

Hichem SNOUSSI

Supélec Engineer

PhD and HdR in Control and Signal Processing

Full Professor (since September 2010), University of Technology of Troyes
Department of Computer Information Systems and Telecommunications
Research activity in Charles Delaunay Institute, System Modelling
and Dependability Laboratory (ICD-LM2S, UMR CNRS 6279).

Born in Bizerta (Tunisia), July 24, 1976

French Citizen

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EDUCATION

- November 2009 : **HdR**, Highest French degree to supervise research
defended on November 30th, 2009, with **highest honors**
Delivered by the University of Technology of Compiègne.
Title : Variational and Geometric Approaches for Online Bayesian Filtering.
- 2000-2003 : **Ph.D. Thesis** in Control and Signal Processing,
defended on September 29th, 2003, with **highest honors**
University of Paris-Sud, Orsay, BDI CNRS Scholarship.
Title : Bayesian Approach for Source Separation. Applications in imagery.
- July 2000 : **M. Sc. in Control and Signal Processing**,
University of Paris-sud, Orsay. Rank : **1 out of 24 with High Honors**.
- July 2000 : **Engineering Diploma** from Supelec (Higher Electrical Engineering School),
Department of Electronics and Digital Communications.
- April 2000 : Graduated from **EPFL** Lausanne (Switzerland),
for postgraduate courses on chaos and image compression. Rank : **1 out of 16**.
- 1995-1997 : High School Entry Preparation at **lycée Saint-Louis**, Paris.
- June 1995 : National ending school exam **with highest honors**.
First Mathematic Prize (Belkahia Prize) in National Terminal Exams (19,5/20)

Students doing research under my supervision

• Phd students

- Mehdi Essoloh (Government Scholarship, 2006-2009)
- Jing Teng (China Scholarship Council, 2006-2009)
- Farah Mourad (Government Scholarship, 2007-2010)
- Zhou Yi (China Scholarship Council, 2007-2010)
- Majdi Mansouri (Government Scholarship, 2008-2011)
- Abdelkader Miraoui (ANR/CRCA Scholarship, 2008-2011)
- Wang Tian (China Scholarship Council, 2011-2014)
- Qin Lei (China Scholarship Council, 2011-2014)
- Zhu Aichun (China Scholarship Council, 2012-2015)
- Xiaowei LV (China Scholarship Council, 2012-2015)

- Matthieu Le Berre (CRCA Scholarship, 2011-2014)
- Nicolas Chrysanthos (**Cifre SAGEM**, 2011-2014)
- Axel Kouvtanovitch (**Cifre SNECMA**, 2014-2017)

- **Postdoctoral students**

- Ram Bilas Pachori (Region scholarship, 2007-2008)
- Nouddine Azzaoui (ANR scholarship, 2008-2010)
- Fleury Nahimana (ANR scholarship 2012)
- Maria Soto (CRCA scholarship 2013)
- Maher Rebai (CRCA scholarship 2012-2014)
- Valeria Borodin (CRCA scholarship 2012-2014)
- Matthieu Le Berre (CRCA scholarship 2012-2014)

Scientific responsibilities

- **Elected Member of Scientific Council of University of Technology of Troyes**
- **Elected Member of CNRS Laboratory UMR STMR.**
- **Team leader** of Research Group "Risk Management and Monitoring of Complex Systems and Networks" of UMR CNRS Laboratory since January 2011.
Scientific activity : System Surveillance – 14 researchers
- **Supervisor** of regional research program S3 (CPER 2007-2013).
Title : Security and Safety of Systems.
Design of Wireless Sensor Network Platform : "CapSec"
- **Leading** research on Sensor Networks in Charles Delaunay Institute.
Organization of weekly seminars on Wireless Sensor Networks since October 2008.
- Member of laboratory council of the Charles Delaunay Institute (FRE CNRS 2848) .
- Member of ICOS council (Information, Communication, Organization and Security of systems) of CARINNA.
- **UTT Correspondent** of Ibn Khaldoun franco-tunisian Consortium (17 universities).
- **Program committee** of IEEE MLSP'05, SETIT 2007, ISIAC 2008, SETIT 2009, E-Medysis 2009
- **Organization committee** of GretsI 2007 at Troyes.

Reviewing activities

- **Reviewer and jury member of 15 French PhD thesis**
- **Reviewer and jury member of 10 International PhD thesis**
- **Regular reviewer of ANR projects (2 projects / year)**
- **Regular reviewer of many IEEE Transactions journals**

Funded Research Projects

- **Principal investigator** of SmartCam project.
Title : Active and smart camera systems.
Budget : 750.000 euros (2011-2015)
- **UTT Co-Investigator** of ODISSEE ANR project.
Title : Distributed data processing in wireless sensor networks.
Budget : 300.000 euros (2013-2016)
- **UTT Co-Investigator** of AutoFerm ANR project.
Title : Data processing and monitoring of complex methanation systems.
Budget : 700.000 euros (2013-2016)
- **Principal investigator** of program S3 of ICOS CPER axis (2007-2013)

Title : Systems Security and Safety.
Sub-project 1 : Embedded Sensors for Security
Sub-project 2 : Collaborative distributed information processing
Sub-project 3 : Realistic Information routing protocols in WSN

- **Principal investigator** of OSEO project : **WiCaN**.
Title : Design and implementation of the wireless camera network system.
Budget : 50.000 euros (2010-2011)
- **Principal investigator** of **SURECAP** project.
Title : Decentralized Surveillance in Wireless Sensor Networks.
Partners : University of Reims Champagne Ardenne.
Budget : 300.000 euros (2010-2013)
- **Principal investigator** of program ANR blanc : **mv-EMD**.
Title : Multivariate Empirical Mode Decomposition (mv-EMD).
Partners : University of Rennes 1 (Laurent Albera) and University of Nice (Pierre Comon).
Budget : 196.000 euros (2008-2010)
- **Principal investigator**
New partnership and new technologies
Funding : Champagne Ardenne Region.
Title : Decentralized detection and collaborative signal processing
Budget : 50.000 euros (2006-2008)
- **Co-Investigator** of GDR-ISIS Young Researchers Project
Title : Signal processing and communications in Wireless Sensor Networks.
Partner : SYSCOM Team, CReSTIC.
Budget : 5.000 euros (2007-2008)
- **Co-Investigator** of Carnot Project
Title : Hologram Independent Analysis (HIA) : Motor noise investigator (Smart Transport)
Partner : : UTC/Laboratory Roberval of Mechanics.
Budget : 35.000 euros (2009-2011)
- **Partner** of Carnot Project
Title :Detection in Wireless Sensor Networks
Partner : : UTC/Heudiasyc and ICD/ERA.
Budget : 30.000 euros (2009-2011)
- **Partner** of ANR VigiRes'eau Project :
Title : Real-time Surveillance of Water Quality in a Distribution Network for Intrusion Detection.
Partner : SUEZ Environnement and ICD/LM2S.
Budget : 647 keuros (2009-2012)
- Strategic UTT program.
Title :Spectroscopic biochemical microsensor for medical and environmental risks monitoring
Partner : ICD/LNIO.
Budget : 33000 euros (2007-2010)

Scientific distinctions

- **Invited researcher** at North China Electric Power University, Beijing (November 2014)
- **Invited researcher** at Shanghai Jiaotong University, Shanghai (May 2011)
- **Invited researcher** at Shanghai Jiaotong University, Shanghai (June 2010)
- **Invited researcher** at Living Institute, USA, by Prof. Vince Calhoun (july 2004).

- **Invited researcher** at ABSP lab, Brain Science Institute, RIKEN, Wako-Shi, Japan by Prof. Andrzej Cichocki (february-april 2004).
- Postdoc CNRS scholarship at l'IRCCyN , Ecole Centrale Nantes (2004-2005).
- CNRS BDI scholarship for PhD studies (2000-2003).
- **Chairman** of "Blind Source Separation" session at IEEE ISCCSP'06, Marrakech, Maroc, 2006.
- **Chairman** of "Wireless Sensor Networks" session at IEEE GlobeCom'08, New Orleans, USA, 2008.
- **Chairman** of "Information Geometry and Applications" session at LIX Fall Colloquium 2008 "Emerging Trends in Visual Computing", Ecole Polytechnique, Palaiseau, France.
- **Invited lecturer** at SensorNets 2009 : The First International School on Cyber-Physical and Sensor Networks Monastir, Tunisia, December 17-21, 2009
- **Invited lecturer** at special sessions in (IEEE ISCCSP'06, IEEE DSP'09, IEEE CAMSAP'09, EMBEC'09)
- **Reviewer** (≈ 12 papers/year) : IEEE Trans. on Signal Processing, IEEE Trans. on Image Processing, IEEE Trans. on Neural Networks, IEE Electronics Letters, Journal of Electronic Imaging, Maxent, NeuroComputing, ...

PUBLICATIONS

- 9 book chapters,
- 50 journal papers,
- 7 patents,
- 110 conference papers (4 invited),

Further details on my research activities and complete papers are in my home page : <http://h.snoussi.free.fr/>

Selected Publications

Collaborative signal/image processing in wireless sensor networks

- [1] Tian Wang, Jie Chen, Yi Zhou, and Hichem Snoussi, "Online least squares one-class support vector machines based abnormal visual event detection," *Sensors*, 2013, no. 12 : 17130-17155
- [2] Tian Wang, Jie Chen, and Hichem Snoussi, "Online detection of abnormal events in video streams", *Journal of Electrical and Computer Engineering* vol. 2013, no. 837275, 2013.
- [3] Tian Wang and Hichem Snoussi, "Unsupervised detection of visual abnormal events via global optical flow orientation histograms," *IEEE Transactions on Information Forensics and Security*. Vol 9, No 6, pp 988- 998, June 2014
- [4] F. Mourad, H. Snoussi, F. Abdallah and C. Richard, "Anchor-based localization via interval analysis for mobile ad-hoc sensor networks." accepted in *IEEE Trans. on Signal Processing, 2009*
- [5] J. Teng, H. Snoussi and C. Richard, "Hybrid Variational and Probabilistic Data Association for Multi-Target Tracking in Sensor Networks." in *IEEE CAMSAP, Aruba, Dutch Antilles , December 2009 (Invited Paper)*
- [6] Yi Zhou, Hichem Snoussi, Cédric Richard and Shibao Zheng, "Fragment-based Variational Visual Tracking" in *IEEE CAMSAP, Aruba, Dutch Antilles , December 2009 (Invited Paper)*
- [7] M. Mansouri, I. Ouachani, H. Snoussi and C. Richard, "Cramer-Rao bound-based quantization for target tracking in wireless sensor networks." in *IEEE SSP'09, 31-3 September 2009, Cardiff, UK*.
- [8] F. Mourad, H. Snoussi, F. Abdallah and C. Richard, "Localisation par intervalles basée sur les ancrés et les non-ancrés dans les réseaux de capteurs mobiles" in *Gretsi'09, Dijon, September 2009 (in French)*
- [9] J. Teng, H. Snoussi and C. Richard, "Auto-localisation et suivi de cible simultanés dans les réseaux de capteurs sans fil." in *Gretsi'09, Dijon, September 2009 (in French)*
- [10] M. Essoloh, P. Honeine, C. Richard and H. Snoussi, "Apprentissage parcimonieux non-linéaire en ligne dans les réseaux de capteurs sans fil." in *Gretsi'09, Dijon, September 2009 (in French)*
- [11] P. Honeine, C. Richard and H. Snoussi, "Auto-localisation dans les réseaux de capteurs sans fil par régression de matrices de Gram." in *Gretsi'09, Dijon, September 2009 (in French)*
- [12] H. Snoussi, J-Y. Tourneret, P. Djuric and C. Richard, "Data-Driven Online Variational Filtering in Wireless Sensor Networks ", in *ICASSP'09, 19-24 April 2009, Taipei, Taiwan*.

- [13] J. Teng, H. Snoussi and C. Richard, “Decentralized Variational Filtering for Simultaneous Sensor Localization and Target Tracking in Binary Sensor Networks ”, in ICASSP’09, 19-24 April 2009, Taipei, Taiwan.
- [14] Paul Honeine, Cédric Richard, Jose Carlos M. Bermudez, Hichem Snoussi, Mehdi Essoloh, François Vincent, “ Functional Estimation in Hilbert Space for Distributed Learning in Wireless Sensor Networks ”, in ICASSP’09, 19-24 April 2009, Taipei, Taiwan.
- [15] F. Mourad, H. Snoussi, F. Abdallah and C. Richard, “ Model-free interval-based localization in MANETs.” in *IEEE DSP’09, 4-7 january 2009, Florida*.
- [16] P. Honeiné, M. Essoloh, C. Richard, H. Snoussi, “ Distributed regression in sensor networks with a reduced-order kernel model”. in *IEEE Globecom’08, 30-4 december 2008, New Orleans*.
- [17] F. Mourad, H. Snoussi, F. Abdallah and C. Richard, “ Guaranteed boxed localization in Manets by interval analysis and constraints propagation techniques.” in *IEEE Globecom’08, 30-4 december 2008, New Orleans*.
- [18] H. Snoussi and C. Richard, “ Distributed bayesian fault diagnosis of jump Markov systems in wireless sensor networks”, in *International Journal of Sensor Networks IJSNet*, Vol. 2, No.1/2 pp. 118 - 127, 2007.
- [19] M. Essoloh, C. Richard, H. Snoussi, and P. Honeiné, “ Distributed localization in wireless sensor networks as a pre-image problem in a reproducing kernel Hilbert space”. in *EUSIPCO’08, 25-29 august 2008, Lausanne*. (accepted)
- [20] J. Teng, H. Snoussi and C. Richard, “ Variational filtering algorithm for interdependent target tracking and sensor localization in wireless sensor network”. in *EUSIPCO’08, 25-29 august 2008, Lausanne*. (accepted)
- [21] P. Honeiné, M. Essoloh, C. Richard, H. Snoussi, “Localization in sensor networks : a matrix regression approach”, in *IEEE SAM’08, 21-23 July 2008, Darmstadt*. (accepted)
- [22] P. Honeiné, C. Richard, J-C. Bermudez and H. Snoussi, “ Distributed prediction of time series data with kernels and adaptive filtering techniques in sensor networks”, in *ASILOMAR’08, 26-29 October 2008, Pacific Grove*. (invited paper)
- [23] H. Snoussi and C. Richard, “ Information-theoretic node scheduling in collaborative sensor networks ”, in *ISSPA’07, , UAE, Sharjah, February 2007*.
- [24] J. Teng, H. Snoussi and C. Richard, “ Binary variational filtering for target tracking in sensor networks ”, in *IEEE SSP’07, 26-29 August 2007, Madison*.
- [25] J. Teng, H. Snoussi and C. Richard, “ Prediction-based Proactive cluster target tracking protocol for binary sensor network”, in *IEEE ISSPIT’07, 15-18 December 2007, Cairo, Egypt*.
- [26] M. Essoloh, C. Richard and H. Snoussi, “ Anchor-based distributed localization in sensor network ”, in *IEEE SSP’07, 26-29 August 2007, Madison*.
- [27] M. Essoloh, C. Richard and H. Snoussi, “ Localisation distribuée dans les réseaux de capteurs sans fil par résolution d’un problème quadratique ”, in *GRETSI’07, 11-14 September 2007, Troyes*.
- [28] H. Snoussi and C. Richard, “Ensemble Learning Online Filtering in Wireless Sensor Networks”, in *IEEE ICCS International Conference on Communications Systems*, Singapore, October, 2006.
- [29] H. Snoussi and C. Richard, “Bayesian Fault Diagnosis in Collaborative Wireless Sensor Networks”, in *IEEE GlobeCom*, San Francisco, November 2006.

Biomedical signal processing

- [30] H. Snoussi, D. Hewson and J. Duchêne ”Nonlinear Chaotic Component Extraction for Postural Stability Analysis” IEEE EMBS Conference, Minneapolis, Minnesota, USA, 2nd - 6th September, 2009. **(Invited Paper)**
- [31] N. Azzaoui, H. Snoussi and J. Duchêne ”An Enhanced Empirical Modal Decomposition without Sifting” IEEE SSP’09, 31-3 September 2009, Cardiff, UK.
- [32] N. Azzaoui, A. Miraoui, H. Snoussi and J. Duchêne ”Empirical Mode Decomposition for vectorial bi-dimensional signals” NDS’09, June 29 to July 1, 2009, Thessaloniki, Greece.
- [33] Ke LI, David J Hewson, Hichem Snoussi, Jacques Duchêne, Jean-Yves Hogrel ”Recurrence Quantification Analysis of Sustained Sub-Maximal Grip Force in Patients with Glycogen Storage Disease Type III” 7th IFAC Symposium on Modelling and Control in Biomedical Systems, August 12 - 14, 2009, Aalborg, Denmark.
- [34] Ram Bilas Pachori, David Hewson, Hichem Snoussi and J Duchene, “Postural Time-Series Analysis Using Empirical Mode Decomposition and Second-Order Difference Plots ”, in ICASSP’09, 19-24 April 2009, Taipei, Taiwan.
- [35] D.Hewson, J.Duchêne, H. Snoussi and N. Singh, “ Detection of the critical point interval of postural control strategy using wavelet transform analysis ”, BIOSIGNALS 2009, Porto, Portugal.

- [36] H. Amoud, H.Snoussi, D.Hewson and J.Duchêne, “One-class support vector machine for joint variable selection and detection of postural balance degradation ”, in EMBEC08, 23-27 november 2008, Antwerp.
- [37] H. Amoud, H.Snoussi, D.Hewson and J.Duchêne, “ Intrinsic mode entropy for postural steadiness analysis ”, in EMBEC08, 23-27 november 2008, Antwerp.
- [38] H. Amoud, H.Snoussi, D.Hewson and J.Duchêne, “ Univariate and Bivariate Empirical Mode Decomposition for Postural Stability Analysis”, accepted to EURASIP Journal on Advances in Signal Processing, 2008.
- [39] H. Amoud, H. Snoussi, D.Hewson, M. Doussot and J.Duchêne, “Intrinsic Mode Entropy for Nonlinear Discriminant Analysis”, *IEEE Signal Processing Letters*, V14-5, pp 297-300, 2007.
- [40] H.Snoussi, S. Khanna, D.Hewson and J.Duchêne, “ Number of Sources Uncertainty in Blind Source Separation. Application to EMG Signal Processing”, *IEEE EMBC*, Lyon, Aug. 2007.
- [41] H. Amoud, H.Snoussi, D.Hewson and J.Duchêne, “ Hilbert-Huang Transformation : Application to Postural Stability Analysis”, *IEEE EMBC*, Lyon, Aug. 2007.
- [42] H. Amoud, H.Snoussi, D.Hewson and J.Duchêne, “ Sélection de variables stabilométriques pour l’analyse et la détection de la dégradation de l’équilibre postural”, *Gretsi’07*, Troyes, September 2007.
- [43] H. Snoussi H. Amoud, M. Doussot, D.Hewson and J.Duchêne, “Reconstructed Phase Spaces of Intrinsic Mode Functions. Applications to Postural Steadiness Analysis ”, *IEEE EMBC*, New York, USA, Aug. 2006
- [44] H. Snoussi and V. D. Calhoun, “Regularized Spectral Matching for Blind Source Separation. Application to fMRI Imaging”, *IEEE Trans. Signal Processing*, special issue on ”Signal Processing Aspects of Brain Imaging, Vol. 53, Issue 9, pp 3373–3383, September, 2005.
- [45] H. Snoussi and V.D. Calhoun, “Bayesian Spectral Matching for Blind Source Separation in fMRI Imaging”, *IEEE International Conference on Image Processing, ICIP’05*, September, 2005.
- [46] H. Snoussi and V. D. Calhoun, “Bayesian Blind Source Separation for Brain Imaging”, *IEEE International Conference on Electronic Sciences, Information Technology and Telecommunication, SETIT*, March 2005.

Blind signal/image separation

- [47] H. Snoussi and A. Mohammad-Djafari, ”Blind Image Separation” Book chapter to appear in ISTE Ltd and John Wiley & Sons Inc, 2010
- [48] H. Snoussi and A. Mohammad-Djafari, “Blind Image Separation”, Book chapter (in French) to appear in 2009.
- [49] H. Snoussi and A. Mohammad-Djafari, “Estimation of Structured Gaussian Mixtures : the Inverse EM Algorithm ”, in *IEEE Trans. Signal Processing*, Volume 55, Issue 7, July 2007, Page(s) :3185 - 3191
- [50] H. Snoussi and J. Idier, “Bayesian Blind Separation of Generalized Hyperbolic Processes in Noisy and Underdeterminate Mixtures”, *IEEE Trans. on Signal Processing Vol. 54, Issue 9, pp 3257–3269, September, 2006*.
- [51] H. Snoussi, “Accounting for Number of Sources Uncertainty in Blind Source Separation”, *IEEE Asilomar*, San Fransisco, October, 2006.
- [52] H. Snoussi, “Fast MCMC Spectral Matching Separation in Noisy Gaussian Mixtures. Application to Astrophysics”, *IEEE ISCCSP*, Marrakech, Morroco, March, 2006.
- [53] H. Snoussi, “Information-Theoretic Approach to Joint Separation and Segmentation of Images”, *ISSPA*, Sydney, Australia, August, 2005.
- [54] H. Snoussi and J. Idier, “Blind Separation of Generalized Hyperbolic Processes : Unifying Approach to Stationary Non Gaussianity and Gaussian Non Stationarity”, *IEEE International Conference on Acoustics, Speech and Signal Processing, ICASSP’05*, Vol.5, pp 229–232, March, 2005.
- [55] H. Snoussi and A. Mohammad-Djafari, “Fast joint separation and segmentation of mixed images”, *Journal of Electronic Imaging*, Vol 13, N°2, pp. 349–361, April 2004.
- [56] H. Snoussi and A. Mohammad-Djafari, “Rao-Blackwell approximation for fast MCMC implementation of Bayesian blind source separation problems”, *Int. Symposium on Recent Advances in Mathematics and its Applications (ISRAMA 2003)*, Calcutta Mathematical Society, Kolkata, India, December 2003.
- [57] H. Snoussi and A. Mohammad-Djafari, “Fast MCMC Joint Separation and Segmentation”, in *IEEE SSD’03*, March 2003, Sousse, Tunisia.
- [58] H. Snoussi and A. Mohammad-Djafari, “Bayesian unsupervised learning for source separation with mixture of Gaussian prior”, *Int. Journal of VLSI Signal Processing Systems*, vol. 37, number 2-3, pp 263-279, 2004.
- [59] H. Snoussi, A. Seghouane, A. Mohammad-Djafari and G. Fleury, “Learning in presence of input noise using the stochastic EM algorithm”, in *Bayesian Inference and Maximum Entropy Methods*. MaxEnt Workshops, Aug. 2002, pp 135–149.

- [60] H. Snoussi and A. Mohammad-Djafari, “Unsupervised learning for source separation with mixture of Gaussians prior for sources and Gaussian prior for mixture coefficients.”, in *Neural Networks for Signal Processing XI*, D. J. Miller, Ed. IEEE workshop, pp. 293–302, Sept. 2001.
- [61] H. Snoussi and A. Mohammad-Djafari, “Bayesian separation of HMM sources”, in *Bayesian Inference and Maximum Entropy Methods*, R. L. Fry, Ed. MaxEnt Workshops, pp. 77–88, Aug. 2001.
- [62] H. Snoussi and A. Mohammad-Djafari, “MCMC Joint Separation and Segmentation of Hidden Markov Fields”, in *Neural Networks for Signal Processing XII*. IEEE workshop, pp. 485–494, Sept. 2002.
- [63] H. Snoussi and A. Mohammad-Djafari, “Séparation de sources par une approche bayésienne hiérarchique”, in *18ème GretsI*, Toulouse, Sept. 2001.
- [64] H. Snoussi and A. Mohammad-Djafari, “Penalized maximum likelihood for multivariate Gaussian mixture”, in *Bayesian Inference and Maximum Entropy Methods*, R. L. Fry, Ed. MaxEnt Workshops, Aug. 2001, pp 36–46.

Bayesian Information Geometry

- [65] H. Snoussi and C. Richard “Monte Carlo Tracking on the Riemannian Manifold of Multivariate Normal Distributions.”, in IEEE DSP’09, 04-07 january 2009, Florida (invited paper)
- [66] H. Snoussi, “Bayesian Information Geometry. Application to Prior Selection on Statistical Manifolds”, *Book chapter in Advances in Imaging and Electron Physics*, P.W. Hawkes, Academic Press, 2007.
- [67] H. Snoussi and A. Mohammad-Djafari, “Particle Filtering on Riemannian Manifolds”, in *Bayesian Inference and Maximum Entropy Methods*. MaxEnt Workshops, July, 2006.
- [68] H. Snoussi, “Geometry of Prior Selection.”, *NeuroComputing, special issue on ”Geometrical Methods in Neural Networks and Learning”*, Vol. 67, pp 214–244, 2005.
- [69] H. Snoussi and A. Mohammad-Djafari, “Information Geometry and Prior Selection.”, in *Bayesian Inference and Maximum Entropy Methods*. MaxEnt Workshops, pp 307–327, Aug. 2002.
- [70] H. Snoussi and A. Mohammad-Djafari, “Sélection d’a priori et géométrie de l’information.”, in *IEEE International Conference on Electronic Sciences, Information Technology and Telecommunication*, SETIT, March 2003.

Astrophysics imaging

- [71] H. Snoussi, G. Patanchon, J. Macías-Pérez, A. Mohammad-Djafari, and J. Delabrouille, “Bayesian blind component separation for cosmic microwave background observations.”, in *Bayesian Inference and Maximum Entropy Methods*, R. L. Fry, Ed. MaxEnt Workshops, Aug. 2001, pp 125–140.
- [72] J.F Cardoso, H. Snoussi, J. Delabrouille and G. Patanchon, “Blind separation of noisy Gaussian stationary sources. Application to cosmic microwave background imaging.”, in *Eusipco 2002*, Toulouse, september 2002.
- [73] G. Patanchon, H. Snoussi, J.F Cardoso and J. Delabrouille, “Component separation for cosmic microwave background data : a blind approach based on spectral diversity”, in *PSIP 2003*, Grenoble, january 2003.
- [74] G. Patanchon, H. Snoussi, J.F Cardoso and J. Delabrouille, “Séparation de composantes pour la mesure des anisotropies du fond diffus cosmologique : Une approche en aveugle basée sur la diversité spectrale”, *REE (Revue de l’Electricité et de l’Electronique)*, Numéro spécial ”Modélisation : de la physique au traitement du signal”, N°6, Juin-Juillet 2003.