Thomas Maugey
Research Scientist
Inria
Team-Project SIROCCO

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RESEARCH INTERESTS

Image/Video Coding: Generative compression, Interactive compression, Distributed Video Coding
Graph-based signal processing
3D visual data processing: 360°, Light Fields, Point Cloud / Meshes

EDUCATION

Ph.D. Candidate, Signal and Image Processing **Oct. 2007 - Sep. 2010**
TELECOM Paris Tech (TSI), Paris, France
Thesis title: "Distributed Video Coding of Multiview Sequences"
Advisors: Béatrice Pesquet-Popescu, Marco Cagnazzo

Master Science degree, Applied and Fundamental Mathematics **Sep. 2007**
Ecole Supérieure d'Électricité (Supélec) and Université Paul Verlaine, Metz, France
Master thesis: "Distributed Multiview Video Coding" in TELECOM ParisTech
Thesis supervisors: Béatrice Pesquet-Popescu, Christophe Tillier

Undergraduate student **Sep. 2004 - Sep. 2007**
In Electrical Engineering at Ecole Supérieure d'Électricité (Supélec)

High school preparation class student **Sep. 2002 - Jun. 2004**
In Maths-Physic in Lycée Buffon (Paris)

ACADEMIC EXPERIENCE

Research Scientist **Sep. 2014 - ...**
INRIA: French National Institute for computer science and applied mathematics
In the team-project SIROCCO headed by Christine Guillemot
Research in interactive multiview video system design

Postdoctoral researcher **Oct. 2010 - Sep. 2014**
Swiss Federal Institute of Technology (EPFL), LTS4 Laboratory headed by Pascal Frossard
Research in interactive multiview video system design
Teaching assistant for Image Communication class
Student supervisor

Teaching assistant **Oct. 2007 - Sep. 2010**
At Université Paris-Est in Informatics and Signal Processing in parallel of the *PhD* at TELECOM ParisTech

Master thesis student **Apr. - Aug. 2007**
In Signal and Image Processing Laboratory (TSI) of TELECOM ParisTech

Collaborations

Researchers

- Prof. Gene Cheung - NII, Japan
- Prof. Antonio Ortega - USC, USA
- Prof. Pascal Frossard - EPFL, CH
- Prof. Christine Guillemot - INRIA, France
- Prof. Marc Atonini - I3S, France
- Prof. Michel Kieffer - LSS, France
- Prof. Joumanah Farah - USEK, Lebanon
- Prof. James E Fowler, Mississippi St. Univ, USA
- Prof. Aline Roumy, Inria, France
- Dr. Roberto Azevedo - Disney Research, Switz.
- Dr. Aline Roumy - INRIA, France
- Dr. Ismaël Daribo - NII, Japan
- Dr. Laura Toni - UCSD, USA
- Dr. Jingyu Yang - Tsinghua University, China
- Dr. Maria Trocan - ISEP, France
- Dr. Charles Yaacoub - USEK, Lebanon
- Dr. Cagatay Dikici, LIRIS, France
- Dr. Jérôme Gauthier, CEA, France
- Dr. Frédéric Payan, I3S, France
- Dr. Elsa Dupraz, Telecom Bretagne, France

Collaborative Research projects

- French ANR project, "ESSOR" (2007-2010) with LSS, I3S, IRISA and TELECOM ParisTech
- Franco-Lebanese project, "CEDRE" (2009-2010) with USEK (Lebanon) and TELECOM ParisTech (France)
- CTI project, "DEMIS" (2013-2014) with HEFR (Suisse) and FASTCOM (Suisse)
- CominLabs (Région Bretagne), "Intercom" (2016-2019) with Telecom Bretagne (France)
- Gdr-isis, "ICON3D" (2016-2018) with I3S (Nice Sophia Antipolis)
- Associate Team with Inria-EPFL "GOP" (2017-2019)
- CominLabs (Région Bretagne), "CoLearn" (2021-2025) with Telecom Bretagne, IETR (France)

Teaching and Supervision experience

Co-supervision of Postdoctoral researcher

- X. Su (INRIA) - Graph-based representation (2015-2016, with C. Guillemot)
- M-Q. Pham (INRIA) - Graph optimization for Massive Random Access (2018-2019, with A. Roumy)
- F. Hawary (INRIA) - Light field estimation from 360 camera array (2019-, with C. Guillemot)
- N. Mahmoudian-Bidgoli (INRIA) - Spherical learning (2019-2021, with A. Roumy)
- A. J. Tom (INRIA) - Data Repurposing (2020-2022)

Co-supervision of PhD students

- M. Rizkallah (IRISA) - Multiview coding using graph-based representations (2016-2019, with C. Guillemot)
- N. Mahmoudian-Bidgoli (INRIA) - Compression schemes for Interactive communication (2016-2019, with A. Roumy)
- P. Garus (INRIA-Orange Labs) - Depth Estimation (>2019, with C. Guillemot and Joel Jung)
- R. Kaafarani (INRIA-Mediakind) - Adaptive video streaming (>2021, with A. Roumy, M. Blestel, M. Ropert)
- R. Piau (INRIA) - Video coding for learning: video content analysis in the compressed domain (>2021, with A. Roumy)
- T. Bachard (IRISA) - Extreme compression of image/video databases using GAN-based synthesis (>2021)
- K. Gu (INRIA) - Spherical light fields (>2021, with C. Guillemot and S. Knor)

Supervision of Engineers

- C. Le Cam (INRIA) - Acquisition for Free viewpoint Television (2016-2018)
- A. Crinière (INRIA) - Compression schemes for sensor networks (2016-2018)
- S. Bellenous (INRIA) - Interactive compression of Omidirectional videos (2020-2022)

Collaboration with PhD students

- A. De Abreu, EPFL - 3D data transmission over a network for interactive MV video coding (2012-2015)
- B. Rajei, Ferdowsi University of Mashhad - Texture and depth rate allocation (2013)
- S. Khattak, Montford University - Non complex multiview video plus depth encoding (2013-2015)
- C. Verleysen, UCL - View synthesis with distant cameras (2013-2015)
- Y.H. Chao, USC - Color compression in Graph-based representation (2014)
- R. Ma, Honk Kong University - Interactive multiview video streaming (2015-2017)

Co-supervision of Master thesis

- V. Davidoiu (TELECOM ParisTech) - stereo video compression (2010, with P. Frossard)
- G. Zappulla (EPFL) - Non Complex virtual view synthesis (2011, with P. Frossard)
- G. Chevtchenko (EPFL)- Efficient depth image based rendering (2011-2012, with P. Frossard)

- T. Uday (EPFL)- 3D data representation for multiview video coding (2012-2013, with P. Frossard)
- P. Farrero i Roger (EPFL)- Design of new 3D multi-view representation (2013, with P. Frossard)
- M. Rizkallah (Inria)- Compression of plenoptic images (2015)
- F. Nasiri (Inria)- Compression of mesh texture for interactive navigation (2018)
- A. Marie (Inria)- Motion estimation for omnidirectional videos (2020)
- T. Bachard (Inria)- Generative compression (2021)
- R. Piau (Inria)- 360 motion estimation (2021)

Lectures and exercises/lab sessions
- *Topics*: Signal/Image/Video Processing, Image Communication/Compression, Computer Science
- *Program*: Master 2 of University of Rennes 1 (SIF and SISEA), Master 1 of EPFL, Master 1 of IMT Atlantique, License of Université Paris-Est

Academic services

Grants

Aide à l'installation scientifique (Rennes Métropole, France), 2015

Invited talks
- LTS4 of Ecole polytechnique Fédérale de Lausanne, Switzerland, " Distributed Video Coding of Multi-view sequences", Apr. 2010
- LIRIS in Lyon, France, "Representation & coding of MV video: existing and novel strategies" (Jan. 2012)
- INRIA in Rennes, France, "3D video representation for interactive MV video streaming" (Dec. 2012)
- NII, Tokyo, Japan, "3D video representation and coding for interactive viewing" (Jan. 2013)
- Technicolor in Rennes, France, "Novel representation methods for interactive MV imaging" (Sep. 2013)
- USC, Los Angeles, USA, "Graph-based representation and coding for multi-view imaging" (Nov. 2013)
- IRCCYN, Nantes, France, "Graph-based representations" (Sep. 2014)
- EPFL, Lausanne, Switzerland, "Interactive mulit-view communication" (Mar 2015)
- INSA, Rennes, France, "FTV: performance and novel representations" (Sep. 2015)
- GdR-ISIS, Paris, France, "Multi-view imaging from acquisition to rendering" (Nov. 2015)
- I3S, Nice, France, "Free Viewpoint Video Transmission" (Feb. 2017)
- EPFL, Lausanne, Switzerland, "Massive Random Access" (May 2017)
- UCL, London, UK, workshop on IoT "Challenges in Data Compression for the IoT" (Jul. 2017)
- University Paris XIII, France, "Free Viewpoint Television: challenges" (Apr. 2018)
- ENS, Rennes, France, "Free Viewpoint Television" (Apr. 2018)
- IRISA's days on Art, Culture and Heritage, Rennes, France, "Data acquisition and compression for user immersion in a virtual scene" (Jan. 2019)
- Orange Lab PhD days, Rennes, France, "Light Field Acquisition and Depth estimation" (Mar. 2019)
- GdR-Isis, Rennes, France, "Acquisition & compression for user immersion in a 3D scene" (Mar. 2019)
- ENS Paris Saclay, France, programme "Panorama recherche", "Compression of visual data: beyond conventional approaches" (May 2021)

Journal editorial
- Guest Editor for the Special Issue on *Interactive Multi-view Video Services: from acquisition to Rendering*, IEEE Multimedia Communication Technical Committee letters, Vol. 11(2), March 2016 (Guest Editors: Erhan Ekmekcioglu, Thomas Maugey, Laura Toni)
- Associate Editor for the *EURASIP Journal on Advanced Signal Processing*

Research committment
- Reviewer for several major international conferences of signal processing (IEEE) and for major journals (IEEE, Elsevier, Springer)
- Organization of thematic days for the GdR-Isis (June 2021)

Conference organization
- Member of the organizing committee of IEEE, MMSP Oct. 2010, (Saint-Malo, France)
- Publicity Chair for Graph Signal Processing Workshop, (Lausanne, Switzerland), Jun. 2018.
- Area Chair for IEEE VCIP 2018, (Taichung, Taiwan), Dec. 2018.
- Awards Chair for the IEEE MMSP 2021 (Tempere, Findland)
- Publicity and Publication chair IEEE ICIP 2022 (Bordeaux, France)

Author/Co-author of accepted projects
- "DEMIS", ICT Project, Fastcom and Fribourg University, Switzerland (1 year)
- "NORIA", TIC Project, Hasler foundation, Switzerland (9 months)
- "NURIS", SNF Project, Swizerland (3 years)
- "Intercom", Cominlabs, ANR and région Bretagne, France (3 years)
- "ATeP", ADT, Inria, France (2 years)
- "ICON3D", Gdr-isis, France (2 years)
- "GOP", Associate Team with Inria-EPFL (3 years)
- "DARE", Inria Exploratory Action, France (2 years)
- "ICOV", ADT, Inria, France (2 years)
- "maDARE", Young scientist program (JCJC), ANR, France (3.5 years)
- "CoLearn", Cominlabs, ANR and région Bretagne, France (3.5 years)

Members of selection comitee
- Selection committee for the assignment of the ministerial PhD grants at IRISA, Rennes, 2016.
- Selection committee for the assignment of the ministerial PhD grants at Inria, Rennes, 2018.
- Selection committee for hiring an assistant professor at Telecom Paris, Paris, 2019.

Members of jury comitee
- Master thesis defense of Bagher Salimi Saleh (Feb 2017), EPFL, Switzerland
- Master thesis defense of Tzamarias Dion Eustathios Olivier (Feb 2017), EPFL, Switzerland
- PhD defense of Antoine Dricot (Mar 2017), TelecomParisTech and OrangeLab
- PhD defense of Renata Khasanova (Dec 2018), EPFL, Switzerland
- PhD defense of Muhammad Abeer Irfan (April 2021), Politecnico di Torino, Italy

Evaluation activity
Referee for the National Agency for the Evaluation of Universities and Research (ANVUR) in Italy

Dissemination and Transfer
- *Scientific mediation*: article in the magazine *Usbek et Rika* (2017, "se divertir en 2067"), Demo for College visit (2018-2019), Hackatech 2021
- *Collaboration with an artist*: Mustapha Azeroual, project "aRza, 2021", Jeu de Paume, Paris
- *Start-up*: scientific advisor for "Anax" (¿2021)

Publications

Journal papers, submitted

(J30) N. Mahmoudian Bidgoli, R. Azevedo, T. Maugey, A. Roumy, P. Frossard, *OSLO: On-the-Sphere Learning for Omnidirectional images and its application to 360-degree image compression*, submitted to IEEE Transactions on Image Processing

Journal papers, accepted/published

(J29) P. Garus, F. Henry, J. Jung, T. Maugey, C. Guillemot, *Immersive Video Coding: Should Geometry Information be Transmitted as Depth Maps?*, accepted in IEEE Transactions on Circuits and Systems for Video Technology 2021

(J28) M. Rizkallah, T. Maugey, C. Guillemot *Rate-Distortion Optimized Graph Coarsening and Partitioning for Light Field Coding*, accepted in IEEE Transactions on Image Processing, 2021

(J27) F. Ye, N. Mahmoudian Bidgoli, E. Dupraz, A. Roumy, K. Amis, T. Maugey *Bit-Plane Coding in Extractable Source Coding: optimality, modeling, and application to 360° data*, accepted in IEEE Communication letters 2021

(J26) T. Maugey, L. Toni, *Large Database Compression Based on Perceived Information*, in IEEE Signal Processing Letters, vol. 7, pp 1735–1739, Sep. 2020

(J25) N. Mahmoudian-Bidgoli, T. Maugey, A. Roumy, *Excess rate for model selection in interactive compression using Belief-propagation decoding*, accepted in Annals of Telecommunications

(J24) N. Mahmoudian-Bidgoli, T. Maugey, A. Roumy, *Fine granularity access in interactive compression of 360-degree images based on rate adaptive channel codes* in IEEE Transactions on Multimedia, vol 23, pp. 2868-2882, Aug. 2021

(J23) M. Q. Pham, A. Roumy, T. Maugey, E. Dupraz, M. Kieffer *Optimal Reference Selection for Random Access in Predictive Coding Schemes* in IEEE Transactions on Communications, vol. 68(9), pp. 5819-5833, Sep. 2020.

(J22) T. Maugey, A. Roumy, E. Dupraz, M. Kieffer, *Incremental coding for extractable compression in the context of Massive Random Access* in IEEE Transactions on Signal and Information Processing over Networks, vol. 6(1), pp. 251-260, Dec. 2020.

(J21) M. Rizkallah, T. Maugey, C. Guillemot, *Prediction and Sampling with Local Graph Transforms for Quasi-Lossless Light Field Compression* in IEEE Transactions on Image processing, vol. 29, pp. 3282 – 3295, Dec. 2019.

(J20) M. Rizkallah, T. Maugey, C. Guillemot, *Geometry-Aware Graph Transforms for Light Field Compact Representation* in IEEE Transactions on Image Processing, vol. 29, pp. 602–616, Jul. 2019.

(J19) E. Dupraz, T. Maugey, A. Roumy, M. Kieffer, *Rate-Storage Regions for Extractable Source Coding with Side Information* in Physical Communication, Elsevier, Special Issue on Coding and Information Theory for Emerging Communication Systems, Vol. 37, 2019.

(J18) R. Ma, T. Maugey, P. Frossard, *Optimized Data Representation for Interactive Multiview Navigation*, in IEEE Transactions on Multimedia, Vol. 20(7), p. 1595-1609, Jul 2018.

(J17) C. Verleysen, T. Maugey, C. De Vleeschouwer, P. Frossard, *Wide baseline image-based rendering based on shape prior regularisation*, in IEEE Transactions on Image Processing, Vol 26(11), p. 5477 – 5490, Jul. 2017.

(J16) X. Su, T. Maugey, C. Guillemot *Rate-distortion optimized graph-based representation for multiview images with complex camera configurations*, in IEEE Transactions on Image Processing, Vol 26(6), p. 2644–2655, Jun. 2017 2017.

(J15) S. Khattak, T. Maugey, R. Hamzaoui, S. Ahmad, P. Frossard, *Temporal and Inter-view consistent error concealment technique for multiview plus depth video broadcasting*, in IEEE Transactions on Circuits and Systems for Video Technology, Vol. 26(5), p. 829-840, May 2016.

(J14) T. Maugey, G. Petrazzuoli, M. Cagnazzo and B. Pesquet-Popescu, P. Frossard, *Reference view selection in DIBR-based multiview coding*, in IEEE Transactions on Image Processing, Vol 25(4), p. 1808-1819, April 2016.

(J13) Y. Gao, G. Cheung, T. Maugey, P. Frossard, J. Liang, *Encoder-driven Inpainting Strategy in Multiview Video Compression,* in IEEE Transactions on Image Processing, Vol. 25(1), p. 134-149, Jan. 2016.

(J12) A. De Abreu, L. Toni, N. Thomos, T. Maugey, F. Pereira, P. Frossard, *Optimal Layered Representation for Adaptive Interactive Multiview Video Streaming*, in Journal of Visual Communication and Image Representation (Elsevier), Vol. 33, pp. 255-264, Nov. 2015.

(J11) L. Toni, T. Maugey, P. Frossard, *Optimized Packet Scheduling in Multiview Video Navigation Systems*, in IEEE Transactions on Multimedia, Vol. 17(9), pp. 1604 - 1616, Sep. 2015.

(J10) T. Maugey, A. Ortega, P. Frossard *Graph-based representation for multiview image geometry*, in IEEE Transactions on Image Processing, Vol. 24(5) , pp. 1573 - 1586, 2015.

(J9) G. Petrazzuoli, T. Maugey, M. Cagnazzo and B. Pesquet-Popescu *Depth-Based Multiview Distributed Video Coding*, in IEEE Transactions on Multimedia, Vol. 16(7), pp. 1834 - 1848, 2014.

(J8) U. Takyar, T. Maugey, P. Frossard *Extended Layered Depth Image Representation in Multiview Navigation*, in IEEE Signal Processing Letters, Vol. 21, p. 22 - 25 Jan. 2014.

(J7) L. Toni, T. Maugey, P. Frossard *Correlation-Aware Packet Scheduling in Multi-Camera Networks*, in IEEE Transactions on Multimedia, Vol. 16(2), pp. 496 - 509, 2014.

(J6) S. Khattak, T. Maugey, R. Hamzaoui, S. Ahmad, P. Frossard *Bayesian Early Mode Decision Technique for View Synthesis Prediction-enhanced Multiview Video Coding*, in IEEE Signal Processing Letters, Vol. 20, p. 1126 - 1129, Nov. 2013.

(J5) T. Maugey, J. Gauthier, M. Cagnazzo, B. Pesquet-Popescu *Evaluation of side information effectiveness in distributed video coding, Signal Processing*, in IEEE Transactions on Circuits and Systems for Video Technology, Vol. 23, p. 2116 - 2126, Dec. 2013.

(J4) B. Rajei, T. Maugey, P. Frossard *Rate-distortion analysis of multiview coding in a DIBR framework*, in Annals of Telecommunications (Springer), Vol. 68, p. 627-640, Dec. 2013.

(J3) T. Maugey, I. Daribo, G. Cheung, P. Frossard *Navigation domain partitioning for interactive multiview imaging*, in IEEE Transactions on Image Processing, Vol. 22, p. 3459-3472, Sep. 2013.

(J2) T. Maugey, P. Frossard *Interactive multiview video system with a non-complex navigation at the decoder*, in IEEE Transactions on Multimedia, Vol.15, p 1-13, Aug. 2013.

(J1) T. Maugey, B. Pesquet-Popescu *Side information estimation and new symmetric schemes for multi-view distributed video coding*, Journal of Visual Communication and Image Representation (Special issue: Resource-Aware Adaptive Video Streaming), Vol. 19, Issue 8, Pages 589-599, Dec. 2008.

International conferences papers

(C47) R. Kaafarani, M. Blestel, T. Maugey, M. Ropert, A. Roumy, *Evaluation Of Bitrate Ladders For Versatile Video Coder*, IEEE VCIP, Dec 2021, Munich, Germany

(C46) A. Marie, N. Mahmoudian Bidgoli, T. Maugey, A. Roumy, *Rate-distortion optimized motion estimation for on-the-sphere compression of 360 videos*, IEEE ICASSP, Jun 2021, Toronto, Canada

(C45) F. Hawary, T. Maugey , C. Guillemot, *Sphere mapping for feature extraction from 360 fish-eye captures* IEEE International Workshop on Multimedia Signal Processing (MMSP), Sep 2020, Tempere, Finland. pp.1-6

(C44) N. Mahmoudian Bidgoli, T. Maugey , A. Roumy, *Intra-coding of 360-degree images on the sphere* Picture Coding Symposium (PCS), Ningbo, China, Nov. 2019

(C43) N. Mahmoudian Bidgoli, T. Maugey, A. Roumy, F. Nasiri and F. Payan, *A geometry-aware compression of 3D mesh texture with random access* Picture Coding Symposium (PCS), Ningbo, China, Nov. 2019

(C42) P. Garus, J. Jung, T. Maugey and C. Guillemot, *Bypassing Depth Maps Transmission For Immersive Video Coding* Picture Coding Symposium (PCS), Ningbo, China, Nov. 2019

(C41) N. Mahmoudian Bidgoli, T. Maugey , A. Roumy, E*valuation framework for 360-degrees visual content compression with user-dependent transmission* IEEE ICIP, Tapei, Taiwan, Sep. 2019

(C40) T. Maugey , L. Guillo, C. Le Cam, *FTV360: a Multiview 360-degree Video Dataset with Calibration Parameters*, ACM Multimedia Systems Conference, Amherst, MA, US, June 2019.

(C39) F. Nasiri, N. Mahmoudian-Bigdoli, F. Payan, T. Maugey ., *A geometry-aware framework for compressing 3D mesh textures*, IEEE ICASSP, Brighton, UK, May. 2019. *cited in IEEE MMTC Review Letter of April 2019*

(C38) M. Rizkallah, T. Maugey, C. Guillemot . *Graph-based Spatio-angular Prediction for Quasi-Lossless Compression of Light Fields*, Data Compression Conference, Cliff Lodge, Snowbird, UT, US , Mar. 2019.

(C37) E. Dupraz, T. Maugey, A. Roumy and M. Kieffer. *Rate-Distortion Performance of Sequential Massive Random Access to Gaussian Sources with Memory*, Data Compression Conference, Snowbird, Utah, US, Mar. 2018.

(C36) M. Rizkallah, F. De Simone, T. Maugey, C. Guillemot, P. Frossard, *Rate Distortion Optimized Graph Partitioning for Omnidirectional Image Coding* EUSIPCO, Athens, Greece, Sept. 2018. *Best Student Paper*

(C35) X.Su, M. Rizkallah, T. Maugey, C. Guillemot, *Rate-Distortion Optimized Super-Ray Merging for Light Field Compression* EUSIPCO, Athens, Greece, Sept. 2018.

(C34) T. Maugey, O. Le Meur, Z. Liu, *Saliency-based navigation in omnidirectional image*, IEEE MMSP, London, UK, Oct. 2017.

(C33) N. Mahmoudian Bidgoli, T. Maugey, A. Roumy *Correlation Model Selection for interactive video communication*, ICIP, Beijing, China, Sep. 2017

(C32) Xin Su, M. Rizkallah, T. Maugey, C. Guillemot *Graph-based light fields representation and coding using geometry information*, ICIP, Beijing, China, Sep., 2017.

(C31) M. Rizkallah, T. Maugey, C. Yaacoub and C. Guillemot *Impact of Light Field Compression on Focus Stack and Extended Focus Images*, EUSIPCO, Budapest, Hungary, Aug. 2016

(C30) X. Su, T. Maugey and C. Guillemot, *Graph-based representation for multiview images with complex camera configurations*, IEEE ICIP, Pheonix Arizona, Sep. 2016

(C29) T. Maugey, P. frossard and C. Guillemot, *Guided inpainting with cluster-based auxiliary information*, IEEE ICIP, Quebec, Canada, Sep., 2015

(C28) A. Roumy and T. Maugey, *Universal lossless coding with random user access: the cost of interactivity*, IEEE ICIP, Quebec, Canada, Sep., 2015 (Top 10% papers)

(C27) L. Toni, T. Maugey, and P. Frossard, *Packet Scheduling in MultiCamera Capture Systems*, VICIP, Malta, Dec., 2014

(C26) A. De Abreu, N. Thomos, T. Maugey, L. Toni and P. Frossard, *Multiview Video Representations for Quality-Scalable Navigation*, VICIP, Malta, Dec., 2014

(C25) T. Maugey, G. Petrazzuoli, P. Frossard, M. Cagnazzo and B. Pesquet-Popescu *Key view selection in distributed multiview coding*, VICIP, Malta, Dec., 2014

(C24) T. Maugey, Y.H. Chao, A. Gadde, A. Ortega and P. Frossard *Luminance coding in graph-based representation of multiview images*, IEEE ICIP, Paris, France, Oct., 2014

(C23) Y. Gao, G. Cheung, T. Maugey, P. Frossard and J. Liang *3D Geometry Representation using Multiview Coding of Image Tiles*, IEEE ICASSP, Florence, Italy, May, 2014

(C22) G. Petrazzuoli, T. Maugey, M. Cagnazzo and B. Pesquet-Popescu *A Distributed Video Coding System for Multi View Video Plus Depth*, IEEE Asilomar CSSC, Pacific Grove, CA, USA, Nov, 2013 - *Invited paper*

(C21) T, Maugey, A. Ortega, P. Frossard *Graph-Based vs Depth-Based Data Representation for Multiview Images*, IEEE Asilomar CSSC, Pacific Grove, CA, USA, Nov, 2013

(C20) T, Maugey, A. Ortega, P. Frossard *Multiview image coding using graph-based approach*, IEEE IVMSP, Seoul, Korea, June, 2013

(C19) T, Maugey, A. Ortega, P. Frossard *Graph-based representation and coding of multiview geometry*, IEEE ICASSP, Vancouver, May, 2013

(C18) I. Daribo, T, Maugey, G. Cheung, P. Frossard *RD optimized auxiliary information for inpainting-based view synthesis*, 3DTV Conference Zurich, Switzerland, Oct., 2012

(C17) T. Maugey, P. Frossard, G. Cheung *Consistent view synthesis in interactive multiview imaging* In international Packet Video Workshop, Orlando, USA, Sep 2012

(C16) L. Toni, T. Maugey, P. Frossard *Correlation-Aware Packet Scheduling for Multi-Camera Streaming* In IEEE Int. Conf. on Image Processing (ICIP), Munich, Germany, May 2012

(C15) T. Maugey, P. Frossard *Interactive multiview video system with low decoding complexity* In IEEE Int. Conf. on Image Processing (ICIP), Bruxelles, Belgium, Sep. 2011

(C14) V. Davidoiu, T. Maugey, B. Pesquet-Popescu, P. Frossard *Rate distortion analysis in a disparity compensated scheme* In IEEE Int. Conf. on Speech and Signal Processing (ICASSP), Prague, Czech Republic, May 2011

(C13) T. Maugey, C. Yaacoub, J. Farah, B. Pesquet-Popescu *Side information enhancement using an adaptative hash-based genetic algorithm in a Wyner-Ziv context* In IEEE Int. Workshop on Multimedia Signal Processing (MMSP), Saint-Malo, Oct 2010

(C12) M. Trocan, T. Maugey, E. Tramel, J. Fowler, B. Pesquet-Popescu *CS-reconstruction of multiview images using bootstrap-like disparity compensation* In IEEE Int. Workshop on Multimedia Signal Processing (MMSP), Saint-Malo, Oct 2010

(C11) G. Petrazzuoli, T. Maugey, M. Cagnazzo, B. Pesquet-Popescu *Side inforrmation refinement for long duration GOPs in DVC* In IEEE International Workshop on Multimedia Signal Processing (MMSP), Saint-Malo, Oct 2010

(C10) M. Trocan, T. Maugey, E. Tramel, J. Fowler, B. Pesquet-Popescu *Compressed-sensing of multiview images using disparity compensation* In Proc. IEEE Int. Conf. on Image Processing (ICIP), Sep 2010, Hong-Kong,

(C9) M. Trocan, T. Maugey, J. Fowler, B. Pesquet-Popescu *Disparity-compensated compressed-sensing reconstruction of multiview images* In Proc. IEEE Int. Conf. on Multimedia and Expo (ICME), Aug 2010, Singapore *reviewed in IEEE Communications Society Multimedia Communications Technical Committee (MMTC) Review Letters (R-Letters) in Aug. 2011*

(C8) T. Maugey, J. Gauthier, B. Pesquet-Popescu, C. Guillemot *Using an exponential power model for Wyner Ziv video coding*, In IEEE Int. Conf. on Speech and Signal Processing (ICASSP), Mar. 2010. Dallas, Texas, USA.

(C7) M. Cagnazzo, W. Miled, T. Maugey, B. Pesquet-Popescu *Image interpolation with edge-preserving differential motion refinement* Proc. IEEE Int. Conf. on Image Processing (ICIP), Nov. 2009. Cairo, Egypt

(C6) T. Maugey, W. Miled, M. Cagnazzo, B. Pesquet-Popescu *Fusion Schemes for Multiview Distributed Video Coding* In European Signal Processing Conference (EUSIPCO), August 2009. Glasgow, Scotland

(C5) W. Miled, T. Maugey, M. Cagnazzo, B. Pesquet-Popescu. *Image Interpolation with Dense Disparity Estimation in Multiview Distributed Video Coding* Int. Conf. on Distributed Smart Cameras (ICDSC), September 2009. Como, Italy.

(C4) M. Cagnazzo, T. Maugey, B. Pesquet-Popescu *A Differential Motion Estimation Method for Image Interpolation in Distributed Video Coding*, IEEE Int. Conf. on Speech and Signal Processing (ICASSP), Taipei, Taiwan, 18-22 April 2009

(C3) T. Maugey, W. Miled, B. Pesquet-Popescu *Dense Disparity Estimation in a Multi-view Distributed Video Coding System*, in IEEE Int. Conf. on Speech and Signal Processing (ICASSP), Taipei, Ta?wan, 18-22 April 2009

(C2) C. Dikici, T. Maugey, M. A. Agostini and O. Crave *Efficient Frame Interpolation for Wyner-Ziv Video Coding*, SPIE Electronical Imaging, Visual Communications and Image Processing conference (VCIP), San Jose, USA, 18-22 January 2009

(C1) T. Maugey, T. André, B. Pesquet-Popescu, J. Farah, *Analysis of Error Propagation Due to Frame Losses in a Distributed Video Coding System*, In European Signal Processing Conference (EUSIPCO), Lausanne, August 2008.

National conferences papers

(CN9) F. Nasiri, N. Mahmoudian Bidgoli, T. Maugey and F. Payan. *Codage d'atlas de textures avec prédiction guideée par la topologie des maillages*, GRETSI, Lille, France, Aug. 2019.

(CN8) N. Mahmoudian bidgoli, T. Maugey and A. Roumy. *Compression de contenus 360 et transmission adaptée à la navigation de l'utilisateur*, GRETSI, Lille, France, Aug. 2019.

(CN7) T. Maugey, C. Le Cam, L. Guillo, *Télévision à point de vue libre et système de capture à plusieurs caméra omni-directionnelles* In Colloque GRETSI - Traitement du Signal et des Images, Juan-les-Pins, France, Sep. 2017

(CN6) A. Crinière, A. Roumy, T. Maugey, M. Kieffer, Jean Dumoulin, *Sélection optimale de capteurs de référence pour le stockage de données spatialement corrélées* In Colloque GRETSI - Traitement du Signal et des Images, Juan-les-Pins, France, Sep. 2017

(CN5) A. Roumy, T. Maugey *Compression et interactivité : étude de la navigation au récepteur* In Colloque GRETSI - Traitement du Signal et des Images, Lyon, France, Sep. 2015

(CN4) T. Maugey, P. Frossard *Nouvelle représentation de données pour les applications interactives de navigation vidéo* In Colloque GRETSI - Traitement du Signal et des Images, Brest, France, Sep. 2013

(CN3) T. Maugey, P. Frossard *Codage vidéo multi-vue pour une vision interactive au récepteur* In Colloque GRETSI - Traitement du Signal et des Images, Bordeaux, France, Sep. 2011

(CN2) T. Maugey, W. Miled, M. Cagnazzo, B. Pesquet-Popescu *Méthodes denses d'interpolation de mouvement pour le codage vidéo distribué monovue et multivue* Colloque GRETSI - Traitement du Signal et des Images, September 2009. Dijon, France

(CN1) J. Gauthier, T. Maugey, B. Pesquet-Popescu, C. Guillemot *Amélioration du Mod?le statistique de bruit pour le codage vidéo distribué* Colloque GRETSI - Traitement du Signal et des Images, September 2009. Dijon, France.

Thesis

(T2) T. Maugey *Distributed Video Coding of Mutliview sequences* PhD thesis

(T1) T. Maugey *Distributed Multiview Video Coding* Master thesis