Adrien Bartoli **Curriculum Vitae**

Professor at Université Clermont Auvergne, member of Institut Universitaire de France January 2024
Co-founder and leader of the EnCoV group at Institut Pascal, CNRS, UCA and CHU de Clermont-Ferrand
Co-founder and CSO of the SURGAR company
Currently on leave at the University Hospital of Clermont-Ferrand and at the SURGAR company

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Notes: UCA (Université Clermont Auvergne) is a 2017 merger of UdA (Université d'Auvergne, Clermont 1) and UBP (Université Blaise Pascal, Clermont 2). UGA (Université Grenoble Alpes) is a 2016 merger of UJF (Université Joseph Fourier, Grenoble 1), UPMF (Université Pierre-Mendès-France, Grenoble 2) and Université Stendhal, Grenoble 3.

Personal Details

Born on 9 April 1977 in Grenoble; French citizen; two children.

Education

2008 **Habilitation in Computer Vision** ; "Habilitation à Diriger des Recherches", UCA
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, 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), UGA ; ranked first
1998 **Bachelor in Computer Science** (third year degree), UGA ; ranked first

Qualified to apply to "Maître de Conférences" in 2004-2008 and "Professeur des Universités" positions in 2008-2012.

Main Responsibilities

2021/now **Founder and head of DIA2M** (Data, Artificial Intelligence and Medical Applications)
University Hospital department with 2 research scientists, 2 PhD students and 1 radiologist
2019/now **Co-founder and Chief Scientific Officer of SURGAR** (Surgical Augmented Reality) with N. Bourdel, B. Le Roy and M. Canis; startup company, spinoff of EnCoV, with 30 permanent employees
2009/now **Founder and head of EnCoV** (Endoscopy and Computer Vision) with M. Canis
research group with 10 permanent scholars / hospital practitioners (3.55 FTE) of Institut Pascal
marked A+ by AERES in May 2011, renewed by HCERES in December 2015 and January 2020
2012/2017 **Founder and deputy director of ISIT** (Image Science for Interventional Therapy, UMR6284 CNRS/UCA)
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

2021/2024 **Research Scientist** – University Hospital (CHU) of Clermont-Ferrand, on leave from UCA
2021/2024 **Chief Scientific Officer** – SURGAR, on leave from UCA
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 (with one-year extension granted)
2009/today **Professor at UCA** (promoted first class by CNU in 2016 and distinguished by CNU in 2020)
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**, UGA, Grenoble

Personal Awards

2020 – Giner de los Ríos visiting professorship at the University of Alcalá
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 – Bronze Medal, CNRS (Centre National de la Recherche Scientifique)
2008 – Outstanding reviewer award at ECCV (European Conference on Computer Vision)
2004 – PhD prize, Grenoble INP

Group and Shared Awards

2024 – SURGAR receives the *i*-Nov award, the Ministry of Higher Education and Research, and Bpifrance
2022 – SURGAR receives the regional Starter and Public's choice company awards
2022 – Best student paper award, honorary mention, AMAI Workshop at MICCAI
2022 – Best 180 Surgx presentation Karl Storz prize at the SCGP congress for our work on bleeding detection
2021 – SURGAR selected for the 2022 CES in Las Vegas
2020 – SURGAR selected for the NETVA program – Deeptech North America
2020 – SURGAR distinguished by the C.U.R.I.E. network
2020 – SURGAR receives the EIT Health Headstart award
2020 – SURGAR distinguished as the most promising startup company of the year in Auvergne
2020 – SURGAR receives the R2B ONCO award (Research to Business, cancer research centre CLARA)
2019 – The spin-off project SURGAR receives the *i*-Lab award, the Ministry of Higher Education and Research, and Bpifrance
2019 – First runner-up junior research award, CHU de Clermont-Ferrand, for our 2019 Journal of Urology paper
2017 – Computer-aided surgery innovation prize, National Academy of Surgery, for our experimental tumour model
2017 – Gédéon Richter award, CNGOF (Collège national des gynécologues et obstétriciens Français), for our work on Augmented Reality aided myomectomy
2017 – Junior research award, CHU de Clermont-Ferrand, for our 2017 Surgical Endoscopy paper
2016 – Research award, UCA, for our 2015 PAMI paper on Shape-from-Template
2015 – Second-best paper award, CARE (International Workshop on Computer-Assisted and Robotic Endoscopy) at MICCAI
2012 – Best paper award, IPCAI (International Conference on Information Processing in Computer-Assisted Interventions)
2007 – Best paper award, CORESA (Compression et Représentation des Signaux Audiovisuels)

Professional Activities

Keynotes (13)

- SITIS, the 16th International Conference on Signal Image Technology and Internet based Systems, 2022
- Hamlyn Symposium, Computer Vision and Augmented Reality in Surgery Workshop, 2021
- SHARP Workshop – Shape recovery from partial textured 3D scans, CVPR 2021
- Endoscopic Artefact Detection Challenge, ISBI, 2019
- Swiss Medical Image Computing Congress, 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 (16)

- Surgical AI Days, ORSI, 2023
- Clermont Innovation Week at CHU Clermont-Ferrand, 2022
- SIAM Conference on Imaging Science, Inverse Problems in Imaging: Models and Algorithms, 2022
- International Symposium on Frontiers in Cancer Research, Cancéropôle CLARA, 2021
- INdAM workshop, 2021
- VIBOT mini-workshop, 2019
- IA-Pau, Data Science and Machine Learning meeting, 2018
- 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 IASIS, 2006
- Workshop on Realtime Visual Tracking, CNRS GdR IASIS, 2006

Invited Tutorials and Short Courses (21)

- IEEE RAS Winter School on SLAM in Deformable Environments, Sydney, 2021 (1h)
- Hamlyn Winter School on Surgical Imaging and Vision, Imperial College South Kensington Campus, London, 2019, 2021 (2h)
- 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 IASIS/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 (44)

- Ecole Centrale Lyon, LIRIS, 2023
- Radu Horaud's Retirement Workshop at Inria, 2022
- LMGC, Montpellier, 2019
- 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 2018
- Associate Editor of the *Journal of Artificial Intelligence Research* (JAIR), since 2020
- Associate Editor of the *IET Computer Vision Journal*, 2012-2020
- Associate Editor of the *Electronic Letters in Computer Vision and Image Analysis* (ELCVIA), 2013-2020
- Guest Editor of the *International Journal of Computer Vision* (IJCV), special issue from TradiCV 2021
- Guest Editor of the *International Journal of Computer Vision* (IJCV), special issue from 3DPVT 2010

Area Chairing

- WACV 2024
- CVPR 2023
- ICCV 2015, 2021
- ECCV 2022
- MICCAI 2020, 2021, 2022
- BMVC 2019, 2020
- IPCAI 2019, 2020
- SCIA 2011, 2015, 2017, 2019
- 3DV 2016, 2017, 2018, 2020, 2021
- ISMAR 2015

Conference, Workshop and Challenge Chairing

- Co-organiser of P2ILF at MICCAI, the Endovis Challenge on Preoperative to Intraoperative Laparoscopy Fusion, 2022
- Co-organiser of ISGIE at MICCAI, the Workshop on Imaging Systems for GI Endoscopy, 2022
- Co-organiser of TradiCV at ICCV, the First Workshop on Traditional Computer Vision in the Age of Deep Learning, 2021
- Co-organiser of ECCV, the *European Conference on Computer Vision*, August 2020, as Workshop Chair
- Co-organizer of the GDR IASIS Workshop on 3D Vision and Machine Learning (with Vincent Lepetit and Cédric Demonceaux), May 2020
- Co-organiser of the First *Beyond Gynecologic Surgery Congress*, Clermont-Ferrand, April 2018
- Co-organiser of the Second *Teaching Minimal Invasive Therapies Congress*, 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 IASIS Workshop on 3D Vision in Dynamical Environments (with Pascal Vasseur and Cédric Demonceaux), June 2016
- Co-organizer of the GDR IASIS 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, 2019 (reviewer in 2003)
- CVPR - IEEE International Conference on Computer Vision and Pattern Recognition ; 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019 (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, 2018 (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 RFIA) ; 2012, 2014, 2016, 2018
- ORASIS - Congrès des jeunes chercheurs en Vision par Ordinateur ; 2007, 2009, 2011, 2013, 2015, 2017, 2019
- 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
- ICDSC - 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, Insa de Lyon

Examiner in HDR Committees (Habilitation à Diriger les Recherches)

Mohamed Tamaazousti	2023	Université Paris-Saclay
Jean-Sébastien Franco	2021	INRIA, Université de Grenoble, *President of the Committee*
Bertrand Le Roy	2020	UCA, Université Clermont Auvergne

Reviewer in PhD Committees

Mario Aricò	2021	ISIR, Sorbonne Universités
Damien Mariyanayagam	2020	INPT, Université de Toulouse
Čeněk Albl	2019	Czech Technical University
Benoit Massé	2018	INRIA, Université de Grenoble
Federica Arrigoni	2017	Universitá 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
Guillame Gales	2011	IRIT, Université de Toulouse
Arnaud Jaegler	2011	Institut Fresnel, Université Aix-Marseilles
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	Universitá degli studi di Milano

Examiner in PhD Committees

Aymeric Pionteck	2020	Ecole des Mines de Saint-Etienne, *President of the Committee*
Yizhen Lao	2019	UCA, Université Clermont Auvergne, *President of the Committee*
Iman Alhossen	2017	ICA, Université de Toulouse, *President of the Committee*
Bastien Durix	2017	IRIT, Université de Toulouse, *President of the Committee*
Nicolas Bourdel	2017	Institut Pascal, Université Clermont Auvergne
Benjamin Allain	2017	INRIA, Université de Grenoble, *President of the Committee*
Mouloud Ourak	2016	FEMTO-ST, Université de Bourgogne Franche-Comté, *President of the Committee*
Sharib Ali	2016	CRAN, Université de Nancy, *President of the Committee*
Danda Pani Paudel	2015	LE2I, Université de Bourgogne, *President of the Committee*
Zehor Ouksili	2010	IRIT, INP Toulouse, *President of the Committee*
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

Reviewer in Medical Thesis Committees

Mathieu Grosso	2023	UCA, Université Clermont Auvergne
Mourad Abdallah	2021	UCA, Université Clermont Auvergne
Guillaume Teluob	2021	UCA, Université Clermont Auvergne
Sabrina Madad Zadeh	2020	UCA, Université Clermont Auvergne
Anne-Flore Lavandier	2019	UCA, Université Clermont Auvergne

Supervising

Postdocs (with topic, co-supervisors and source of funding; 24 people, approx. 20 months/year since 2007)

Devesh Adlakha 05-2023 to FET Endomapper
Uniqueness of SfT and NRSfM solutions, with application to colonoscopy

Karim Makki 03-2022 to FET Endomapper
A specular model for 3D reconstruction in colonoscopy

Islem Mhiri 11-2021 to 10-2022 Cancéropôle AIALO
Neural model registration in liver MIS

Behzad Mirmahboub 04-2021 to 04-2023 FET Endomapper
Local region matching for colonic NRSfM

Navid Rabbani 10-2020 to 05-2023 Cancéropôle AIALO
Bleeding detection in MIS

Fang Bai 09-2020 to 06-2022 ANR TOPACS
Deformable generalised Procrustes analysis

Damien Mariyanayagam 09-2020 to 05-2022 FET Endomapper
Reflexion based 3D visual cues and reconstruction

Dewan Bappy 09-2020 to 03-2021 FET Endomapper
Theory and practice of first-order deformable reconstruction

Agniva Sengupta 07-2020 to 07-2023 FET Endomapper
NRSfM with topological constraints

Carlos Arango 09-2019 to 04-2021 ERC FLEXABLE, ERC P-ViTAL
Deformation models for organ registration

Bastien Durix 09-2018 to 08-2019 ERC FLEXABLE
Plane-based SfT with silhouette constraints

Shaifali Parashar 09-2017 to 12-2018 ERC FLEXABLE
Robustifying the local solutions to NRSfM (with Daniel Pizarro)

Katrin Skerl 06-2016 to 06-2017 ERC FLEXABLE
Using elastography to improve Shape-from-Template in a surgical context

Bongjin Koo 06-2016 to 06-2018 Région Auvergne
Computer-aided minimal invasive liver surgery (with Erol Özgür)

Darshan Venkat 04-2016 to 04-2017 ERC FLEXABLE
Shape-from-Template in context (with Toby Collins)

Rindra Rantoson 04-2015 to 09-2017 ERC FLEXABLE
The convergence between object detection and Shape-from-Template

Pablo Mesejo 10-2013 to 09-2014 ANR SYSEO
Shape and appearance based automatic classification of neoplasia in colonoscopy

Rahat Khan 10-2013 to 11-2015 ERC FLEXABLE
Multiple-View Geometry of a Deformable Surface (with Daniel Pizarro)

Pablo Alcantarilla 01-2012 to 11-2012 ANR SYSEO
Reconstructing the 3D shape of neoplasia in gastroscopy

Jae-Hak Kim 03-2011 to 08-2012 Région Auvergne
Assessment of monocular 3D reconstruction methods for deformable bodies (with Richard Hartley)

Abed Malti 02-2011 to 07-2013 Région Auvergne
Direct image registration and 3D reconstruction (with Richard Hartley)

Florent Brunet 11-2010 to 11-2011 IMF Toulouse
Image registration and measurements with mechanical constraints (with Emmanuel Cid)

Toby Collins 11-2009 to 11-2011 Région Auvergne
Brain scans registration then colonoscopy (with Christophe Tilmant)

Julien Peyras 06-2008 to 06-2009 ANR HFIBMR
A learning approach to image-based rendering

Michela Farenzena 10-2007 to 10-2008 Industrial contract
Vision-based Outdoor Localization (with Youcef Mezouar)

PhD Students (with topic, co-supervisors and source of funding; 5 co-supervised defended, 13 directed defended, 6 directed on-going)

Emilien Gadoux 10-2023 to Cancéropôle CLARA
Liver augmentation in laparoscopic and robot-assisted interventions

Mahdi Kalantari 06-2023 to ANR IMMORTALLS
Ultrasound probe localisation for interventional surgical image fusion (with Erol Özgür and Youcef Mezouar)

Samad Barri Khojasteh 05-2023 to University of Alcalà
Improving NRSfM with a NeRF representation (with Daniel Pizarro and David Fuentes)

Rasoul Sharifian 11-2022 to Industrial PhD, at CHU
Breast and uterus tracking during surgery in spite of incision for augmented reality (with Prasad Samarakoon)

Kilian Chandelon 09-2020 to Industrial PhD
Surgical augmented reality for MIS of the kidney (with Prasad Samarakoon)

Mathieu Labrunie 09-2020 to Industrial PhD
Development of continuous liver surgical augmented reality (with Prasad Samarakoon)

Ivan Mikhailov 12-2019 to Industrial PhD
Automatic preoperative image segmentation towards intra-operative Augmented Reality (with Lilian Calvet)

Nicolas Loiseau-Witon 10-2019 to ANR TOPACS
Large-scale registration of full-body CT images (with Razmig Kechichian and Sébastien Valette)

Yamid Espinel 09-2018 to 12-2022 MENRT
Image-based Liver Tracking for Continuous Laparoscopic Augmented Reality (with Christophe Tilmant)
Now: research engineer in EnCoV, Clermont-Ferrand

Tom François 09-2017 to 12-2021 Industrial PhD
Laparoscopic image understanding (with Lilian Calvet)
Now: research engineer at Be-Ys / be almerys

Richard Modrzejewski 11-2016 to 08-2020 IRCAD
Texturing a preoperative liver model from laparoscopy (with Toby Collins)
Now: data scientist at SURGAR, Clermont-Ferrand

Souheil Hadj Said 04-2015 to 03-2020 CEA
Using Image Restoration and Inpainting in Diminished Reality (with Mohamed Tamaazousti)
Now: research engineer at Faurecia, Paris

Alexandre Morgand 11-2014 to 11-2018 CEA
Light Source Modeling and Reconstruction from Multiple Depth Images (with Mohamed Tamaazousti)
Now: research engineer at SLAMcore, London

Kristina Prokopetc 09-2014 to 11-2017 Industrial PhD
Accurate Retinal Mapping from Slit-Lamp Images
Now: researcher at CEA, Saclay

Mathias Gallardo 09-2014 to 09-2018 ERC FLEXABLE
Deformable 3D Reconstruction from Multiple Visual Cues (with Toby Collins)
Now: postdoc at the University of Bern

Shaifali Parashar 09-2014 to 10-2017 ERC FLEXABLE
Volumetric Deformable 3D Reconstruction (with Daniel Pizarro)
Winner, PhD prize from Université Clermont Auvergne
Now: Chargée de Recherche au CNRS

Ajad Chhatkuli 09-2013 to 12-2016 ERC FLEXABLE
The Multiple-View Geometry of Deformable Surfaces (with Daniel Pizarro)
Now: postdoc at ETHZ, Zurich

Jim Braux-Zin 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

François Chadebecq 03-2011 to 11-2015 ANR SYSEO
Using focus to measure the size of neoplasias in colonoscopy (with Christophe Tilmant at 50%)
Now: lecturer, Middlesex University London

Amir Yavariabdi 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: lecturer, Karatay University

Amira Bel-Hedi 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: lecturer, ISTIC, Ben Arous

Ludovic Magerand 09-2008 to 12-2014 MENRT*, with sick-leave*
The Geometry of Single and Multiple Rolling Shutter Cameras (with Omar Ait-Aider at 50%)
Now: Lecturer, University of Dundee

Florent Brunet 09-2007 to 11-2010 Région Auvergne – TUM, *European PhD*
Registration and 3D reconstruction of deformable surfaces (with Nassir Navab at 45% and Rémy Malgouyres at 5%)
Winner of the second prize at "Doctoriales" 2009 Clermont-Ferrand
Winner of the best contribution to "journées de l'EDSPI" 2010 Clermont-Ferrand
Now: computer vision research manager at Ubleam, Toulouse

Julien Michot 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, 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: project leader in medical imaging, CEA, 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, Paris

Engineers (with topic and source of funding)

Yamid Espinel 12-2022 to 05-2023 Cancéropôle AIALO
Mini-invasive liver surgery and surgical fluorescence imaging

Rasoul Sharifian 09-2021 to 10-2022 Cancéropôle AIALO
Smoke detection in mini-invasive surgery

Karim Botros 10-2019 to 12-2020 CNRS pre-transfer
Validation and improvement of hepatic laparoscopic augmented reality (with Lilian Calvet)

Navid Rabbani 10-2019 to 09-2020 CNRS pre-transfer
Validation and improvement of hepatic laparoscopic augmented reality (with Lilian Calvet)

Prasad Samarakoon 04-2018 to 12-2019 ERC P-ViTAL
Development of the EESEP platform for uterine laparoscopic augmented reality

Pamir Ghimir 09-2018 to 02-2019 ERC P-ViTAL
Development of the EESEP platform for uterine laparoscopic augmented reality

Medical Students (17)

Nalick Lombion (M2 in ENT surgery) ; Alice Pitout (M2 in urologic surgery, CHU Bordeaux) ; Gaëlle Margue (M2 in urologic surgery, CHU Bordeaux) ; Abderrahmane Khaddad (M2 in urologic surgery, CHU Bordeaux) ; Mathieu Ribeiro, 2021 (M2 in hepatobiliary surgery) ; Luce Compagnone, 2021 (M2 in ENT surgery) ; Callyane Seve, 2021 (M2 in gynecologic surgery) ; Salomé Marchand, 2020-2022 (medical thesis in urology, CHU St Etienne) ; Claire Figuier, 2020 (M2 in gynecologic surgery) ; Farouk Mouri, 2020 (M2 in hepatobiliary surgery, CHU St Etienne) ; Anne-Flore Lavandier, 2019 (medical thesis) ; Guillaume Teluob, 2018 (medical thesis in radiology) ; Mourad Abdallah, 2018-2020 (M1, M2 and medical thesis in hepatobiliary surgery) ; Sabrina Madad Zadeh, 2018-2020 (M2 and medical thesis 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 21 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 (2010-2016), statistical inference (2009-2016), information systems (2009), basics in mathematics (2009-2013), statistical tests (since 2017) ; approximately 160h per year over 2009-2016 and 60h since 2017
- **MSc TechMed**: scientific calculus (2012-2016), medical image registration (2009-2016), 3D computer vision (2009-2012) ; approximately 70h per year over 2009-2012 ; computer assisted surgery (since 2012)
- **MSc Nutrition, Health and Mobility**: e-Health (2023-2024)

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 Alcala

- **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, 2013-2018, 1.5M€ (ISIT, Principal Investigator)

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

- **Campus BOpEx**, Tiers Lieu d'Expérimentation project on laparoscopic liver surgery, with 7 partners, 2023-2026, Caisse des dépôts et des consignations, 300k€ (SURGAR)
- **IMMORTALLS**, ANR (jeunes chercheurs) project on laparoscopic liver surgery with US and cobotics, 2022-2026, 420k€ (IP)
- **Digital Urology 3D**, ANR RHU, with 8 partners, 2022-2027, 152k€ (SURGAR)
- **FEMaLe**, H2020 RIA grant, with 11 partners, 2021-2024, 712k€ (SURGAR)
- **AIALO***, Cancéropôle CLARA, with SURGAR, 2020-2023, 315k€ (IP)
- **EndoMapper**, H2020 FET-Open grant, with Uni. Zaragoza, UCL and Odin Medical, 2019-2023, 730k€ (IP)
- **TOPACS**, ANR project on large scale registration, with CREATIS, ICube, Gipsa-lab, LIRIS and CURML, 2019-2023, 80k€ (IP)
- **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 IASIS 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 IASIS project, with IRIT, 2002, 5k€

Other Funding Sources

- **Chirurgie oncologique guidée par l'image : repérage des lésions de cancer mammaire non palpables par Réalité Augmentée, translational research grant**, CHU, Centre Jean Perrin, UCA, 2023, 40k€
- **NORA, Internal Hospital Funding (AOI), grant on ENT surgery**, 2020, 20k€
- **Research contract with Yansys Medical**, 2019, 40k€ ; 2021, 40k€
- **CNRS pre-transfer, grant on hepatic surgery**, 2019, 100k€
- **Région Auvergne, grant on hepatic surgery**, 2015, 96k€
- **Région Auvergne, grant on colonoscopy**, 2015, 98k€
- **Research contract with Almerys,** 2012, 80k€
- **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

- SURGAR, Clermont-Ferrand (2020, 2021)
- FittingBox, Toulouse (2009)
- The Unkelbach Valley Software Work, Remagen (2004-2005)

Laboratory Evaluation Panels

- Inria, internal evaluation, Vision, perception and multimedia interpretation theme, 2023
- GIPSA-lab (Grenoble Images Parole Signal Automatique), AERES evaluation, 2010
- IRIT (Institut de Recherche en Informatique de Toulouse), AERES evaluation, 2009

Project Evaluation

- PRISMA Programme, Science Fund of the Republic of Serbia (SSF), 2023
- Transfer program A*MIDEX Aix-Marseille Université, 2023
- European Science Foundation, Research Foundation Flanders (FWO), 2022
- European Science Foundation, Research Foundation Flanders (FWO), 2021
- European Research Council (ERC), Advanced Grants call, PE6, 2020
- European Science Foundation, Région Grand-Est, 2020
- Data+ program (University of Copenhagen), 2020
- European Science Foundation, Research Foundation Flanders (FWO), 2019
- 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

2023	Board member of a lecturer recruitment committee at Grenoble INP (CS 26/27ème section)
2021/2023	Member of the college of experts of the European Science Foundation
2019	Board member of a lecturer recruitment committee at Université de Toulouse (CS 27ème section)
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 (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, then Institut Pascal, 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)
2009/2022	**Co-responsible of geometric and learning-based 3D vision at CNRS GDR-IASIS (ex ISIS)**
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 45 with 9074 citations in January 2024 according to Google Scholar; 23 of our publications were selected for special journal issues from conferences.

Software and Industrial Property

Patents:

- Using Specular Reflexion to Synchronise the Two Video Streams of a Stereoscopic Surgical Camera, French No. FR2311679, filed 26-oct-2023, pending
- Combined System and Process for the Selection, Annotation and Training of a Shared Machine Learning Model, French No. FR2302198, filed 09-mar-2023, pending
- Interactive Image Segmentation with Deep Neural Networks and an Interaction Memory, French No. FR2201763, filed 28-feb-2022, pending
- Interactive Contactless Organ Registration Initialisation in Mini-invasive Surgery, French No. FR2209161, filed 13-sep-2022, pending
- Real-time Camera Pose Tracking with a Self-updating Keyframe Database, French No. FR2113591, filed 15-dec-2021, international extension No. PCT/EP2022/085905, filed 14-dec-2022
- Trocar Position Estimation in Minimally Invasive Surgery, French No. FR2101020, filed 3-feb-2021, international extension No. PCT/EP2022/052367, filed 02-feb-2022, pending
- Image Processing in the Presence of Specularities, European patent No. 16729835.5-1020, filed 8-jun-2015
- Method and Apparatus for Merging Data from Image and Motion or Position Sensors, French patent No. 1053803, filed 17-jun-2010, international extension No. 11715235.5 - 1224, filed 21-dec-2012

Software filed at APP (Agency for the Protection of Programs)[1]:

- L-SURGAR: IDDN.FR.001.230005.000.S.P.2020.000.31230, June 2, 2020
- SURGAR (Surgical Augmented Reality): IDDN.FR.001.310005.000.S.P.2019.000.31230, July 22, 2019
- Reconstruction of Deformable Objects from Monocular Images: IDDN.FR.001.140011.000.S.P.2019.000.41200, March 26, 2019
- CAPRE (Computer Aided Polyp Recognition): IDDN.FR.001.350029.000.S.P.2015.000.31230, August 28, 2015
- 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

Software included in libraries:

- IPPE (Infinitesimal Plane Pose Estimation) in OpenCV > 4.1.1 and default pose method in ArUco > 3.1.15
- KAZE/AKAZE in OpenCV and Matlab

[1] SURGAR makes regular APP filings; the list is only given for the APP filings made with UCA.

Publication List

Most of these publications are downloadable from `encov.ip.uca.fr/publications`.

International Journals (107)

[J107] **A Deep Learning-based Interactive Medical Image Segmentation Framework with Sequential Memory**
I. Mikhailov, B. Chauveau, N. Bourdel and A. Bartoli
Computer Methods and Programs in Biomedicine, accepted January 2024

[J106] **Automatic Smoke Analysis in Minimally Invasive Surgery by Image-based Machine Learning**
R. Sharifian, H. Mendonça Abrão, S. Madad-Zadeh, C. Sève-d'Erceville, P. Chauvet, N. Bourdel, M. Canis and A. Bartoli
Journal of Surgical Research, accepted January 2024

[J105] **ROBUSfT: Robust Real-Time Shape-from-Template, a C++ Library**
M. Shetab-Bushehri, M. Aranda, E. Özgür, Y. Mezouar and A. Bartoli
Image and Vision Computing, accepted November 2023

[J104] **ToTem NRSfM: Object-wise Non-Rigid Structure-from-Motion with a Topological Template**
A. Sengupta and A. Bartoli
International Journal of Computer Vision, accepted September 2023

[J103] **3D Reconstruction of a Thin Flexible Disc in a Vortical Flow**
E. Ibarra, G. Verhille and A. Bartoli
Experiments in Fluids, accepted September 2023

[J102] **KernelGPA: A Globally Optimal Solution to Deformable SLAM in Closed-form**
F. Bai, K. Wu and A. Bartoli
International Journal of Robotics Research, special issue: selected papers from RSS 2022, accepted July 2023

[J101] **Elliptical Specularity Detection in Endoscopy with Application to Normal Reconstruction**
K. Makki, K. Chandelon and A. Bartoli
International Journal of Computer Assisted Radiology and Surgery, special issue: selected papers from IPCAI 2023, accepted March 2023

[J100] **SurgAI3.8K: a Labelled Dataset of Gynaecologic Organs in Laparoscopy, with Application to Automatic Augmented Reality Surgical Guidance**
S. Madad-Zadeh, T. François, A. Comptour, M. Canis, N. Bourdel and A. Bartoli
Journal of Minimally Invasive Gynecology, accepted January 2023

[J099] **The Proxy Step-size Technique for Regularized Optimization on the Sphere Manifold**
F. Bai and A. Bartoli
IEEE Transactions on Pattern Analysis and Machine Intelligence, accepted October 2022

[J098] **Kidney Tracking for Live Augmented Reality in Stereoscopic Mini-invasive Partial Nephrectomy**
K. Chandelon, R. Sharifian, S. Marchand, A. Khaddad, N. Bourdel, N. Mottet, J.-C. Bernhard and A. Bartoli
Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, special issue: selected papers from AE-CAI 2022, 11(4):1251-1260, June 2023

[J097] **A Survey of Augmented Reality Methods to guide Minimally Invasive Partial Nephrectomy**
A. Khaddad, J.-C. Bernhard, G. Margue, C. Michiels, S. Ricard, K. Chandelon, F. Bladou, N. Bourdel and A. Bartoli
World Journal of Urology, 41(2):335-343, February 2023

[J096] **Using Multiple Images and Contours for Deformable 3D-2D Registration of a Preoperative CT in Laparoscopic Liver Surgery**
Y. Espinel, L. Calvet, K. Botros, E. Buc, C. Tilmant and A. Bartoli
International Journal of Computer Assisted Radiology and Surgery, special issue: selected papers from MICCAI 2021, 17(12):2211-2219, December 2022

[J095] **Deep Shape-from-Template: Single-image Quasi-isometric Deformable Registration and Reconstruction**
D. Fuentes-Jimenez, D. Pizarro, D. Casillas-Perez, T. Collins and A. Bartoli
Image and Vision Computing, 127:1045-1075, November 2022

[J094] **Metastatic Melanoma Treated by Immunotherapy: Discovering Prognostic Markers from Radiomics Analysis of Pretreatment CT with Feature Selection and Classification**
G. Ungan, A.-F. Lavandier, J. Rouanet, C. Hordonneau, B. Chauveau, B. Pereira, L. Boyer, J.-M. Garcier, S. Mansard, A. Bartoli and B. Magnin
International Journal of Computer Assisted Radiology and Surgery, 17(10):1867-1877, October 2022

[J093] **Robust Isometric Non-Rigid Structure-from-Motion**
S. Parashar, D. Pizarro and A. Bartoli
IEEE Transactions on Pattern Analysis and Machine Intelligence, 44(10):6409-6423, October 2022

[J092] **Tracking Better, Tracking Longer: Automatic Keyframe Selection in Model-based Laparoscopic Augmented Reality**
K. Chandelon and A. Bartoli
International Journal of Computer Assisted Radiology and Surgery, special issue: selected papers from IPCAI 2022, 17(8):1507-1511, August 2022

[J091] **Automatic Preoperative 3D Model Deformable Registration in Laparoscopic Liver Resection**
M. Labrunie, M. Ribeiro, F. Mourthadhoi, C. Tilmant, B. Le Roy, E. Buc and A. Bartoli
International Journal of Computer Assisted Radiology and Surgery, special issue: selected papers from IPCAI 2022, 17(8):1429-1436, August 2022

[J090] **A Methodology and Clinical Dataset with Ground-truth to Evaluate Registration Accuracy Quantitatively in Computer-assisted Laparoscopic Liver Resection**
N. Rabbani, L. Calvet, Y. Espinel, B. Le Roy, M. Ribeiro, E. Buc and A. Bartoli
Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, special issue: selected papers from AE-CAI 2021, 10(4):441-450, June 2022

[J089] **Procrustes Analysis with Deformations: A Closed-Form Solution by Eigenvalue Decomposition**
F. Bai and A. Bartoli
International Journal of Computer Vision, 130:567-593, February 2022

[J088] **Flat Colorectal Adenocarcinoma: A Worrisome False Negative of Artificial Intelligence-assisted Colonoscopy**
P. Lafeuille, C. Yzet, J. Rivory, G. Pontarollo, H. Latif, A. Bartoli and M. Pioche
Endoscopy E-Videos, February 2022

[J087] **Augmented Reality in Laparoscopic Liver Resection Evaluated on an Ex-vivo Animal Model with Pseudo-tumours**
M. Abdallah, Y. Espinel, L. Calvet, B. Pereira, B. Le Roy, A. Bartoli and E. Buc
Surgical Endoscopy, 36(1):833-843, January 2022

[J086] **Learning 3D Medical Image Keypoint Descriptors with the Triplet Loss**
N. Loiseau–Witon, R. Kéchichian, S. Valette and A. Bartoli
International Journal of Computer Assisted Radiology and Surgery, special issue: selected papers from IPCAI 2021, 17(1):141-146, January 2022

[J085] **An Optimal Triangle Projector with Prescribed Area and Orientation, Application to Position-Based Dynamics**
C. Arango and A. Bartoli
Graphical Models, 118:101-117, November 2021

[J084] **Non-granular Laterally Spreading Tumors: Potential Superficial Cancers that Artificial Intelligence does not Easily Detect**
P. Lafeuille, J. Rivory, T. Lambin, T. Fenouil, C. Yzet, H. Latif, A. Bartoli and M. Pioche
Endoscopy E-Videos, October 2021

[J083] **A Proof-of-Concept Augmented Reality System in Oral and Maxillofacial Surgery**
N. Pham-Dang, K. Chandelon, I. Barthélémy, L. Devoize and A. Bartoli
Journal of Stomatology, Oral and Maxillofacial Surgery, 122(4):338-342, September 2021

[J082] **Colonoscopic 3D Reconstruction by Tubular Non-Rigid Structure-from-Motion**
A. Sengupta and A. Bartoli
International Journal of Computer Assisted Radiology and Surgery, special issue: selected papers from IPCAI 2021, 16:1237–1241, July 2021

[J081] **The Isowarp: the Template-based Visual Geometry of Isometric Surfaces**

D. Casillas-Perez, D. Pizarro, D. Fuentes-Jimenez, M. Mazo and A. Bartoli
International Journal of Computer Vision, 129:2194–2222, July 2021

[J080] **Texture-Generic Deep Shape-from-Template**
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E. Özgür, A. Lafont and A. Bartoli
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[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] **Robust, Real-time, Dense and Deformable 3D Organ Tracking in Laparoscopic Videos**
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] **Schwarps: 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-Assisted 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**
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 Dynamic 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: a Piecewise Affine Approach**
T. Collins, J.-D. Durou, P. Gurdjos and A. Bartoli
3DPVT - *International Symposium on 3D Data Processing, Visualization and Transmission*, 2010

[I061] **Simultaneous In-Plane 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] **Semantic 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 Benmarking 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

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[E006] **QU3ST - Proceedings of the Workshop on 2.5D Sensing Technologies in Motion: The Quest for 3D**
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[E005] **NORDIA - Proceedings of the Workshop on Non-Rigid Shape Analysis and Deformable Image Alignment**
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[R004] **Motion Panoramas**
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[R002] **Three New Algorithms for Projective Bundle Adjustment with Minimum Parameters**
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[N069] **Reconnaissance automatisée de la surface rénale par intelligence artificielle au cours de néphrectomies partielles robot-assistées (NPRA) : un pas vers la réalité augmentée**
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[N068] **Trapping of a Flexible Disc in a Vortical Flow: Reconstruction Process and Theory**
E. Ibarra, A. Bartoli, F. Candelier and G. Verhille
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[N067] **Intelligence artificielle et endométriose**
A. Netter, S. Paracchini, A. Agostini, B. Courbière, M. Canis, A. Bartoli and N. Bourdel
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[N066] **Intelligence artificielle et chirurgie mini-invasive**
A. Comptour, S. Paracchini, A. Aleksandrov, A. Bartoli and N. Bourdel
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[N065] **AI for dummies, ou comment s'y retrouver en intelligence artificielle, apprentissage automatique et vision par ordinateur**
C. Sève-d'Erceville, A. Bartoli and N. Bourdel
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[N064] **Preuve de concept en réalité augmentée pour la chirurgie maxillo-faciale**
N. Pham-Dang, K. Chandelon, I. Barthélémy, L. Devoize and A. Bartoli
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[N063] **Description de points clés par apprentissage dans des images médicales 3D**
N. Loiseau–Witon, R. Kéchichian, S. Valette and A. Bartoli
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B. Le Roy, E. Özgür, B. Koo, D. Pezet, E. Buc and A. Bartoli

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[N057] **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
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[N056] **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
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[N055] **SLIM (Slit Lamp Image Mosaicing)**
K. Prokopetc and A. Bartoli
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[N054] **Un modèle de spécularité géométrique multi-vues**
A. Morgand, M. Tamaazousti and A. Bartoli
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[N053] **Un modèle de propagation de spécularité dans une vidéo pour la réalité diminuée**
S. Hadj Said, M. Tamaazousti and A. Bartoli
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[N052] **Etude de la taille des polypes in vivo en coloscopie par mesure assistée par ordinateur : Etude prospective portant sur 30 patients et 78 polypes**
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[N048] **Un cadre générique pour le recalage dense combinant un coût dense et un coût basé sur des correspondances de primitives**
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[N046] **Détection générique et temps réel des spécularités**
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[N045] **Shape-from-Template dans Flatland**
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[N044] **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

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[N043] **Caméras virtuelles pour l'étalonnage d'un système de réalité augmentée sur affichage semi-transparent**
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[N039] **Estimation de l'échelle des néoplasies en coloscopie par détection de la profondeur de défocalisation**
F. Chadebecq, C. Tilmant and A. Bartoli
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F. Brunet, E. Cid, A. Bartoli, F. Risso and V. Roig
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B. Compte and A. Bartoli
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[N033] **Fusion d'images IRM et échographique par recalage multi-modal pour la caractérisation des kystes endométriosiques**
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[N030] **Découverte automatique du recouvrement en recalage direct d'images**
F. Brunet, A. Bartoli, N. Navab and R. Malgouyres
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[N029] **Shape-from-texture revisité : reconstruction 3D et autocalibrage à partir d'une seule image**
J.-D. Durou, A. Bartoli and P. Gurdjos
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[N028] **Recalage non-rigide avec prise en compte des auto-occultations**
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[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
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[N026] **Scene Sailing**
J. Peyras, A. Bartoli, P. Georgel and M. Loog
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[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**
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[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
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[N022] **Ajustement automatique de surfaces paramétriques sur données de profondeur en présence d'un bruit hétérogène**
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[N020] **Reconstruction 3D de surfaces déformables par un modèle de faible rang hiérarchique**
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[N017] **Reconstruction de surface par validation croisée**
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[N016] **Recalage non-rigide direct avec prise en compte des auto-occultations au niveau image**
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[N015] **Contour-Based Registration and Retexturing of Cartoon-Like Videos**
N. Tiilikainen, A. Bartoli and S. Olsen
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[N014] **Automatic Quasi-Isometric Surface Recovery and Registration from 4D Range Data**
T. Collins, A. Bartoli and B. Fisher

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[N013] **Gestion des auto-occultations pour l'augmentation d'une surface déformable**
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[N011] **Modélisation et reconstruction de papier à partir de plusieurs images**
M. Perriollat and A. Bartoli
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[N010] **Autocalibrage multi-vues d'une distance focale et mouvements critiques associés**
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[N008] **Alignement de reconstructions tridimensionnelles affines en présence de données images manquantes**
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[N005] **Des séquences vidéo aux panoramas de mouvement**
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K. Chandelon and A. Bartoli
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M. Tamaazousti, A. Bartoli and A. Morgand
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[P001] **Method and Apparatus for Merging Data from Image and Motion or Position Sensors**
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J. Michot, A. Bartoli and F. Gaspard
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[A013] **Real-time Augmented Reality in Gynaecologic Malignancies: on the Verge of Creating New Software to Automatically Stage Carcinomatosis**
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[A012] **Machine Learning in Minimal Invasive Gynecology: Promises and Pitfalls**
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[A009] **A Methodology and Clinical Dataset to Evaluate Preoperative Registration Accuracy in Laparoscopic Liver Resection**
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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 (23)

[T023] **Registration of Preoperative CT Data to Laparoscopic Liver Surgery Images for Augmented Reality Guided Surgical Assistance**
Y. Espinel
PhD thesis (thèse de doctorat), Université Clermont Auvergne, December 2022 [supervision: L. Calvet, C. Tilmant, E. Buc and A. Bartoli (director)] [document in English]

[T022] **Contributions au recalage pour la réalité augmentée en coelioscopie de l'utérus : détection de contours sémantiques et mise à jour topologique du modèle virtuel à partir d'images peropératoires**
T. François
PhD thesis (thèse de doctorat), Université Clermont Auvergne, December 2021 [supervision: L. Calvet, D. Saboul and A. Bartoli (director)] [document in French]

[T021] **Contributions to Plane-based and Deformable 3D Reconstruction from Monocular Images**
T. Collins
PhD thesis (thèse de doctorat), Université Clermont Auvergne, December 2021 [supervision: A. Bartoli (director)] [document in English]

[T020] **Recalage déformable, jeux de données et protocoles d'évaluation pour la chirurgie mini-invasive abdominale augmentée**
R. Modrzejewski
PhD thesis (thèse de doctorat), Université Clermont Auvergne, August 2020 [supervision: T. Collins and A. Bartoli (director)] [document in French]

[T019] **Illumination Estimation from Specular Highlights in Mixed Reality with Application in Diminished Reality**
S. Hadj Said
PhD thesis (thèse de doctorat), Université Clermont Auvergne, March 2020 [supervision: M. Tamaazousti and A. Bartoli (director)] [document in English]

[T018] **Un modèle géométrique multi-vues des taches spéculaires basé sur les quadriques avec application en réalité augmentée**
A. Morgand
PhD thesis (thèse de doctorat), Université Clermont Auvergne, November 2018 [supervision: M. Tamaazousti and A. Bartoli (director)] [document in French]

[T017] **Contributions to Monocular Deformable 3D Reconstruction: Curvilinear Objects and Multiple Visual Cues**
M. Gallardo
PhD thesis (thèse de doctorat), Université Clermont Auvergne, September 2018 [supervision: T. Collins and A. Bartoli (director)] [document in English]

[T016] **Image-based Deformable 3D Reconstruction using Differential Geometry and Cartan's Connections**
S. Parashar
PhD thesis (thèse de doctorat), Université Clermont Auvergne, November 2017 [supervision: D. Pizarro and A. Bartoli (director)] [document in English]

[T015] **Precise Mapping for Retinal Photocoagulation in SLIM (Slit-Lamp Image Mosaicing)**
K. Prokopetc
PhD thesis (thèse de doctorat), Université Clermont Auvergne, November 2017 [supervision: A. Bartoli (director) and B. Wassmer] [document in English]

[T014] **Local Analytic and Global Convex Methods for the 3D Reconstruction of Isometric Deformable Surfaces**
A. 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]