018
- Co-organizer of the *Second Congress on Teaching Minimal Invasive Therapies*, Clermont-Ferrand, March 2016
- General Chair for 3DPVT 2010, the Fifth *International Symposium on 3D Data Processing, Visualization and Transmission*, Paris (with Marcus Magnor)
- Publication Chair for 3DPVT 2008, the Fourth *International Symposium on 3D Data Processing, Visualization and Transmission*, Georgia Institute of Technology, Atlanta
- Co-founder of NORDIA, a series of *Workshops on Nonrigid Shape Analysis and Deformable Image Analysis*
  - General Chair of NORDIA at CVPR 2008, the first edition (with Vincent Lepetit, Alexander Bronstein, Michael Bronstein, Ron Kimmel and Nassir Navab)

- General Chair of NORDIA at CVPR 2011, the fourth edition (with Lourdes Agapito, Alexander Bronstein, Michael Bronstein and Alessio Del Bue)
- NORDIA has been successfully held six times, at CVPR 2008, ICCV 2009, CVPR 2010, CVPR 2011, ECCV 2012 and ECCV 2014
- Co-organizer of QU3ST at ECCV 2012, the *Workshop on 2.5D Sensing Technologies in Motion: The Quest for 3D*, Firenze, October 2012 (with David Fofi)
- Co-organizer of the *Workshop on Fundamental and Applied 3D Computer Vision*, Clermont-Ferrand, September 2012 (with Christophe Tilmant)
- Co-organizer of the LASMEA-DIKU Workshop on Computer Vision, Copenhagen, March 2009 (with Søren Olsen)
- Co-organizer of DEFORM at BMVC 2006, the *Workshop on Image Registration in Deformable Environments*, Edinburgh (with Nassir Navab and Vincent Lepetit)
- Co-organizer of the GDR ISIS Workshop on 3D Vision in Dynamical Environments (with Pascal Vasseur and Cédric Demonceaux), June 2016
- Co-organizer of the GDR ISIS Workshop on State of the Art and Recent Trends in SfM-SfX (with Peter Sturm), February 2006
- General Chair for ORASIS 2005, « Congrès des jeunes chercheurs en Vision par Ordinateur », Fournol (with Thierry Chateau)

### **Tutorial Chairing**

- Series of four tutorials “Computer Vision in a Non-Rigid World” (with Lourdes Agapito and Alessio Del Bue), held at ISR (Lisbon) in 2009 ; IIT (Genoa) in 2010 ; SCIA (Ystad) in 2011 ; ICCV (Barcelona) in 2011, 2h lecture given
- “Vision for Robotics” at IROS 2008 with 6 lecturers from 4 countries (with Andrew Comport), 1h lecture given
- “Computer Vision for AR: Rigid and Deformable Tracking Using Markers or Scene Features” at ISMAR 2007 (with Selim Ben Himane and Vincent Lepetit), 1h lecture given

### **Journal Reviewing**

- IJCV - International Journal of Computer Vision
- PAMI - IEEE Transactions on Pattern Analysis and Machine Intelligence
- TMI - IEEE Transactions on Medical Imaging
- CVIU - Computer Vision and Image Understanding
- JMIV - Journal of Mathematical Imaging and Vision
- IVC - Image and Vision Computing
- TASE - IEEE Transactions on Automation Science and Engineering
- TRO - IEEE Transactions on Robotics
- TIP - IEEE Transactions on Image Processing
- SMC - IEEE Transactions on Systems, Man and Cybernetics
- SPL - IEEE Signal Processing Letters
- RAM - IEEE Robotics and Automation Magazine
- TCSVT - IEEE Transactions on Circuits and Systems for Video Technology
- TNN - IEEE Transactions on Neural Networks
- IEEE Journal of Selected Topics in Signal Processing
- Solar Physics
- The Annals of Statistics
- Synthesis Lectures on Computer Vision (Morgan & Claypool Publishers)
- CGForum - Computer Graphics Forum, Eurographics
- CAVW - Computer Animation and Virtual Worlds
- PR - Pattern Recognition
- PRL - Pattern Recognition Letters
- IEE Proceedings - Vision, Image and Signal Processing
- EURASIP Journal on Image and Video Processing
- OE - SPIE Optical Engineering
- ETRI Journal - Electronics and Telecommunications Research Institute Journal
- JEI - Journal of Electronic Imaging (SPIE and IS&T)
- DKE - Data and Knowledge Engineering
- IJCA - International Journal of Computers and Applications
- JVRB - Journal of Virtual Reality and Broadcasting
- IJIST - International Journal of Imaging Systems and Technology
- JVCIR - Journal of Visual Communication and Image Representation
- JIAS - Journal of Image Analysis and Stereology
- AJSE - Arabian Journal for Science and Engineering
- TS - Traitement du Signal

## Conference Program Committee Memberships

- ICCV - IEEE International Conference on Computer Vision ; 2007, 2009, 2011, 2013, 2017 (reviewer in 2003)
- CVPR - IEEE International Conference on Computer Vision and Pattern Recognition ; 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017 (reviewer in 2001, 2003, 2004, 2005, 2006)
- ECCV - European Conference on Computer Vision ; 2008, 2010, 2012, 2014, 2016, 2018 (reviewer in 2002, 2006)
- MICCAI - International Conference on Medical Image Computing and Computer Assisted Intervention ; 2013, 2014, 2015, 2017 (reviewer in 2007, 2008)
- BMVC - British Machine Vision Conference ; 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018
- 3DV - 3D Vision Conference (formerly 3DPVT/3DIM) ; 2007, 2009, 2010, 2011, 2012, 2013, 2014, 2015
- IPCAI - International Conference on Information Processing in Computer-Assisted Interventions ; 2017
- ACCV - Asian Conference on Computer Vision ; 2009, 2010
- MIAR - International Conference on Medical Imaging and Augmented Reality ; 2016
- SCIA - Scandinavian Conference on Image Analysis ; 2007, 2009
- AMDO - International Conference on Articulated Motion and Deformable Objects ; 2008, 2010, 2012, 2014
- ICIP - IEEE International Conference on Image Processing ; 2006, 2007, 2008, 2009, 2010
- VISAPP - International Conference on Computer Vision Theory and Applications ; 2008, 2009, 2010
- IPTA - International Conference on Image Processing Theory, Tools and Applications ; 2008, 2010
- RFIAP - Congrès de Reconnaissance des Formes, Image, Apprentissage et Perception (ex RFAI) ; 2012, 2014, 2016, 2018
- ORASIS - Congrès des jeunes chercheurs en Vision par Ordinateur ; 2007, 2009, 2011, 2013, 2015, 2017
- CORESA - Compression et Représentation des Signaux Audiovisuels ; 2007, 2009, 2010, 2012, 2013, 2016, 2017
- IbPRIA - Iberian Conference on Pattern Recognition and Image Analysis ; 2011
- WMVC - IEEE Workshop on Motion and Video Computing ; 2011
- ICVGIP - Indian Conference on Computer Vision, Graphics and Image Processing ; 2011
- VIIP - International Conference on Visualization, Imaging and Image Processing ; 2008, 2009

## Conference Reviewing

- ISMAR – IEEE/ACM International Symposium on Mixed and Augmented Reality ; 2006, 2007, 2018
- IROS - IEEE/RSJ International Conference on Intelligent Robots and Systems ; 2008, 2009, 2010, 2011
- ICRA - IEEE International Conference on Robotics and Automation ; 2005, 2008, 2009
- ICDCS - ACM/IEEE International Conference on Distributed Smart Cameras ; 2008

## Workshop Program Committee Memberships

- International Workshop on Visual Odometry and Computer Vision Applications Based on Location Clues ; at CVPR 2017, 2018
- WBIR - International Workshop on Biomedical Image Registration ; at CVPR 2016 ; 2018
- AE-CAI - Workshop on Augmented Environments for Computer-Assisted Interventions (formerly AMI-ARCS) ; at MICCAI 2006, 2008, 2009, 2011, 2012, 2013, 2017
- NORDIA - International Workshop on Non-rigid Shapes and Deformable Image Alignment at ICCV 2009, CVPR 2010, ECCV 2012, ECCV 2014
- WDV - Workshop on Dynamical Vision ; at ECCV 2006, ICCV 2007, ICCV 2009
- 4DMOD - International Workshop on Dynamic Shape Capture and Analysis ; at ICCV 2010, ICCV 2013
- CARE - International Workshop On Computer-Assisted and Robotic Endoscopy ; at MICCAI 2014
- DBC - Symposium on Deep Brain Connectomics ; 2012
- PCP - Workshop on Point Cloud Processing in Computer Vision ; at CVPR 2012
- TWPJJ - Tribute Workshop to Peter Johansen ; 2008
- MIAR - International Workshop on Medical Imaging and Augmented Reality at MICCAI ; 2010
- RMLE - Workshop on Reconstruction and Modeling of Large-Scale 3D Environments ; at ECCV 2010
- S+SSPR - Joint IAPR International Workshops on Structural and Syntactic Pattern Recognition and Statistical Techniques in Pattern Recognition at ICPR ; 2008, 2010
- Modeling3D - Workshop on Representation and Modeling of Large-Scale Virtual Environments ; at ACCV 2009

## Doctoral and Habilitation Committees

### Reviewer in HDR Committees (Habilitation à Diriger les Recherches)

Adrian Basarab	2016	IRIT, Université de Toulouse
Pascal Monasse	2013	IMAGINE, ENS Cachan
Hervé Liebgott	2011	CREATIS, Lyon

### Reviewer in PhD Committees

Federica Arrigoni	2017	Università degli studi di Udine
Rémi Agier	2017	CREATIS, INSA de Lyon

Dat Ngo	2016	EPFL, Lausanne
Yvain Quéau	2015	IRIT, Université de Toulouse
Hector Jacinto	2015	CREATIS, INSA de Lyon
David Jiménez	2015	Universidad de Alcalà
Nazim Haouchine	2015	INRIA, Université Lille 1
Khrystyna Kyrgyzova	2014	CEA, Université Paris-Sud
Behrooz Nasihatkon	2014	NICTA, Australian National University
Yubin Kuang	2014	Centre for Mathematical Sciences, Lund University, Sweden
Pierre Moulon	2014	IMAGINE, Université Paris-Est, Marne-la-Vallée
Lilian Calvet	2014	IRIT, Université de Toulouse
Antoine Meler	2013	INRIA, Université de Grenoble
Enrique Muñoz	2012	Universidad Politécnica de Madrid
Aydın Varol	2012	EPFL, Lausanne
Nicolas Noury	2011	LORIA (INRIA Nancy)
Pablo Alcantarilla	2011	Universidad de Alcalà
Régis Perrier	2011	INRIA, Université de Grenoble
Guillaume Gales	2011	IRIT, Université de Toulouse
Arnaud Jaegler	2011	Institut Fresnel, Université Aix-Marseille
Jérôme Courchay	2011	IMAGINE, Université Paris-Est, Marne-la-Vallée
Amaury Dame	2010	IRISA (INRIA Rennes), Université de Rennes 1
Tamir Yedidya	2010	NICTA, Australian National University
Yvan Pétillot	2008	LISTIC, Université de Savoie
Daniel Pizarro	2008	Universidad de Alcalà
Julien Pilet	2008	EPFL, Lausanne
Julien Peyras	2007	Università degli studi di Milano

#### Examiner in PhD Committees

Iman Alhossen	2017	ICA, Université de Toulouse, <i>President of the Committee</i>
Bastien Durix	2017	IRIT, Université de Toulouse, <i>President of the Committee</i>
Nicolas Bourdel	2017	Institut Pascal, Université Clermont Auvergne
Benjamin Allain	2017	INRIA, Université de Grenoble, <i>President of the Committee</i>
Mouloud Ourak	2016	FEMTO-ST, Université de Bourgogne Franche-Comté, <i>President of the Committee</i>
Sharib Ali	2016	CRAN, Université de Nancy, <i>President of the Committee</i>
Danda Pani Paudel	2015	LE2I, Université de Bourgogne, <i>President of the Committee</i>
Zehor Ouksili	2010	IRIT, INP Toulouse, <i>President of the Committee</i>
Martin de la Gorce	2009	Ecole Centrale de Paris
Benoît Bocquillon	2008	IRIT, INP Toulouse

#### Invited Member in PhD Committees

Florian Bugarin	2012	Mines Albi, Université de Toulouse
-----------------	------	------------------------------------

#### Supervising

##### Postdocs (with topic, co-supervisors and source of funding)

<b>Shaifali Parashar</b>	09-2017	to		ERC FLEXABLE
Improving local solution to NRSfM				
<b>Katrin Skerl</b>	06-2016	to	06-2017	ERC FLEXABLE
Using elastography to improve Shape-from-Template in a surgical context				
<b>Bongjin Koo</b>	06-2016	to	06-2018	Région Auvergne
Computer-aided minimal invasive liver surgery (with Erol Özgür)				
<b>Darshan Venkat</b>	04-2016	to	04-2017	ERC FLEXABLE
Shape-from-Template in context (with Toby Collins)				
<b>Rindra Rantosen</b>	04-2015	to	09-2017	ERC FLEXABLE
The convergence between object detection and Shape-from-Template				
<b>Pablo Mesejo</b>	10-2013	to	09-2014	ANR SYSEO
Shape and appearance based automatic classification of neoplasia in colonoscopy				
<b>Rahat Khan</b>	10-2013	to	11-2015	ERC FLEXABLE
Multiple-View Geometry of a Deformable Surface (with Daniel Pizarro)				
<b>Pablo Alcantarilla</b>	01-2012	to	11-2012	ANR SYSEO
Reconstructing the 3D shape of neoplasia in gastroscopy				

<b>Jae-Hak Kim</b>	03-2011 to 08-2012	Région Auvergne
Assessment of monocular 3D reconstruction methods for deformable bodies (with Richard Hartley)		
<b>Abed Malti</b>	02-2011 to 07-2013	Région Auvergne
Direct image registration and 3D reconstruction (with Richard Hartley)		
<b>Florent Brunet</b>	11-2010 to 11-2011	IMF Toulouse
Image registration and measurements with mechanical constraints (with Emmanuel Cid)		
<b>Toby Collins</b>	11-2009 to 11-2011	Région Auvergne
Brain scans registration then colonoscopy (with Christophe Tilmant)		
<b>Julien Peyras</b>	06-2008 to 06-2009	ANR HFIBMR
A learning approach to image-based rendering		
<b>Michela Farenzena</b>	10-2007 to 10-2008	Industrial contract
Vision-based Outdoor Localization (with Youcef Mezouar)		
<b>PhD Students</b> (with topic, co-supervisors and source of funding)		
<b>John Lin</b>	03-2017 to	CEA
Image Analysis with the Dichromatic Model for Augmented and Diminished Reality (with Mohamed Tamaazousti)		
<b>Richard Modrzejewski</b>	11-2016 to	IRCAD
Texturing a preoperative liver model from laparoscopy (with Luc Soler and Toby Collins)		
<b>Souheil Hadj Said</b>	04-2015 to	CEA
Using Image Restoration and Inpainting in Diminished Reality (with Mohamed Tamaazousti)		
<b>Alexandre Morgand</b>	11-2014 to	CEA
Light Source Modeling and Reconstruction from Multiple Depth Images (with Mohamed Tamaazousti)		
<b>Kristina Prokopetc</b>	09-2014 to 11-2017	Industrial PhD
Accurate Retinal Mapping from Slit-Lamp Images Now: researcher at CEA		
<b>Mathias Gallardo</b>	09-2014 to	ERC FLEXABLE
Deformable 3D Reconstruction from Multiple Visual Cues (with Toby Collins)		
<b>Shaifali Parashar</b>	09-2014 to 10-2017	ERC FLEXABLE
Volumetric Deformable 3D Reconstruction (with Daniel Pizarro) Now: postdoc in UCA		
<b>Ajad Chhatkuli</b>	09-2013 to 12-2016	ERC FLEXABLE
The Multiple-View Geometry of Deformable Surfaces (with Daniel Pizarro) Now: post at ETHZ		
<b>Jim Braux-Zin</b>	06-2011 to 09-2014	CEA
Computer vision for augmented reality in driving assistance (with Romain Dupont at 50%) Now: permanent research at Apple, San Francisco		
<b>François Chadebecq</b>	03-2011 to 11-2015	ANR SYSEO
Using focus to measure the size of neoplasias in colonoscopy (with Christophe Tilmant at 50%) Now: postdoc at UCL		
<b>Amir Yavariabdi</b>	02-2011 to 06-2014	Région Auvergne
2D TVUS to 3D MRI registration in gynecology for mapping endometrial implants (with Chafik Samir at 50%) Now: Assistant Professor, Karatay University		
<b>Amira Bel-Hedi</b>	04-2010 to 06-2013	CEA
Calibration of a TOF camera from weak scene geometry (with Kamel Hamrouni at 5% and Steve Bourgeois at 65%) Now: postdoc at « Centre de Morphologie Mathématique », Mines ParisTech		
<b>Ludovic Magerand</b>	09-2008 to 12-2014	MENRT, <i>with sick-leave</i>
The Geometry of Single and Multiple Rolling Shutter Cameras (with Omar Ait-Aider at 50%) Now: postdoc at CTU		
<b>Florent Brunet</b>	09-2007 to 11-2010	Région Auvergne – TUM, <i>European PhD</i>
Registration and 3D reconstruction of deformable surfaces (with Nassir Navab at 45% and Rémy Malgouyres at 5%) <i>Winner of the second prize at "Doctoriales" 2009 Clermont-Ferrand</i> <i>Winner of the best contribution to "journées de l'EDSPI" 2010 Clermont-Ferrand</i> Now: computer vision research manager at Ubleam in Toulouse		
<b>Julien Michot</b>	09-2007 to 12-2010	CEA
Line Search and Data Fusion with Bundle Adjustment: Application to Vision-Based Localization (with François		

Gaspard at 45% and Jean-Marc Lavest at 5%)  
Now: permanent researcher at Ericsson in Stockholm

**Mathieu Perriollat** 09-2005 to 11-2008 MENRT  
Parameterization and 3D Reconstruction of Developable Surfaces from Images (with Jean-Marc Lavest at 5%)  
Now: head of R&D at VI-Technology in Grenoble

**Vincent Gay-Bellile** 09-2005 to 11-2008 Région Auvergne – CEA  
Contributions to the Registration and 3D Reconstruction of Deformable Surfaces (with Patrick Sayd at 25% and Jean-Thierry Lapresté at 5%)  
*Winner of the best paper prize at CORESA 2007*  
Now: permanent researcher at CEA Saclay

**Hanna Martinsson** 11-2004 to 09-2008 CEA, *only 39 months spent due to maternity leave*  
Reconstructing Manufactured Objects from Image Sequences (François Gaspard at 55% and Jean-Marc Lavest at 5%)  
Now: permanent researcher at Global Imaging in Paris

## Medical Students

Mourad Abdallah, 2018 (M1 and M2 in hepatobiliary surgery) ; Sabrina Madad Zadeh, 2018 (M2 in gynecologic surgery) ; Karine Poirot, 2016 (M1 in hepatobiliary surgery) ; Pauline Chauvet, 2016 (M2 in gynecologic surgery) ; Christophe Allimant, 2016 (M2 in gastroenterology).

## Other Students

I have supervised about 20 visiting PhD students on internships and a larger number of graduate and undergraduate students.

## Classes Taught in Universities

### Université Clermont Auvergne

- **IUT GEA**: descriptive statistics (2010-2013), statistical inference (2009-2013), information systems (2009), basics in mathematics (2009-2013) ; approximately 160h per year over 2009-2013
- **MSc TechMed**: scientific calculus (2012), computer assisted surgery (2012), medical image registration (2009-2012), 3D computer vision (2009-2012) ; approximately 70h per year over 2009-2012 ; computer assisted surgery (since 2012)

### University of Copenhagen

- **MSc and PhD levels**: 3D computer vision (2006, 2008), image registration (2007) ; approximately 30h per year over 2006-2009

### Université Blaise Pascal

- **MSc MSIR**: image processing (2007), visual geometry for 3D vision (2004-2012) ; 16h per year
- **ENSCCF**: numerical optimization (2005-2007) ; 32h per year

### University of Alcalá

- **MSc and PhD levels**: Rigid and Non-Rigid Structure-from-Motion (2010, 10h), Non-Rigid Image Registration and 3D Reconstruction for Deforming Surfaces (2009, 4h)

### University of Verona

- **MSc level**: Image Registration – 2D, 3D, rigid and deformable scenes (2007, 20h)

### University of Oxford

- **Undergraduate**: C++ coursework module, practicals, (2004, 10h)

### Université Joseph Fourier

- **BSc in CS**: image synthesis and vision, practicals (2001-2003)
- **ISTG graduate course in CS**: multiresolution and visualization, practicals (2002)
- **Undergraduate courses in CS**: computer architecture (2002), programming (2000-2002), internet and the www (2001)

## Research Projects and Grants, and Funding Sources

### European Research Council

- **P-ViTAL**, ERC Proof-of-Concept Grant, 2018-2019, 150k€ (IP, Principal Investigator)
- **fLEXABLE**, ERC Consolidator Grant, 2013-2017, 1.5M€ (ISIT, Principal Investigator)

### Multi-Partners Projects (\* indicates membership of the leading partner)

- **3DCI (3D Component Inspection)**, FUI project, with ViT and EIA companies and the LIG lab, 2013-2016, 342k€ (ISIT)
- **SYSEO**, ANR (tecsan) project on gastroenterology, 2011-2014, 128k€ (ISIT)
- **HFIBMR (High Fidelity Image-Based Modeling and Rendering)**, ANR (blanc) project on 3D modeling, 2008-2011, 204k€
- **VIRAGO\* (Vision Rapide)**, ANR (jeunes chercheurs) project on CMOS cameras 2007-2011, 180k€
- **STANDS-MSG (Spatio-Temporal Analysis in MSG Images)**, ANR (jeunes chercheurs) project, 2006-2009, 103k€



- **VISIRE\* (Vision-based 3D Reconstruction)**, European IST project 10756, 1999-2003, 2M€

#### Bilateral Projects (\* indicates membership of the leading partner)

- **Automatic Methods for the Video Analysis of Leukocytes**, ERDF Veneto, with EVS Verona, 2013-2014, 73k€
- **MOSCA (Mouvement et structure en configurations atypiques)**, CNRS-INSIS (PEPS) with Le2i lab, 2011-2012, 25k€
- **RECODES: Reconstruction, Correction and Deformation of Brain Surfaces**, PHC Fast with CSIRO, Brisbane, 2011, 8k€
- **FCT-Portugal Visiting Fellowship**, FCT grant MODI-PTDC/EEA-ACR/72201/2006, with ISR, 2010, 3k€
- **SURF-3D\* (3D Reconstruction of Deformable Surfaces from Endoscopic Images)**, PHC Procope with TU-Munich, 2009, 5k€
- **3D Reconstruction of Surfaces by Integrating Mechanical Models\***, PHC Alliance with University of London, 2009, 5k€
- **SUN\* (Surface Unraveling with Application to Document Scanning)**, French Embassy in Denmark, with DIKU, 2009, 10k€
- **University of Verona Visiting Fellowship\***, CooperInt Fellowship #49992V/8, with University of Verona, 2006, 5k€
- **PMoCap\* (Computer Vision Based Motion Capture for Paper)**, GdR ISIS project, with INRIA Rhône-Alpes, 2007, 5k€
- **A Machine Learning Approach to Deformable Object Modeling\***, France/Germany BFHZ project, with TU-Munich, 2007, 2k€
- **CALIPSOO (Calibration from Planar Objects)**, GdR ISIS project, with IRIT, 2002, 5k€

#### Other Funding Sources

- **Région Auvergne, grant on hepatic surgery**, 2015, 96k€
- **Région Auvergne, grant on colonoscopy**, 2015, 98k€
- **Research contract with VIT**, 2010, 10k€
- **Postdoc grant from Région Auvergne**, 2011, 40k€
- **Research contract with CEA**, 2007, 55k€
- **CNRS Researcher Exchange with Australia**, grant number 19821, 2007, 3k€

#### Consulting

- **FittingBox**, a spin-off in Toulouse (2009)
- **The Unkelback Valley Software Work** (2004-2005)

#### Laboratory Evaluation Panels

- **GIPSA-lab (Grenoble Images Parole Signal Automatique)**, AERES evaluation in 2010
- **IRIT (Institut de Recherche en Informatique de Toulouse)**, AERES evaluation in 2009

#### Project Evaluation

- **GAČR (Czech Science Foundation)**, 2017
- **AIAS (Aarhus Institute of Advanced Studies)**, 2015
- **ANCS (Romanian National Authority for Scientific Research) PCCA**, 2011
- **ANR ContInt (Interactive Contents)**, 2009, 2010
- **ANR CSOSCG (Global Security)**, 2006, 2007, 2008, 2009, 2010
- **ANR Blanc (general research)**, 2010
- **ANR TecSan (Technology for Health)**, 2007, 2009
- **NSF Information and Intelligent Systems**, 2008
- **ANR RIAM (Multimedia)**, 2005, 2006, 2008
- **ANR TechLog (Software Engineering)**, 2007

#### Other Duties, Awards and Responsibilities

2018	External evaluation for the recruitment of a professor at Chalmers University of Technology (Sweden)
2017	Board member of a lecturer recruitment committee at Université de Bourgogne, I-SITE (CS 27ème section)
2016	Board member of a lecturer recruitment committee at Université de Toulouse (CS 27ème section)
2014	Board member of a lecturer recruitment committee at INSA Lyon (CS 61ème/27ème sections)
2013/now	Member of the ISIT research council
2013	President of a lecturer recruitment committee at Uda (CS 27ème section)
2012	Board member of a lecturer recruitment committee at Uda (CS 27ème section)
2010	President of one and board member of a second recruitment committee at Uda (CS 27ème section)
2008	Board member of three recruitment committees at Uda (CS 27ème section)
2007/2009	Replacement board member of the international exchanges board at UBP – UFR ST
2007/2009	Replacement board member of the recruitment committee at UBP (CSE 61ème section)
2007/2008	Responsible for the “Models and Software for Health, the Living, the Physics” research project of the Research Federation TIMS at LASMEA laboratory
2007/2009	Responsible for the Socrates-Erasmus student exchange scheme with DIKU, Denmark

2006/2009 Member of the LASMEA research council  
2005 Organizer of the annual meeting of the GRAVIR group of the LASMEA laboratory  
2005/2008 Installation and administration of the ComSee team's website  
2004/2007 Co-organizer of the seminars of the GRAVIR group of the LASMEA laboratory  
2004 Recipient of an IEEE travel grant for the CVPR conference, Washington, USA  
2001/2003 Organizer of the Image Synthesis, Vision and Robotics seminars at INRIA Rhône-Alpes  
2003 Organizer of the welcoming workshop for the new teaching assistants in Grenoble  
2003 Recipient of an IEEE travel grant for the ICCV conference, Nice, France  
2001 Organizer of the annual meeting of the Perception (ex MOVI) team of the GRAVIR lab  
2001 Recipient of an IEEE travel grant for the CVPR conference, Hawaii, USA

Speaker at “fête de la science” 2002 (Grenoble) and 2007 (Clermont-Ferrand), speaker at “Mercredis de la Science” 2012 (Clermont-Ferrand).

## **Publications**

My h-index is 28 with 2499 citations in April 2016 according to Google Scholar. I have had 8 conference articles selected for Special Issues in journals (IPCAI 2017, ISMAR 2017, RFIA 2016, RFIA 2014, ORASIS 2013, 3DPVT 2010, RFIA 2008, BMVC 2008).

## **Software**

Protected software:

- PIMS (Polyp Interactive Measurement System): IDDN.FR.001.160008.000.S.P.2015.000.31230, April 8, 2015
- Laparaug (laparoscopic uterine augmentation): IDDN.FR.001.160007.000.S.P.2015.000.31230, April 8, 2015
- CAPRE (Computer Aided Polyp Recognition): IDDN.FR.001.350029.000.S.P.2015.000.31230, August 28, 2015

## Publication List

Most of these publications can be downloaded from [igt.ip.uca.fr/encov/publications](http://igt.ip.uca.fr/encov/publications).

### International Journals (55)

- [J055] **Isometric Non-Rigid Shape-from-Motion with Riemannian Geometry Solved in Linear Time**  
S. Parashar, D. Pizarro and A. Bartoli  
*IEEE Transactions on Pattern Analysis and Machine Intelligence*, accepted September 2017
- [J054] **Inextensible Non-Rigid Structure-from-Motion by Second-Order Cone Programming**  
A. Chhatkuli, D. Pizarro, T. Collins and A. Bartoli  
*IEEE Transactions on Pattern Analysis and Machine Intelligence*, accepted September 2017
- [J053] **Fast Shape-from-Template Using Local Features**  
M. Famouri, A. Bartoli and Z. Azimifar  
*Machine Vision and Applications*, accepted August 2017
- [J052] **A 3D Deformable Model-Based Framework for the Retrieval of Near-Isometric Flattenable Objects using Bag-of-Visual-Words**  
R. Rantson and A. Bartoli  
*Computer Vision and Image Understanding*, accepted August 2017
- [J051] **Preliminary Trial of Augmented Reality Performed on a Laparoscopic Left Hepatectomy**  
P. Phutane, E. Buc, K. Poirot, E. Özgür, D. Pezet, A. Bartoli and B. Le Roy  
*Surgical Endoscopy*, accepted July 2017
- [J050] **Image-Based Models for Specularity Propagation in Diminished Reality**  
S. Hadj Said, M. Tamaazousti and A. Bartoli  
*IEEE Transactions on Visualization and Computer Graphics*, accepted May 2017
- [J049] **Augmented Reality in a Tumor Resection Model**  
P. Chauvet, T. Collins, C. Debize, L. Novais-Gameiro, B. Pereira, A. Bartoli, M. Canis and N. Bourdel  
*Surgical Endoscopy*, accepted May 2017
- [J048] **SLIM (Slit Lamp Image Mosaicing): Handling Reflection Artifacts**  
K. Prokopetc and A. Bartoli  
*International Journal of Computer Assisted Radiology and Surgery*, special issue: selected papers from IPCAI 2017, accepted March 2017
- [J047] **A Geometric Model for Specularity Prediction on Planar Surfaces with Multiple Light Sources**  
A. Morgand, M. Tamaazousti and A. Bartoli  
*IEEE Transactions on Visualization and Computer Graphics*, accepted February 2017
- [J046] **A Multiple-View Geometric Model of Specularities on Non-Planar Shapes with Application to Dynamic Retexturing**  
A. Morgand, M. Tamaazousti and A. Bartoli  
*IEEE Transactions on Visualization and Computer Graphics*, special issue: selected papers from ISMAR 2017, 23(11):0-0, November 2017
- [J045] **Particle-SfT: a Provably-Convergent, Fast Shape-from-Template Algorithm**  
E. Özgür and A. Bartoli  
*International Journal of Computer Vision*, 123(2):184-205, June 2017
- [J044] **Planar Structure-from-Motion with Affine Camera Models: Closed-Form Solutions, Ambiguities and Degeneracy Analysis**  
T. Collins and A. Bartoli  
*IEEE Transactions on Pattern Analysis and Machine Intelligence*, 39(6):1237-1255, June 2017
- [J043] **A Stable Analytical Framework for Isometric Shape-from-Template by Surface Integration**  
A. Chhatkuli, D. Pizarro, A. Bartoli and T. Collins  
*IEEE Transactions on Pattern Analysis and Machine Intelligence*, 39(5):833-850, May 2017

- [J042] **Use of Augmented Reality in Laparoscopic Gynecology to Visualize Myomas**  
N. Bourdel, T. Collins, D. Pizarro, C. Debize, A.-S. Grémeau, A. Bartoli and M. Canis  
*Fertility and Sterility*, 107(3):737-739, March 2017
- [J041] **Generalizing the Prediction Sum of Squares Statistic and Formula, Application to Linear Fractional Image Warp and Surface Fitting**  
A. Bartoli  
*International Journal of Computer Vision*, 122(1):61-83, March 2017
- [J040] **EasyFlow: Increasing the Convergence Basin of Variational Image Matching with a Feature-Based Cost**  
J. Braux-Zin, R. Dupont, A. Bartoli and M. Tamaazousti  
*IET Computer Vision*, 11(2):122-134, March 2017
- [J039] **Augmented Reality in Gynecologic Surgery: Evaluation of Potential Benefits for Myomectomy**  
N. Bourdel, T. Collins, D. Pizarro, A. Bartoli, D. Da Ines, B. Pereira and M. Canis  
*Surgical Endoscopy*, 31(1):456-461, January 2017
- [J038] **A Comparative Study of Transformation Models for the Sequential Mosaicing of Long Retinal Sequences of Slit-Lamp Images Obtained in a Closed Loop Motion**  
K. Prokopetc and A. Bartoli  
*International Journal of Computer Assisted Radiology and Surgery*, 11(12):2163-2172, December 2016
- [J037] **Computer-Aided Classification of Gastrointestinal Lesions in Regular Colonoscopy**  
P. Mesejo, D. Pizarro, L. Poincloux, O. Rouquette, S. Beorchia, A. Abergel and A. Bartoli  
*IEEE Transactions on Medical Imaging*, 35(9):2051-2063, September 2016
- [J036] **Schwarzs: Locally Projective Image Warps Based on 2D Schwarzian Derivatives**  
D. Pizarro, R. Khan and A. Bartoli  
*International Journal of Computer Vision*, 119(2):93-109, September 2016
- [J035] **3D Conformation of a Flexible Fiber in a Turbulent Flow**  
G. Verhille and A. Bartoli  
*Experiments in Fluids*, 57(7):117-127, July 2016
- [J034] **Noise Modeling in TOF Sensors with Application to Depth Noise Removal and Uncertainty Estimation in 3D Measurement**  
A. Bel-Hedi, A. Bartoli, S. Bourgeois, V. Gay-Bellile, K. Hamrouni and P. Sayd  
*IET Computer Vision*, 9(6):967-977, December 2015
- [J033] **Shape-from-Template**  
A. Bartoli, Y. Gérard, F. Chadebecq, T. Collins and D. Pizarro  
*IEEE Transactions on Pattern Analysis and Machine Intelligence*, 37(10):2099-2118, October 2015
- [J032] **Rank-Constrained Fundamental Matrix Estimation by Polynomial Global Optimization Versus the Eight-Point Algorithm**  
F. Bugarin, A. Bartoli, D. Henrion, J.-B. Lasserre, J.-J. Orteu and T. Sentenac  
*Journal of Mathematical Imaging and Vision*, 53(1):42-60, September 2015
- [J031] **Mapping and Characterizing Endometrial Implants by Registering 2D Transvaginal Ultrasound to 3D Pelvic Magnetic Resonance Images**  
A. Yavariabdi, A. Bartoli, C. Samir, M. Artigues and M. Canis  
*Computerized Medical Imaging and Graphics*, 45:11-25, July 2015
- [J030] **Metric Corrections of the Affine Camera**  
A. Bartoli, T. Collins and D. Pizarro  
*Computer Vision and Image Understanding*, 135:141-156, June 2015
- [J029] **How Big is this Neoplasia? Live Colonoscopic Size Measurement using the Infocus-Breakpoint**  
F. Chadebecq, C. Tilmant and A. Bartoli  
*Medical Image Analysis*, 19(1):58-74, January 2015

- [J028] **Comparative Validation of Single-shot Optical Techniques for Laparoscopic 3D Surface Reconstruction**  
L. Maier-Hein, A. Groch, A. Bartoli, S. Bodenstedt, G. Boissonnat, P.-L. Chang, N. T. Clancy, D. S. Elson, S. Haase, E. Heim, J. Hornegger, P. Jannin, H. Kenngott, T. Kilgus, B. Müller-Stich, D. Oladokun, S. Röhl, T. R. dos Santos, H.-P. Schlemmer, A. Seitel, S. Speidel, M. Wagner and D. Stoyanov  
*IEEE Transactions on Medical Imaging*, 33(10):1913-1930, October 2014
- [J027] **Infinitesimal Plane-Based Pose Estimation**  
T. Collins and A. Bartoli  
*International Journal of Computer Vision*, 109(3):252-286, September 2014
- [J026] **Monocular Template-Based 3D Surface Reconstruction: Convex Inextensible and Nonconvex Isometric Methods**  
F. Brunet, A. Bartoli and R. Hartley  
*Computer Vision and Image Understanding*, 125:138-154, August 2014
- [J025] **Combining Conformal Deformation and Cook-Torrance Shading for 3D Reconstruction in Laparoscopy**  
A. Malti and A. Bartoli  
*IEEE Transactions on Biomedical Engineering*, 61(6):1684-1692, June 2014
- [J024] **Optical Techniques for 3D Surface Reconstruction in Computer-assisted Laparoscopic Surgery**  
L. Maier-Hein, P. Mountney, A. Bartoli, H. Elhawary, D. Elson, A. Groch, A. Kolb, M. Rodrigues, J. Sorger, S. Speidel and D. Stoyanov  
*Medical Image Analysis*, 17(8):974-996, December 2013
- [J023] **A Computational Model of Bounded Developable Surfaces with Application to Image-Based 3D Reconstruction**  
M. Perriollat and A. Bartoli  
*Computer Animation and Virtual Worlds*, 24(5):459-476, September 2013
- [J022] **Image Registration Algorithms for Molecular Tagging Velocimetry Applied in Hele-Shaw Cell**  
F. Brunet, E. Cid, A. Bartoli, E. Bouche, F. Risso and V. Roig  
*Experimental Thermal and Fluid Science*, 44:897-904, January 2013
- [J021] **Stratified Generalized Procrustes Analysis**  
A. Bartoli, D. Pizarro and M. Loog  
*International Journal of Computer Vision*, 101(2):227-253, January 2013
- [J020] **Computer Assisted Minimally Invasive Surgery: Is Medical Computer Vision the Answer to Improving Laparosurgery?**  
A. Bartoli, T. Collins, M. Canis and N. Bourdel  
*Medical Hypotheses*, 79(6):858-863, December 2012
- [J019] **Feature-Based Deformable Surface Detection with Self-Occlusion Reasoning**  
D. Pizarro and A. Bartoli  
*International Journal of Computer Vision*, special issue: selected papers from 3DPVT 2010, 97(1):54-70, March 2012
- [J018] **Monocular Template-Based Reconstruction of Inextensible Surfaces**  
M. Perriollat, R. Hartley and A. Bartoli  
*International Journal of Computer Vision*, special issue: selected papers from BMVC 2008, 95(2):124-137, November 2011
- [J017] **Feature-Driven Direct Non-Rigid Image Registration**  
F. Brunet, V. Gay-Bellile, A. Bartoli, N. Navab and R. Malgouyres  
*International Journal of Computer Vision*, 93(1):33-52, May 2011
- [J016] **Generalized Thin-Plate Spline Warps**  
A. Bartoli, M. Perriollat and S. Chambon  
*International Journal of Computer Vision*, 88(1):85-110, May 2010
- [J015] **Direct Estimation of Non-Rigid Registrations with Image-Based Self-Occlusion Reasoning**  
V. Gay-Bellile, A. Bartoli and P. Sayd  
*IEEE Transactions on Pattern Analysis and Machine Intelligence*, 32(1):87-104, January 2010

- [J014] **On Computing the Prediction Sum of Squares Statistic in Linear Least Squares Problems with Multiple Parameter or Measurement Sets**  
A. Bartoli  
*International Journal of Computer Vision*, 85(2):133-142, November 2009
- [J013] **Robust Deformation Capture from Temporal Range Data for Surface Rendering**  
U. Castellani, V. Gay-Bellile and A. Bartoli  
*Computer Animation and Virtual Worlds*, 19(5):591-603, December 2008
- [J012] **Groupwise Geometric and Photometric Direct Image Registration**  
A. Bartoli  
*IEEE Transactions on Pattern Analysis and Machine Intelligence*, 30(12):2098-2108, December 2008
- [J011] **Maximizing the Predictivity of Smooth Deformable Image Warps Through Cross-Validation**  
A. Bartoli  
*Journal of Mathematical Imaging and Vision*, special issue: tribute to Peter Johansen, 31(2-3):133-145, July 2008
- [J010] **Implicit Non-Rigid Structure-from-Motion with Priors**  
S. Olsen and A. Bartoli  
*Journal of Mathematical Imaging and Vision*, special issue: tribute to Peter Johansen, 31(2-3):233-244, July 2008
- [J009] **Triangulation for Points on Lines**  
A. Bartoli and J.-T. Lapresté  
*Image and Vision Computing*, 26(2):315-324, February 2008
- [J008] **A Random Sampling Strategy For Piecewise Planar Scene Segmentation**  
A. Bartoli  
*Computer Vision and Image Understanding*, 105(1):42-59, January 2007
- [J007] **Affine Approximation for Direct Batch Recovery of Euclidean Motion From Sparse Data**  
N. Guilbert, A. Bartoli and A. Heyden  
*International Journal of Computer Vision*, 69(3):317-333, September 2006
- [J006] **Structure-from-Motion Using Lines: Representation, Triangulation and Bundle Adjustment**  
A. Bartoli and P. Sturm  
*Computer Vision and Image Understanding*, 100(3):416-441, December 2005
- [J005] **The Geometry of Dynamic Scenes - On Coplanar and Convergent Linear Motions Embedded in 3D Static Scenes**  
A. Bartoli  
*Computer Vision and Image Understanding*, 98(2):223-238, May 2005
- [J004] **Motion Panoramas**  
A. Bartoli, N. Dalal and R. Horaud  
*Computer Animation and Virtual Worlds*, 15(5):501-517, November 2004
- [J003] **The 3D Line Motion Matrix and Alignment of Line Reconstructions**  
A. Bartoli and P. Sturm  
*International Journal of Computer Vision*, 57(3):159-178, May 2004
- [J002] **Non-Linear Estimation of the Fundamental Matrix With Minimal Parameters**  
A. Bartoli and P. Sturm  
*IEEE Transactions on Pattern Analysis and Machine Intelligence*, 26(3):426-432, March 2004
- [J001] **Constrained Structure and Motion From Multiple Uncalibrated Views of a Piecewise Planar Scene**  
A. Bartoli and P. Sturm  
*International Journal of Computer Vision*, 52(1):45-64, April 2003

## International Conference and Workshop Proceedings (138)

- [I138] **A Multiple-View Geometric Model of Specularities on Non-Uniformly Curved Surfaces**  
A. Morgand, M. Tamaazousti and A. Bartoli  
*VRST - ACM Symposium on Virtual Reality Software and Technology, 2017*
- [I137] **Dense Non-Rigid Structure-from-Motion and Shading with Unknown Albedos**  
M. Gallardo, T. Collins and A. Bartoli  
*ICCV - IEEE International Conference on Computer Vision, 2017*
- [I136] **Visualizing In-Organ Tumors in Augmented Monocular Laparoscopy**  
E. Özgür, A. Lafont and A. Bartoli  
*ISMAR - IEEE International Symposium on Mixed and Augmented Reality, 2017*
- [I135] **A Multiple-View Geometric Model of Specularities on Non-Planar Shapes with Application to Dynamic Retexturing**  
A. Morgand, M. Tamaazousti and A. Bartoli  
*ISMAR - IEEE International Symposium on Mixed and Augmented Reality, 2017*
- [I134] **Deformable Registration of a Preoperative 3D Liver Volume to a Laparoscopy Image using Contour and Shading Cues**  
B. Koo, E. Özgür, B. Le Roy, E. Buc and A. Bartoli  
*MICCAI - International Conference on Medical Image Computing and Computer Assisted Intervention, 2017*
- [I133] **SLIM (Slit Lamp Image Mosaicing): Handling Reflection Artifacts**  
K. Prokopetc and A. Bartoli  
*IPCAI - International Conference on Information Processing in Computer-Assisted Interventions, 2017*
- [I132] **A System for Augmented Reality Guided Laparoscopic Tumor Resection with Quantitative Ex-vivo User Evaluation**  
T. Collins, P. Chauvet, C. Debize, D. Pizarro, A. Bartoli, N. Bourdel and M. Canis  
*CARE - International Workshop on Computer Assisted and Robotics Endoscopy at MICCAI, 2016*
- [I131] **Using Shading and a 3D Template to Reconstruct Complex Surface Deformations**  
M. Gallardo, T. Collins and A. Bartoli  
*BMVC - British Machine Vision Conference, 2016*
- [I130] **Can we Jointly Register and Reconstruct Creased Surfaces by Shape-from-Template Accurately?**  
M. Gallardo, T. Collins and A. Bartoli  
*ECCV - European Conference on Computer Vision, 2016*
- [I129] **A Perspective on Non-Isometric Shape-from-Template**  
A. Bartoli and E. Özgür  
*ISMAR - IEEE International Symposium on Mixed and Augmented Reality, 2016*
- [I128] **An Empirical Model for Specularity Prediction with Application to Dynamic Retexturing**  
A. Morgand, M. Tamaazousti and A. Bartoli  
*ISMAR - IEEE International Symposium on Mixed and Augmented Reality, 2016*
- [I127] **Dense, Robust and Real-time 3D Tracking of Deformable Organs in Monocular Laparoscopy**  
T. Collins, A. Bartoli, N. Bourdel and M. Canis  
*MICCAI - International Conference on Medical Image Computing and Computer Assisted Intervention, 2016*
- [I126] **Reducing Drift in Mosaicing Slit-Lamp Retinal Images**  
K. Prokopetc and A. Bartoli  
*WBIR - International Workshop on Biomedical Image Registration at CVPR, 2016*
- [I125] **Isometric Non-Rigid Shape-from-Motion in Linear Time**  
S. Parashar, D. Pizarro and A. Bartoli  
*CVPR - IEEE International Conference on Computer Vision and Pattern Recognition, 2016*
- [I124] **Inextensible Non-Rigid Shape-from-Motion by Second Order Cone Programming**  
A. Chhatkuli, D. Pizarro, T. Collins and A. Bartoli  
*CVPR - IEEE International Conference on Computer Vision and Pattern Recognition, 2016*

- [I123] **A Comparative Study of Transformation Models for the Sequential Mosaicing of Long Retinal Sequences of Slit-Lamp Images Obtained in a Closed Loop Motion**  
K. Prokopetc and A. Bartoli  
*CARS - International Conference on Computer Assisted Radiology and Surgery, 2016*
- [I122] **As-Rigid-As-Possible Volumetric Shape-from-Template**  
S. Parashar, D. Pizarro, A. Bartoli and T. Collins  
*ICCV - IEEE International Conference on Computer Vision, 2015*
- [I121] **Using Shading to Register an Intraoperative CT Scan to a Laparoscopic Image**  
S. Bernhardt, S. Nicolau, A. Bartoli, V. Agnus, L. Soler and C. Doignon  
*CARE - International Workshop on Computer Assisted and Robotics Endoscopy at MICCAI, 2015*
- [I120] **Segmenting the Uterus in Monocular Laparoscopic Images without Manual Input**  
T. Collins, A. Bartoli, N. Bourdel and M. Canis  
*MICCAI - International Conference on Medical Image Computing and Computer Assisted Intervention, 2015*
- [I119] **Shape-from-Template in Flatland**  
M. Gallardo, D. Pizarro, A. Bartoli and T. Collins  
*CVPR - IEEE International Conference on Computer Vision and Pattern Recognition, 2015*
- [I118] **A Linear Least-Squares Solution to Elastic Shape-from-Template**  
A. Malti, A. Bartoli and R. Hartley  
*CVPR - IEEE International Conference on Computer Vision and Pattern Recognition, 2015*
- [I117] **Automatic Detection of the Uterus and Fallopian Tube Junctions in Laparoscopic Images**  
K. Prokopetc, T. Collins and A. Bartoli  
*IPMI - International Conference on Information Processing in Medical Imaging, 2015*
- [I116] **Non-Rigid Shape-from-Motion for Isometric Surfaces using Infinitesimal Planarity**  
A. Chhatkuli, D. Pizarro and A. Bartoli  
*BMVC - British Machine Vision Conference, 2014*
- [I115] **Schwarzs: Locally Projective Image Warps Based on 2D Schwarzian Derivatives**  
R. Khan, D. Pizarro and A. Bartoli  
*ECCV - European Conference on Computer Vision, 2014*
- [I114] **Using Isometry to Classify Correct/Incorrect 3D-2D Correspondences**  
T. Collins and A. Bartoli  
*ECCV - European Conference on Computer Vision, 2014*
- [I113] **An Analysis of Errors in Graph-based Keypoint Matching and Proposed Solutions**  
T. Collins, P. Mesejo and A. Bartoli  
*ECCV - European Conference on Computer Vision, 2014*
- [I112] **Computer-Aided Laparoscopic Myomectomy by Augmenting the Uterus with Pre-operative MRI Data**  
T. Collins, D. Pizarro, A. Bartoli, N. Bourdel and M. Canis  
*ISMAR - IEEE International Symposium on Mixed and Augmented Reality, 2014*
- [I111] **Stable Template-Based Isometric 3D Reconstruction in All Imaging Conditions by Linear Least-Squares**  
A. Chhatkuli, D. Pizarro and A. Bartoli  
*CVPR - IEEE International Conference on Computer Vision and Pattern Recognition, 2014*
- [I110] **Live Image Parsing in Uterine Laparoscopy**  
A. Chhatkuli, A. Bartoli, A. Malti and T. Collins  
*ISBI - IEEE International Symposium on Biomedical Imaging, 2014*
- [I109] **A Robust Analytical Solution to Isometric Shape-from-Template with Focal Length Calibration**  
A. Bartoli, D. Pizarro and T. Collins  
*ICCV - IEEE International Conference on Computer Vision, 2013*



- [I108] **A General Dense Image Matching Framework Combining Direct and Feature-based Costs**  
J. Braux-Zin, R. Dupont and A. Bartoli  
ICCV - *IEEE International Conference on Computer Vision*, 2013
- [I107] **Combining Features and Intensity for Wide-Baseline Non-Rigid Surface Registration**  
J. Braux-Zin, R. Dupont and A. Bartoli  
BMVC - *British Machine Vision Conference*, 2013
- [I106] **Isowarp and Conwarp: Warps that Exactly Comply with Weak-Perspective Projection of Deforming Objects for 3D Reconstruction**  
D. Pizarro, A. Bartoli and T. Collins  
BMVC - *British Machine Vision Conference*, 2013
- [I105] **Fast Explicit Diffusion for Accelerated Features in Nonlinear Scale Spaces**  
P. Alcantarilla, J. Nuevo and A. Bartoli  
BMVC - *British Machine Vision Conference*, 2013
- [I104] **Contour-Based TVUS-MR Image Registration for Mapping Small Endometrial Implants**  
A. Yavariabdi, C. Samir, A. Bartoli, D. Da Ines and N. Bourdel  
ABD - *Workshop on Computational and Clinical Applications in Abdominal Imaging at MICCAI*, 2013
- [I103] **Realtime Wide-Baseline Registration of the Uterus in Monocular Laparoscopic Videos**  
T. Collins, D. Pizarro, A. Bartoli, M. Canis and N. Bourdel  
MIAR - *International Workshop on Medical Imaging and Augmented Reality at MICCAI*, 2013
- [I102] **Enhanced Imaging Colonoscopy Facilitates Dense Motion-Based 3D Reconstruction**  
P. Alcantarilla, A. Bartoli, F. Chadebecq, C. Tilmant and V. Lepilliez  
EMBC - *IEEE/EMBS International Engineering in Medicine and Biology Conference*, 2013
- [I101] **Industrial Phase-Shifting Profilometry in Motion**  
P. Schroeder, R. Roux, J.-M. Favreau, M. Perriollat and A. Bartoli  
SCIA - *Scandinavian Conference on Image Analysis*, 2013
- [I100] **Monocular Template-Based 3D Reconstruction of Extensible Surfaces with Local Linear Elasticity**  
A. Malti, R. Hartley, A. Bartoli and J.-H. Kim  
CVPR - *IEEE International Conference on Computer Vision and Pattern Recognition*, 2013
- [I099] **Template-Based Isometric Deformable 3D Reconstruction with Sampling-Based Focal Length Self-Calibration**  
A. Bartoli and T. Collins  
CVPR - *IEEE International Conference on Computer Vision and Pattern Recognition*, 2013
- [I098] **Shape-from-Polarization in Laparoscopy**  
S. Martinez-Herrera, A. Malti, O. Morel and A. Bartoli  
ISBI - *IEEE International Symposium on Biomedical Imaging*, 2013
- [I097] **Mapping Endometrial Implants by 2D/2D Registration of TVUS to MR Images from Point Correspondences**  
A. Yavariabdi, C. Samir, A. Bartoli, D. Da Ines and N. Bourdel  
ISBI - *IEEE International Symposium on Biomedical Imaging*, 2013
- [I096] **Using the Infocus-Breakpoint to Estimate the Scale of Neoplasia in Colonoscopy**  
F. Chadebecq, C. Tilmant and A. Bartoli  
ISBI - *IEEE International Symposium on Biomedical Imaging*, 2013
- [I095] **Calibrating an Optical See-Through Rig with Two Non-Overlapping Cameras: the Virtual Camera Framework**  
J. Braux-Zin, A. Bartoli, R. Dupont and R. Vinciguerra  
3DIMPVT - *International Symposium on 3D Imaging, Modeling, Processing, Visualization and Transmission*, 2012
- [I094] **Noise Modelling and Uncertainty Propagation for TOF Sensors**  
A. Bel-Hedi, A. Bartoli, S. Bourgeois, K. Hamrouni, V. Gay-Bellile and P. Sayd  
QU3ST - *Workshop on 2.5D Sensing Technologies in Motion: The Quest for 3D at ECCV*, 2012

- [I093] **Depth Correction for Depth Cameras From Planarity**  
A. Bel-Hedi, A. Bartoli, V. Gay-Bellile, S. Bourgeois, P. Sayd and K. Hamrouni  
BMVC - *British Machine Vision Conference*, 2012
- [I092] **Deformable 3D Reconstruction with an Object Database**  
P. Alcantarilla and A. Bartoli  
BMVC - *British Machine Vision Conference*, 2012
- [I091] **Estimating the Cook-Torrance BRDF Parameters In-Vivo from Laparoscopic Images**  
A. Malti and A. Bartoli  
AE-CAI - *Workshop on Augmented Environments in Computer-Assisted Interventions at MICCAI*, 2012
- [I090] **Global Optimization of Object Pose and Motion from a Single Rolling Shutter Image with Automatic 2D-3D Matching**  
L. Magerand, A. Bartoli, O. Ait-Aider and D. Pizarro  
ECCV - *European Conference on Computer Vision*, 2012
- [I089] **KAZE Features**  
P. Alcantarilla, A. Bartoli and A. Davison  
ECCV - *European Conference on Computer Vision*, 2012
- [I088] **Measuring the Size of Neoplasia in Colonoscopy using Depth-from-Defocus**  
F. Chadebecq, C. Tilmant and A. Bartoli  
EMBC - *IEEE/EMBS International Engineering in Medicine and Biology Conference*, 2012
- [I087] **3D Reconstruction in Laparoscopy with Close-Range Photometric Stereo**  
T. Collins and A. Bartoli  
MICCAI - *International Conference on Medical Image Computing and Computer Assisted Intervention*, 2012
- [I086] **Non-Parametric Depth Calibration of a TOF Camera**  
A. Bel-Hedi, S. Bourgeois, V. Gay-Bellile, P. Sayd, A. Bartoli and K. Hamrouni  
ICIP - *IEEE International Conference on Image Processing*, 2012
- [I085] **Tracking by Detection for Interactive Image Augmentation in Laparoscopy**  
J.-H. Kim, A. Bartoli, T. Collins and R. Hartley  
WBIR - *Workshop on Biomedical Image Registration*, 2012
- [I084] **Constant Flow Sampling: A Method to Automatically Select the Regularization Parameter in Image Registration**  
B. Compte, A. Bartoli and D. Pizarro  
WBIR - *Workshop on Biomedical Image Registration*, 2012
- [I083] **On Template-Based Reconstruction from a Single View: Analytical Solutions and Proofs of Well-Posedness for Developable, Isometric and Conformal Surfaces**  
A. Bartoli, Y. Gérard, F. Chadebecq and T. Collins  
CVPR - *IEEE International Conference on Computer Vision and Pattern Recognition*, 2012
- [I082] **Towards Live Monocular 3D Laparoscopy using Shading and Specularity Information**  
T. Collins and A. Bartoli  
IPCAI - *International Conference on Information Processing in Computer-Assisted Interventions*, 2012
- [I081] **Template-Based Conformal Shape-from-Motion-and-Shading for Laparoscopy**  
A. Malti, A. Bartoli and T. Collins  
IPCAI - *International Conference on Information Processing in Computer-Assisted Interventions*, 2012
- [I080] **A Pixel-Based Approach to Template-Based Monocular 3D Reconstruction of Deformable Surfaces**  
A. Malti, A. Bartoli and T. Collins  
4DMOD - *IEEE International Workshop on Dynamic Shape Capture and Analysis at ICCV*, 2011
- [I079] **Simultaneous Image Registration and Monocular Volumic Reconstruction of a Fluid Flow**  
F. Brunet, E. Cid and A. Bartoli  
BMVC - *British Machine Vision Conference*, 2011

- [I078] **Multiview 3D Warps**  
A. Del Bue and A. Bartoli  
ICCV - *IEEE International Conference on Computer Vision*, 2011
- [I077] **Deformable Shape-from-Motion in Laparoscopy using a Rigid Sliding Window**  
T. Collins, B. Compte and A. Bartoli  
MIUA - *Medical Image Understanding and Analysis Conference*, 2011
- [I076] **Template-Based Conformal Shape-from-Motion from Registered Laparoscopic Images**  
A. Malti, A. Bartoli and T. Collins  
MIUA - *Medical Image Understanding and Analysis Conference*, 2011
- [I075] **3D Medical Image Enhancement based on Wavelet Transforms**  
A. Yavariabdi, C. Samir and A. Bartoli  
MIUA - *Medical Image Understanding and Analysis Conference*, 2011
- [I074] **Global Optimization for Optimal Generalized Procrustes Analysis**  
D. Pizarro and A. Bartoli  
CVPR - *IEEE International Conference on Computer Vision and Pattern Recognition*, 2011
- [I073] **Closed-Form Solutions to Multiple-View Homography Estimation**  
P. Schroeder, A. Bartoli, P. Georgel and N. Navab  
WMVC - *IEEE Workshop on Motion and Video Computing*, 2011
- [I072] **Monocular Template-based Reconstruction of Smooth and Inextensible Surfaces**  
F. Brunet, R. Hartley, A. Bartoli, N. Navab and R. Malgouyres  
ACCV - *Asian Conference on Computer Vision*, 2010
- [I071] **Locally Affine and Planar Deformable Surface Reconstruction from Video**  
T. Collins and A. Bartoli  
VMV - *International Fall Workshop on Vision, Modeling and Visualization*, 2010
- [I070] **Pixel-Based Hyperparameter Selection for Feature-Based Image Registration**  
F. Brunet, A. Bartoli, N. Navab and R. Malgouyres  
VMV - *International Fall Workshop on Vision, Modeling and Visualization*, 2010
- [I069] **Direct Image Registration without Region of Interest**  
F. Brunet, A. Bartoli, N. Navab and R. Malgouyres  
VMV - *International Fall Workshop on Vision, Modeling and Visualization*, 2010
- [I068] **Stratified Generalized Procrustes Analysis**  
A. Bartoli, D. Pizarro and M. Loog  
BMVC - *British Machine Vision Conference*, 2010
- [I067] **Sequential Non-Rigid Structure-from-Motion with the 3D-Implicit Low-Rank Shape Model**  
M. Paladini, A. Bartoli and L. Agapito  
ECCV - *European Conference on Computer Vision*, 2010
- [I066] **Automatic Hair Detection in the Wild**  
P. Julian, C. Dehais, F. Lauze, V. Charvillat, A. Bartoli and A. Choukroun  
ICPR - *IAPR International Conference on Pattern Recognition*, 2010
- [I065] **Bi-Objective Bundle Adjustment With Application to Multi-Sensor SLAM**  
J. Michot, A. Bartoli and F. Gaspard  
3DPVT - *International Symposium on 3D Data Processing, Visualization and Transmission*, 2010
- [I064] **A Generic Rolling Shutter Camera Model and its Application to Dynamical Pose Estimation**  
L. Magerand and A. Bartoli  
3DPVT - *International Symposium on 3D Data Processing, Visualization and Transmission*, 2010

- [I063] **Feature-Based Non-Rigid Surface Detection with Self-Occlusion Reasoning**  
D. Pizarro and A. Bartoli  
3DPVT - *International Symposium on 3D Data Processing, Visualization and Transmission*, 2010
- [I062] **Single-View Perspective Shape-from-Texture with Focal Length Estimation**  
T. Collins, J.-D. Durou, P. Gurdjos and A. Bartoli  
3DPVT - *International Symposium on 3D Data Processing, Visualization and Transmission*, 2010
- [I061] **Simultaneous Motion Estimation and Point Matching Using Geometric Cues Only**  
P. Georgel, A. Bartoli and N. Navab  
WMVC - *IEEE Workshop on Motion and Video Computing*, 2009
- [I060] **Is Dual Linear Self-Calibration Artificially Ambiguous?**  
P. Gurdjos, A. Bartoli and P. Sturm  
ICCV - *IEEE International Conference on Computer Vision*, 2009
- [I059] **Shape Context for the Registration of Multiple Partial 3D Views**  
S. Khoualed, U. Castellani and A. Bartoli  
BMVC - *British Machine Vision Conference*, 2009
- [I058] **Algebraic Line Search For Bundle Adjustment**  
J. Michot, A. Bartoli, F. Gaspard and J.-M. Lavest  
BMVC - *British Machine Vision Conference*, 2009
- [I057] **NURBS Warps**  
F. Brunet, A. Bartoli, N. Navab and R. Malgouyres  
BMVC - *British Machine Vision Conference*, 2009
- [I056] **Monocular Template-Based Reconstruction of Inextensible Surfaces**  
M. Perriollat, R. Hartley and A. Bartoli  
BMVC - *British Machine Vision Conference*, 2008
- [I055] **Contour-Based Registration and Retexturing of Cartoon-Like Videos**  
N. Tiilikainen, A. Bartoli and S. Olsen  
BMVC - *British Machine Vision Conference*, 2008
- [I054] **Pools of AAMs: Towards Automatically Fitting Any Face Image**  
J. Peyras, A. Bartoli and S. Khoualed  
BMVC - *British Machine Vision Conference*, 2008
- [I053] **Efficient Camera Smoothing in Sequential Structure-from-Motion using Approximate Cross-Validation**  
M. Farenzena, A. Bartoli and Y. Mezouar  
ECCV - *European Conference on Computer Vision*, 2008
- [I052] **Automatically Smoothing Camera Pose Using Cross-Validation for Sequential Vision-Based 3D Mapping**  
M. Farenzena, A. Bartoli and Y. Mezouar  
IROS - *IEEE/RSJ International Conference on Intelligent Robots Systems*, 2008
- [I051] **Template-Based Paper Reconstruction from a Single Image is Well Posed when the Rulings are Parallel**  
P. Taddei and A. Bartoli  
NORDIA - *Workshop on Non-Rigid Shape Analysis and Deformable Image Alignment at CVPR*, 2008
- [I050] **Coarse-to-Fine Low-Rank Structure-from-Motion**  
A. Bartoli, V. Gay-Bellile, U. Castellani, J. Peyras, S. Olsen and P. Sayd  
CVPR - *IEEE International Conference on Computer Vision and Pattern Recognition*, 2008
- [I049] **Light-Invariant Fitting of Active Appearance Models**  
D. Pizarro, J. Peyras and A. Bartoli  
CVPR - *IEEE International Conference on Computer Vision and Pattern Recognition*, 2008

- [I048] **L-Tangent Norm: A Low Computational Cost Criterion for Choosing Regularization Weights and its Use for Range Surface Reconstruction**  
F. Brunet, A. Bartoli, R. Malgouyres and N. Navab  
3DPVT - *International Symposium on 3D Data Processing, Visualization and Transmission*, 2008
- [I047] **Deformable Surface Augmentation in spite of Self-Occlusions**  
V. Gay-Bellile, A. Bartoli and P. Sayd  
ISMAR - *IEEE International Symposium on Mixed and Augmented Reality*, 2007
- [I046] **Direct Estimation of Non-Rigid Registrations with Image-Based Self-Occlusion Reasoning**  
V. Gay-Bellile, A. Bartoli and P. Sayd  
ICCV - *IEEE International Conference on Computer Vision*, 2007
- [I045] **Adaptive Evolution of 3D Curves for Quality Control**  
H. Martinsson, F. Gaspard, A. Bartoli and J.-M. Lavest  
WISP - *IEEE International Symposium on Intelligent Signal Processing*, 2007
- [I044] **Implementation of an Image Registration Algorithm on an Heterogeneous Platform**  
M. Abid, S. Prasad Sah, F. Berry, F. Dias and A. Bartoli  
ICDSC - *ACM/IEEE International Conference on Distributed Smart Cameras*, 2007
- [I043] **Direct Image Registration with Adaptive Multi-Resolution**  
C. Grava, A. Bartoli, V. Gay-Bellile, V. Buzuloiu and J.-M. Lavest  
VVG - *Workshop on Vision, Video and Graphics at BMVC*, 2007
- [I042] **Using Priors for Improving Generalization in Non-Rigid Structure-from-Motion**  
S. Olsen and A. Bartoli  
BMVC - *British Machine Vision Conference*, 2007
- [I041] **Segmented AAMs Improve Person-Independent Face Fitting**  
J. Peyras, A. Bartoli, H. Mercier and P. Dalle  
BMVC - *British Machine Vision Conference*, 2007
- [I040] **Feature-Driven Direct Non-Rigid Image Registration**  
V. Gay-Bellile, A. Bartoli and P. Sayd  
BMVC - *British Machine Vision Conference*, 2007
- [I039] **An Adaptive Multi-Resolution Algorithm for Motion Estimation in Medical Image Sequences**  
C. Grava, A. Bartoli, V. Gay-Bellile, V. Buzuloiu and J.-M. Lavest  
ECCTD - *European Conference on Circuit Theory and Design*, 2007
- [I038] **Joint Reconstruction and Registration of a Deformable Planar Surface Observed by a 3D Sensor**  
U. Castellani, V. Gay-Bellile and A. Bartoli  
3DIM - *International Conference on 3D Digital Imaging and Modeling*, 2007
- [I037] **Energy-Based Reconstruction of 3D Curves for Quality Control**  
H. Martinsson, F. Gaspard, A. Bartoli and J.-M. Lavest  
EMMCVPR - *IAPR International Workshop on Energy Minimization Methods in Computer Vision and Pattern Recognition*, 2007
- [I036] **A Quasi-Minimal Model for Paper-Like Surfaces**  
M. Perriollat and A. Bartoli  
BENCOS - *ISPRS International Workshop Towards Benchmarking Automated Calibration, Orientation, and Surface Reconstruction from Images at CVPR*, 2007
- [I035] **Kinematics From Lines in a Single Rolling Shutter Image**  
O. Ait-Aider, A. Bartoli and N. Andreff  
CVPR - *IEEE International Conference on Computer Vision and Pattern Recognition*, 2007
- [I034] **Generalized Thin-Plate Spline Warps**  
A. Bartoli, M. Perriollat and S. Chambon  
CVPR - *IEEE International Conference on Computer Vision and Pattern Recognition*, 2007

- [I033] **Algorithms for Batch Matrix Factorization with Application to Structure-from-Motion**  
J.-P. Tardif, A. Bartoli, M. Trudeau, N. Guilbert and S. Roy  
*CVPR - IEEE International Conference on Computer Vision and Pattern Recognition, 2007*
- [I032] **On Constant Focal Length Self-Calibration From Multiple Views**  
B. Bocquillon, A. Bartoli, P. Gurdjos and A. Crouzil  
*CVPR - IEEE International Conference on Computer Vision and Pattern Recognition, 2007*
- [I031] **Shadow Resistant Direct Image Registration**  
D. Pizarro and A. Bartoli  
*SCIA - Scandinavian Conference on Image Analysis, 2007*
- [I030] **Reconstruction of 3D Curves for Quality Control**  
H. Martinsson, F. Gaspard, A. Bartoli and J.-M. Lavest  
*SCIA - Scandinavian Conference on Image Analysis, 2007*
- [I029] **Image Registration by Combining Thin-Plate Splines With a 3D Morphable Model**  
V. Gay-Bellile, M. Perriollat, A. Bartoli and P. Sayd  
*ICIP - IEEE International Conference on Image Processing, 2006*
- [I028] **Groupwise Geometric and Photometric Direct Image Registration**  
A. Bartoli  
*BMVC - British Machine Vision Conference, 2006*
- [I027] **A Single Directrix Quasi-Minimal Model for Paper-Like Surfaces**  
M. Perriollat and A. Bartoli  
*DEFORM - Workshop on Image Registration in Deformable Environments at BMVC, 2006*
- [I026] **Triangulation for Points on Lines**  
A. Bartoli and J.-T. Lapresté  
*ECCV - European Conference on Computer Vision, 2006*
- [I025] **Towards 3D Motion Estimation from Deformable Surfaces**  
A. Bartoli  
*ICRA - IEEE International Conference on Robotics and Automation, 2006*
- [I024] **Feature-Based Estimation of Radial Basis Mappings for Non-Rigid Registration**  
V. Charvillat and A. Bartoli  
*VMV - International Fall Workshop on Vision, Modeling and Visualization, 2005*
- [I023] **Handling Missing Data in the Computation of 3D Affine Transformations**  
H. Martinsson, A. Bartoli, F. Gaspard and J.-M. Lavest  
*EMMCVPR - IAPR International Workshop on Energy Minimization Methods in Computer Vision and Pattern Recognition, 2005*
- [I022] **A Batch Algorithm For Implicit Non-Rigid Shape and Motion Recovery**  
A. Bartoli and S. Olsen  
*WDV - Workshop on Dynamical Vision at ICCV, 2005*
- [I021] **Estimating the Pose of a 3D Sensor in a Non-Rigid Environment**  
A. Bartoli  
*WDV - Workshop on Dynamical Vision at ICCV, 2005*
- [I020] **On Aligning Sets of Points Reconstructed From Uncalibrated Affine Cameras**  
A. Bartoli, H. Martinsson, F. Gaspard and J.-M. Lavest  
*SCIA - Scandinavian Conference on Image Analysis, 2005*
- [I019] **Euclidean Reconstruction Independent of Camera Intrinsic Parameters**  
E. Malis and A. Bartoli  
*IROS - IEEE/RSJ International Conference on Intelligent Robots Systems, 2004*

- [I018] **Direct Estimation of Non-Rigid Registrations**  
A. Bartoli and A. Zisserman  
BMVC - *British Machine Vision Conference*, 2004
- [I017] **Augmenting Images of Non-Rigid Scenes Using Point and Curve Correspondences**  
A. Bartoli, E. von Tunzelmann and A. Zisserman  
CVPR - *IEEE International Conference on Computer Vision and Pattern Recognition*, 2004
- [I016] **A Framework For Pencil-of-Points Structure-From-Motion**  
A. Bartoli, M. Coquerelle and P. Sturm  
ECCV - *European Conference on Computer Vision*, 2004
- [I015] **Towards Gauge Invariant Bundle Adjustment: A Solution Based on Gauge Dependent Damping**  
A. Bartoli  
ICCV - *IEEE International Conference on Computer Vision*, 2003
- [I014] **Multiple-View Structure and Motion From Line Correspondences**  
A. Bartoli and P. Sturm  
ICCV - *IEEE International Conference on Computer Vision*, 2003
- [I013] **Batch Recovery of Multiple Views with Missing Data Using Direct Sparse Solvers**  
N. Guilbert and A. Bartoli  
BMVC - *British Machine Vision Conference*, 2003
- [I012] **VISIRE. Photorealistic 3D Reconstruction from Video Sequences**  
T. Rodriguez, P. Sturm, M. Wilczkowiak, A. Bartoli, M. Personnaz, N. Guilbert, F. Kahl, M. Johansson, A. Heyden, J. M. Menendez, J. I. Ronda and F. Jaureguizar  
ICIP - *IEEE International Conference on Image Processing*, 2003
- [I011] **Motion From 3D Line Correspondences: Linear and Non-Linear Solutions**  
A. Bartoli, R. Hartley and F. Kahl  
CVPR - *IEEE International Conference on Computer Vision and Pattern Recognition*, 2003
- [I010] **From Video Sequences to Motion Panoramas**  
A. Bartoli, N. Dalal, B. Bose and R. Horaud  
WMVC - *IEEE Workshop on Motion and Video Computing*, 2002
- [I009] **The Geometry of Dynamic Scenes - On Coplanar and Convergent Linear Motions Embedded in 3D Static Scenes**  
A. Bartoli  
BMVC - *British Machine Vision Conference*, 2002
- [I008] **A Unified Framework for Quasi-Linear Bundle Adjustment**  
A. Bartoli  
ICPR - *IAPR International Conference on Pattern Recognition*, 2002
- [I007] **On the Non-Linear Optimization of Projective Motion Using Minimal Parameters**  
A. Bartoli  
ECCV - *European Conference on Computer Vision*, 2002
- [I006] **Minimal Metric Structure and Motion From Three Affine Images**  
M.-A. Ameller, A. Bartoli and L. Quan  
ACCV - *Asian Conference on Computer Vision*, 2002
- [I005] **Piecewise Planar Segmentation for Automatic Scene Modeling**  
A. Bartoli  
CVPR - *IEEE International Conference on Computer Vision and Pattern Recognition*, 2001
- [I004] **The 3D Line Motion Matrix and Alignment of Line Reconstructions**  
A. Bartoli and P. Sturm  
CVPR - *IEEE International Conference on Computer Vision and Pattern Recognition*, 2001

- [I003] **Projective Structure and Motion From Two Views of a Piecewise Planar Scene**  
A. Bartoli, P. Sturm and R. Horaud  
*ICCV - IEEE International Conference on Computer Vision, 2001*
- [I002] **Constrained Structure and Motion From N Views of a Piecewise Planar Scene**  
A. Bartoli and P. Sturm  
*VAA - International Symposium on Virtual and Augmented Architecture, 2001*
- [I001] **Structure and Motion From Two Uncalibrated Views Using Points on Planes**  
A. Bartoli, P. Sturm and R. Horaud  
*3DIM - International Conference on 3D Digital Imaging and Modeling, 2001*

#### Edited Proceedings (6)

- [E006] **QU3ST - Proceedings of the Workshop on 2.5D Sensing Technologies in Motion: The Quest for 3D**  
D. Fofi and A. Bartoli (Eds.)  
*Workshop associated to ECCV, Florence, Italy, Springer, 2012*
- [E005] **NORDIA - Proceedings of the Workshop on Non-Rigid Shape Analysis and Deformable Image Alignment**  
L. Agapito, A. Bartoli, A. Bronstein, M. Bronstein and A. Del Bue (Eds.)  
*Workshop associated to CVPR, Colorado Springs, Colorado, USA, IEEE Computer Society, 2011*
- [E004] **3DPVT - Proceedings of the Fifth International Symposium on 3D Data Processing, Visualization and Transmission**  
A. Bartoli, M. Magnor, C. Theobalt and R. B. Fisher (Eds.)  
*International Conference, Paris, France, Eurographics, 2010, ISBN: 978-3-905673-81-4*
- [E003] **NORDIA - Proceedings of the Workshop on Non-Rigid Shape Analysis and Deformable Image Alignment**  
V. Lepetit, A. Bronstein, M. Bronstein, A. Bartoli, R. Kimmel and N. Navab (Eds.)  
*Workshop associated to CVPR, Anchorage, Alaska, USA, IEEE Computer Society, 2008*
- [E002] **DEFORM - Proceedings of the Workshop on Image Registration in Deformable Environments**  
A. Bartoli, N. Navab and V. Lepetit (Eds.)  
*Workshop associated to BMVC, Edinburgh, UK, 2006*
- [E001] **ORASIS - Proceedings of the Doctorate Symposium in Computer Vision**  
T. Chateau and A. Bartoli (Eds.)  
*National Conference, Fournol, France, 2005*

#### Edited Journal Special Issues (1)

- [S001] **3D Data Processing, Visualization and Transmission - IJCV Special Issue from 3DPVT'10**  
A. Bartoli, M. Magnor, R. B. Fisher and C. Theobalt (Eds.)  
*International Journal of Computer Vision, 97(1), March 2012*

#### Book Chapters (1)

- [B001] **3D Shape Registration**  
U. Castellani and A. Bartoli  
*3D Imaging, Analysis, and Applications, N. Pears, Y. Liu and P. Bunting (Eds.), Springer, 2012*

#### Research Reports (5)

- [R005] **Rank-Constrained Fundamental Matrix Estimation by Polynomial Global Optimization Versus the Eight-Point Algorithm**  
F. Bugarin, A. Bartoli, D. Henrion, J.-B. Lasserre, J.-J. Orteu and T. Sentenac  
*Research Report 12489, LAAS, Toulouse, France, September 2012*



- [R004] **Motion Panoramas**  
A. Bartoli, N. Dalal and R. Horaud  
*Research Report 4771*, INRIA, Grenoble, France, March 2003
- [R003] **Euclidean Bundle Adjustment Independent of Camera Intrinsic Parameters**  
E. Malis and A. Bartoli  
*Research Report 4377*, INRIA, Sophia, France, December 2001
- [R002] **Three New Algorithms for Projective Bundle Adjustment with Minimum Parameters**  
A. Bartoli and P. Sturm  
*Research Report 4236*, INRIA, Grenoble, France, August 2001
- [R001] **A Projective Framework for Structure and Motion Recovery From Two Views of a Piecewise Planar Scene**  
A. Bartoli, P. Sturm and R. Horaud  
*Research Report 4070*, INRIA, Grenoble, France, October 2000

#### Invited Papers (1)

- [V001] **Direct Image Registration With Gain and Bias**  
A. Bartoli  
*Topics in Automatic 3D Modelling and Processing Workshop*, Verona, Italy, 2006

#### National Journals, Conference and Workshop Proceedings (56)

- [N056] **Utilisation de la photométrie et d'un patron pour la reconstruction de surfaces pliées et la calibration photométrique**  
M. Gallardo, T. Collins and A. Bartoli  
*Traitement du signal, GRETSI-CNRS*, special issue: selected papers from RFIA 2016, accepted May 2017
- [N055] **Peut-on estimer un modèle d'illumination locale à partir d'une tâche spéculaire en connaissant la géométrie de la scène ?**  
S. Hadj Said, M. Tamaazousti and A. Bartoli  
*CORESA - Journées Compression et Représentation des Signaux Audiovisuels*, 2017
- [N054] **SLIM (Slit Lamp Image Mosaicing)**  
K. Prokopetc and A. Bartoli  
*ORASIS - Congrès Francophone des Jeunes Chercheurs en Vision par Ordinateur*, 2017
- [N053] **Un modèle de spécularité géométrique multi-vues**  
A. Morgand, M. Tamaazousti and A. Bartoli  
*ORASIS - Congrès Francophone des Jeunes Chercheurs en Vision par Ordinateur*, 2017
- [N052] **Un modèle de propagation de spécularité dans une vidéo pour la réalité diminuée**  
S. Hadj Said, M. Tamaazousti and A. Bartoli  
*ORASIS - Congrès Francophone des Jeunes Chercheurs en Vision par Ordinateur*, 2017
- [N051] **Etude de la taille des polypes in vivo en coloscopie par mesure assistée par ordinateur : Etude prospective portant sur 30 patients et 78 polypes**  
C. Allimant, O. Rouquette, S. Le Roux, B. Pereira, F. Goutorbe, A. Abergel, A. Bartoli, C. Tilmant and L. Poincloux  
*JFHOD - Journées Francophones d'Hépatogastroentérologie et d'Oncologie Digestive*, 2017
- [N050] **Un modèle empirique de prédiction géométrique de spécularité, application au retexturing**  
A. Morgand, M. Tamaazousti and A. Bartoli  
*RFIA - Congrès Francophone de Reconnaissance des Formes et Intelligence Artificielle*, 2016
- [N049] **Indexation par sac-de-mots d'objets avec modèles déformables isométriques : apprentissage sur données synthétiques et vérification géométrique 3D**  
R. Rantoson and A. Bartoli  
*RFIA - Congrès Francophone de Reconnaissance des Formes et Intelligence Artificielle*, 2016

- [N048] **Recalage et Reconstruction 3D de Surfaces Pliées par Shape-from-Template**  
M. Gallardo, T. Collins and A. Bartoli  
*RFIA - Congrès Francophone de Reconnaissance des Formes et Intelligence Artificielle*, 2016
- [N047] **Un cadre générique pour le recalage dense combinant un coût dense et un coût basé sur des correspondances de primitives**  
J. Braux-Zin, R. Dupont and A. Bartoli  
*Traitement du signal, GRETSI-CNRS*, special issue: selected papers from RFIA 2014, 32(2-3):195-213, September 2015
- [N046] **Reconstruction d'une source lumineuse modélisée par une quadrique à partir d'images multiples**  
A. Morgand, M. Tamaazousti and A. Bartoli  
*ORASIS - Congrès Francophone des Jeunes Chercheurs en Vision par Ordinateur*, 2015
- [N045] **Détection générique et temps réel des spéularités**  
A. Morgand, M. Tamaazousti and A. Bartoli  
*ORASIS - Congrès Francophone des Jeunes Chercheurs en Vision par Ordinateur*, 2015
- [N044] **Shape-from-Template dans Flatland**  
M. Gallardo, D. Pizarro, A. Bartoli and T. Collins  
*ORASIS - Congrès Francophone des Jeunes Chercheurs en Vision par Ordinateur*, 2015
- [N043] **Multimodal and Multimedia Image Analysis and Collaborative Networking for Digestive Endoscopy**  
L. d'Orazio, A. Bartoli, A. Baetz, S. Beorchia, G. Calvary, Y. Chabane, F. Chadebecq, T. Collins, Y. Laurillau, L. Martins-Baltar, B. Mohamad, T. Ponchon, C. Rey, C. Tilmant and S. Torti  
*Innovation and Research in Biomedical Engineering*, 35(2):88-93, April 2014
- [N042] **Caméras virtuelles pour l'étalonnage d'un système de réalité augmentée sur affichage semi-transparent**  
J. Braux-Zin, A. Bartoli, R. Dupont and M. Tamaazousti  
*Traitement du signal, GRETSI-CNRS*, special issue: selected papers from ORASIS 2013, 31(1-2):175-195, 2014
- [N041] **Un cadre générique pour le recalage dense combinant un coût dense et un coût basé sur des correspondances de primitives**  
J. Braux-Zin, R. Dupont and A. Bartoli  
*RFIA - Congrès Francophone de Reconnaissance des Formes et Intelligence Artificielle*, 2014
- [N040] **Caméras virtuelles pour la calibration d'un système de réalité augmentée composé d'un écran transparent et deux caméras à champs disjoints**  
J. Braux-Zin, A. Bartoli, R. Dupont and R. Vinciguerra  
*ORASIS - Congrès Francophone des Jeunes Chercheurs en Vision par Ordinateur*, 2013
- [N039] **Estimation de l'échelle des néoplasies en coloscopie par détection de la profondeur de défocalisation**  
F. Chadebecq, C. Tilmant and A. Bartoli  
*ORASIS - Congrès Francophone des Jeunes Chercheurs en Vision par Ordinateur*, 2013
- [N038] **Vélocimétrie par marquage moléculaire et recalage d'images pour le passage d'une bulle isolée en cellule de Hele-Shaw**  
F. Brunet, E. Cid, A. Bartoli, F. Risso and V. Roig  
*CFTL - Congrès Francophone de Techniques Laser*, 2012
- [N037] **Estimation de l'échelle en coloscopie monoculaire par quantification du flou optique : étude de faisabilité**  
F. Chadebecq, C. Tilmant, J. Peyras, T. Collins and A. Bartoli  
*RFIA - Congrès Francophone de Reconnaissance des Formes et Intelligence Artificielle*, 2012
- [N036] **Monocular Volumetric Reconstruction of a Fluid Flow Based on Image Registration and Molecular Tagging**  
F. Brunet, E. Cid, A. Bartoli, E. Bouche, F. Risso and V. Roig  
*FVR - Forum on Volumetric Reconstruction*, 2011
- [N035] **Recalage d'images appliqué à la vélocimétrie 3D par marquage moléculaire en cellule de Hele-Shaw**  
F. Brunet, E. Cid, A. Bartoli, E. Bouche, S. Cazin, F. Risso and V. Roig  
*FLUVISU - Congrès Français de Visualisation et de Traitement d'Images en Mécanique des Fluides*, 2011

- [N034] **Fonctions de déformation image produit tensoriel généralisées**  
B. Compte and A. Bartoli  
ORASIS - *Congrès Francophone des Jeunes Chercheurs en Vision par Ordinateur*, 2011
- [N033] **Fusion d'images IRM et échographique par recalage multi-modal pour la caractérisation des kystes endométriosiques**  
C. Samir, A. Bartoli, M. Canis, D. Da Inès and J. Stein  
RITS - *Colloque pour la Recherche en Imagerie et Technologies pour la Santé*, 2011
- [N032] **Utilisation de l'information photométrique pour la sélection des hyperparamètres en recalage géométrique d'images**  
F. Brunet, A. Bartoli, N. Navab and R. Malgouyres  
CORESA - *Journées Compression et Représentation des Signaux Audiovisuels*, 2010
- [N031] **Autocorrélation basée sur les transformations pour la détection de régions affines covariantes**  
S. Khoualed, A. Bartoli and T. Collins  
CORESA - *Journées Compression et Représentation des Signaux Audiovisuels*, 2010
- [N030] **Découverte automatique du recouvrement en recalage direct d'images**  
F. Brunet, A. Bartoli, N. Navab and R. Malgouyres  
RFIA - *Congrès Francophone de Reconnaissance des Formes et Intelligence Artificielle*, 2010
- [N029] **Shape-from-texture revisité : reconstruction 3D et autocalibrage à partir d'une seule image**  
J.-D. Durou, A. Bartoli and P. Gurdjos  
RFIA - *Congrès Francophone de Reconnaissance des Formes et Intelligence Artificielle*, 2010
- [N028] **Recalage non-rigide avec prise en compte des auto-occultations**  
V. Gay-Bellile, A. Bartoli and P. Sayd  
*The Information - Interaction - Intelligence Journal*, special issue: selected papers from RFIA 2008, 8(2), 2009
- [N027] **Une longueur de pas optimale au sens de l'erreur de reprojection algébrique pour l'ajustement de faisceaux**  
J. Michot, A. Bartoli, F. Gaspard and J.-M. Lavest  
ORASIS - *Congrès Francophone des Jeunes Chercheurs en Vision par Ordinateur*, 2009
- [N026] **Scene Sailing**  
J. Peyras, A. Bartoli, P. Georgel and M. Loog  
ORASIS - *Congrès Francophone des Jeunes Chercheurs en Vision par Ordinateur*, 2009
- [N025] **Un modèle de projection Rolling Shutter flexible appliqué au calcul de pose**  
L. Magerand, A. Bartoli and O. Ait-Aider  
ORASIS - *Congrès Francophone des Jeunes Chercheurs en Vision par Ordinateur*, 2009
- [N024] **Découverte automatique de la région d'intérêt en recalage d'images direct**  
F. Brunet, A. Bartoli, N. Navab and R. Malgouyres  
ORASIS - *Congrès Francophone des Jeunes Chercheurs en Vision par Ordinateur*, 2009
- [N023] **Détermination de la matrice de rigidité d'un matériau en petites déformations planes à partir du flot optique**  
L. Magerand, A. Bartoli, M. Grédiac and J.-M. Thiesse  
CORESA - *Journées Compression et Représentation des Signaux Audiovisuels*, 2009
- [N022] **Ajustement automatique de surfaces paramétriques sur données de profondeur en présence d'un bruit hétérogène**  
F. Brunet, A. Bartoli, N. Navab and R. Malgouyres  
CORESA - *Journées Compression et Représentation des Signaux Audiovisuels*, 2009
- [N021] **An Alternation-based Approach to Super-Resolution for Deformable Surfaces**  
D. Liu, A. Bartoli and J. Peyras  
CORESA - *Journées Compression et Représentation des Signaux Audiovisuels*, 2009
- [N020] **Reconstruction 3D de surfaces déformables par un modèle de faible rang hiérarchique**  
V. Gay-Bellile, A. Bartoli, U. Castellani, J. Peyras, S. Olsen and P. Sayd  
CORESA - *Journées Compression et Représentation des Signaux Audiovisuels*, 2009

- [N019] **Longueur de pas algébrique pour l'ajustement de faisceaux**  
J. Michot, A. Bartoli, F. Gaspard and J.-M. Lavest  
CORESA - *Journées Compression et Représentation des Signaux Audiovisuels*, 2009
- [N018] **Reconstruction tridimensionnelle multi-vues de papier**  
M. Perriollat, A. Bartoli and L. Reveret  
*Traitement du signal, GRETSI-CNRS*, 25(3):167-179, 2008
- [N017] **Reconstruction de surface par validation croisée**  
F. Brunet, A. Bartoli, N. Navab and R. Malgouyres  
ROADEF - *Journées de Recherche Opérationnelle et d'Aide à la Décision*, 2008
- [N016] **Recalage non-rigide direct avec prise en compte des auto-occultations au niveau image**  
V. Gay-Bellile, A. Bartoli and P. Sayd  
RFIA - *Congrès Francophone de Reconnaissance des Formes et Intelligence Artificielle*, 2008
- [N015] **Contour-Based Registration and Retexturing of Cartoon-Like Videos**  
N. Tiilikainen, A. Bartoli and S. Olsen  
DSAGM - *Danish Machine Vision Conference*, 2008
- [N014] **Automatic Quasi-Isometric Surface Recovery and Registration from 4D Range Data**  
T. Collins, A. Bartoli and B. Fisher  
*BMVA Symposium on 3D Video - Analysis, Display and Applications*, 2008
- [N013] **Gestion des auto-occultations pour l'augmentation d'une surface déformable**  
V. Gay-Bellile, A. Bartoli and P. Sayd  
CORESA - *Journées Compression et Représentation des Signaux Audiovisuels*, 2007
- [N012] **Estimation directe d'alignements non-rigides guidés par primitives**  
V. Gay-Bellile, A. Bartoli and P. Sayd  
ORASIS - *Congrès Francophone des Jeunes Chercheurs en Vision par Ordinateur*, 2007
- [N011] **Modélisation et reconstruction de papier à partir de plusieurs images**  
M. Perriollat and A. Bartoli  
ORASIS - *Congrès Francophone des Jeunes Chercheurs en Vision par Ordinateur*, 2007
- [N010] **Autocalibrage multi-vues d'une distance focale et mouvements critiques associés**  
B. Bocquillon, A. Bartoli, P. Gurdjos and A. Crouzil  
ORASIS - *Congrès Francophone des Jeunes Chercheurs en Vision par Ordinateur*, 2007
- [N009] **Reconstruction de courbes 3D pour le contrôle de conformité**  
H. Martinsson, F. Gaspard, A. Bartoli and J.-M. Lavest  
ORASIS - *Congrès Francophone des Jeunes Chercheurs en Vision par Ordinateur*, 2007
- [N008] **Alignement de reconstructions tridimensionnelles affines en présence de données images manquantes**  
H. Martinsson, A. Bartoli, F. Gaspard and J.-M. Lavest  
RFIA - *Congrès Francophone de Reconnaissance des Formes et Intelligence Artificielle*, 2006
- [N007] **A Single Directrix Quasi-Minimal Model for Paper-Like Surfaces**  
M. Perriollat and A. Bartoli  
DSAGM - *Danish Machine Vision Conference*, 2006
- [N006] **A Batch Algorithm For Implicit Non-Rigid Shape and Motion Recovery**  
A. Bartoli and S. Olsen  
DSAGM - *Danish Machine Vision Conference*, 2006
- [N005] **Des séquences vidéo aux panoramas de mouvement**  
A. Bartoli, N. Dalal and R. Horaud  
CORESA - *Journées Compression et Représentation des Signaux Audiovisuels*, 2003

- [N004] **Reconstruction métrique minimale à partir de trois caméras affines**  
M.-A. Ameller, A. Bartoli and L. Quan  
RFIA - *Congrès Francophone de Reconnaissance des Formes et Intelligence Artificielle*, 2002
- [N003] **La matrice de mouvement pour droites 3D, application à l'alignement de reconstructions de droites**  
A. Bartoli and P. Sturm  
RFIA - *Congrès Francophone de Reconnaissance des Formes et Intelligence Artificielle*, 2002
- [N002] **Triangulation projective contrainte par multi-coplanarité**  
A. Bartoli and P. Sturm  
ORASIS - *Congrès Francophone des Jeunes Chercheurs en Vision par Ordinateur*, 2001
- [N001] **Segmentation en plans pour la modélisation automatique à partir d'images**  
A. Bartoli  
*Journée Thématique Coopération Analyse d'Image et Modélisation*, 2001

## Patents (2)

- [P002] **Image Processing in the Presence of Specularities**  
*Procédé de traitement d'images avec spéularités*  
M. Tamaazousti, A. Bartoli and A. Morgand  
*Pending, filed 8-jun-2015*
- [P001] **Method and Apparatus for Merging Data from Image and Motion or Position Sensors**  
*Procédé et système pour fusionner des données issues de capteurs d'image et de capteurs de mouvement ou de position*  
J. Michot, A. Bartoli and F. Gaspard  
*French patent No. 1053803, filed 17-jun-2010, international extension No. 11715235.5 - 1224, filed 21-dec-2012*

## Abstracts (7)

- [A007] **3D OCT image compression using the shearlet transform**  
B. Haydar, B. Tamadazte, N. Andreff and A. Bartoli  
*MIR - Workshop on Medical Imaging Robotics at IROS*, 2017
- [A006] **Automatic Verification of Laparoscopic 3D Reconstructions with Stereo Cross-Validation**  
R. Modrzejewski, T. Collins, A. Bartoli, A. Hostettler, L. Soler and J. Marescaux  
*Surgetica*, 2017
- [A005] **Augmented Reality in a Tumor Resection Model**  
P. Chauvet, T. Collins, C. Debize, A. Bartoli, M. Canis and N. Bourdel  
*Journal of Minimally Invasive Gynecology*, 23(7):S34, December 2016
- [A004] **Augmented Reality Evaluation of Potential Benefits for Myomectomy in an Experimental Uterine Model**  
N. Bourdel, T. Collins, D. Pizarro, B. Pereira, M. Canis and A. Bartoli  
*Journal of Minimally Invasive Gynecology*, 23(7):S41, December 2016
- [A003] **First use of Augmented Reality in Gynecology**  
N. Bourdel, T. Collins, D. Pizarro, P. Chauvet, C. Debize, A. Bartoli and M. Canis  
*Journal of Minimally Invasive Gynecology*, 23(7):S226-S227, December 2016
- [A002] **Augmented Reality in a Tumor Resection Model**  
P. Chauvet, T. Collins, C. Debize, A. Bartoli, M. Canis and N. Bourdel  
*ESGE - Annual Congress of the European Society for Gynaecological Endoscopy*, 2016
- [A001] **Development of a Tumor Model for Augmented Reality**  
P. Chauvet, T. Collins, C. Debize, A. Bartoli, M. Canis and N. Bourdel  
*ESGE - Annual Congress of the European Society for Gynaecological Endoscopy*, 2016

## Demos (3)

- [D003] **Uteraug: Augmented Reality in Laparoscopic Surgery of the Uterus**  
T. François, C. Debize, L. Calvet, T. Collins, D. Pizarro and A. Bartoli  
Demo at ISMAR - *IEEE International Symposium on Mixed and Augmented Reality*, 2017
- [D002] **Live Template-Based 3D Tracking and 3D Reconstruction of Deformable Objects in 2D Videos**  
T. Collins and A. Bartoli  
Demo at ECCV - *European Conference on Computer Vision*, 2016
- [D001] **Realtime Shape-from-Template: System and Applications**  
T. Collins and A. Bartoli  
Demo at ISMAR - *IEEE International Symposium on Mixed and Augmented Reality*, 2015

## MSc, PhD and Habilitation Theses (14)

- [T014] **Local Analytic and Global Convex Methods for the 3D Reconstruction of Isometric Deformable Surfaces**  
Ajad Chhatkuli  
*PhD thesis (thèse de doctorat)*, Université d'Auvergne, December 2016 [supervision: D. Pizarro and A. Bartoli (director)]  
[document in English]
- [T013] **Estimation de l'échelle absolue par vision passive monofocale et application à la mesure 3D de néoplasies en imagerie coloscopique**  
F. Chadebecq  
*PhD thesis (thèse de doctorat)*, Université Blaise Pascal, October 2015 [supervision: C. Tilmant and A. Bartoli (director)]  
[document in French]
- [T012] **Calcul de pose dynamique avec les caméras CMOS utilisant une acquisition séquentielle**  
L. Magerand  
*PhD thesis (thèse de doctorat)*, Université Blaise Pascal, December 2014 [supervision: O. Ait-Aider and A. Bartoli (director)] [document in French]
- [T011] **Contributions aux problèmes de l'étalonnage extrinsèque d'affichages semi-transparents pour la réalité augmentée et de la mise en correspondance dense d'images**  
J. Braux-Zin  
*PhD thesis (thèse de doctorat)*, Université d'Auvergne, September 2014 [supervision: R. Dupont, A. Bartoli (director) and M. Tamaazousti] [document in French]
- [T010] **Mapping Endometrial Implants by Registering Transvaginal Ultrasound to Pelvic Magnetic Resonance Images**  
A. Yavariabdi  
*PhD thesis (thèse de doctorat)*, Université d'Auvergne, July 2014 [supervision: A. Bartoli (director) and C. Samir]  
[document in English]
- [T009] **Modélisation du bruit et étalonnage de la mesure de profondeur des caméras Temps-de-Vol**  
A. Bel-Hedi  
*PhD thesis (thèse de doctorat)*, Université Blaise Pascal, École Nationale d'Ingénieurs de Tunis, July 2013 [supervision: A. Bartoli (director), S. Bourgeois and K. Hamrouni (director)] [document in French]
- [T008] **Contributions to Parametric Image Registration and 3D Surface Reconstruction**  
F. Brunet  
*PhD thesis (thèse de doctorat)*, Université d'Auvergne, Technische Universität München, October 2010 [supervision: A. Bartoli, N. Navab (director) and R. Malgouyres (director)] [document in English]
- [T007] **Recherche linéaire et fusion de données par ajustement de faisceaux**  
J. Michot  
*PhD thesis (thèse de doctorat)*, Université Blaise Pascal, September 2010 [supervision: A. Bartoli, F. Gaspard and J.-M. Lavest (director)] [document in French]

- [T006] **Paramétrisation et reconstruction des surfaces développables à partir d'images**  
M. Perriollat  
*PhD thesis (thèse de doctorat)*, Université Blaise Pascal, October 2008 [supervision: A. Bartoli and J.-M. Lavest (director)] [document in French]
- [T005] **Contributions au recalage et à la reconstruction 3D de surfaces déformables**  
V. Gay-Bellile  
*PhD thesis (thèse de doctorat)*, Université Blaise Pascal, October 2008 [supervision: A. Bartoli, P. Sayd and J.-T. Lapresté (director)] [document in French]
- [T004] **Reconstructing Manufactured Objects from Image Sequences**  
H. Martinsson  
*PhD thesis (thèse de doctorat)*, Université Blaise Pascal, September 2008 [supervision: A. Bartoli, F. Gaspard and J.-M. Lavest (director)] [document in English]
- [T003] **Contributions to Image Registration and to the 3D Reconstruction of Rigid and Deformable Scenes**  
*Contributions au recalage d'images et à la reconstruction 3D de scènes rigides et déformables*  
A. Bartoli  
*Habilitation thesis (Habilitation à Diriger des Recherches)*, Université Blaise Pascal, June 2008 [document in English and French]
- [T002] **Reconstruction et alignement en vision 3D : points, droites, plans et caméras**  
*Reconstruction and Alignment in 3D Vision: Points, Lines, Planes and Cameras*  
A. Bartoli  
*PhD thesis (thèse de doctorat)*, Grenoble INP, September 2003 [supervision: P. Sturm and R. Horaud (director)] [document in French]
- [T001] **Facettes planes en stéréovision : détection, modélisation, estimation et reconstruction**  
A. Bartoli  
*Master thesis (rapport de Master)*, Grenoble INP, June 2000 [supervision: P. Sturm and R. Horaud] [document in French]