

**Séminaire SFR-MATH STIC en l'honneur de François CHAPEAU-BLONDEAU**  
**16 Feb 2024 Amphi E Polytech - Organisation D. Rousseau ; M-F; Gérard.**

**Program**

8H30-9H Welcome coffee  
9H-9H10 Welcome words David Rousseau  
9H10-9H30 Derek Abbott (University of Adelaide, Australia)  
9H35-9H55 Fabing Duan (Institute of Complexity Science, Qingdao University)  
10H00-10H20 Yan Pan (Institute of Complexity Science, Qingdao University)  
10H25-10H55 Savério Morfu (Imvia, France)  
11H00-11H30 Steeve Zozor (GIPSA- LAb, France)  
11H35-11H55 Two more Phd's  
12H-12H30 François's conclusive lesson  
12H30-14H Buffet

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**Title:** Some counterintuitive phenomena in probability and stochastics--A tribute to François Chapeau-Blondeau.

**Bio:** Prof. Derek Abbott obtained his BSc in Physics from Loughborough University, UK, in 1982 and his PhD in Electrical & Electronic Engineering from the University of Adelaide in 1997. He is currently a full professor at the University of Adelaide. He has collaborated with Francois and his postdoc Fabing Duan for many years. Also a number of years ago Francois kindly hosted Derek's PhD student Lachlan Gunn and this also led to a number of collaborative publications.

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**Title:** Learn to be an Excellent Teacher; Act as an Exemplary Person--Salute to my supervisor Professor Francois Chapeau-Blondeau.

**Bio:** Fabing Duan was born in China in 1974. He received the Master degree in engineering mechanics from the China University of Mining and Technology (Beijing) in 1999. He received, in 2002, the Ph.D. degree in solid mechanics at Zhejiang University, China. From 2002 to 2003, he was a postdoctoral fellow under the guidance of Professor Francois CHAPEAU-BLONDEAU at the University of Angers, France. Since 2004, he has been with Qingdao University, China, and is currently a professor of system science. Since 2003, he has jointly published 45 international journal papers under the guidance of Professor Francois CHAPEAU-BLONDEAU, including journals such as IEEE Transactions on Signal Processing, Digital Signal Processing, Physical Review E, and more. Throughout his academic career, he has always looked up to Professor Francois CHAPEAU-BLONDEAU as a role model for learning.

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"Academic Guidance from Professor Francois CHAPEAU-BLONDEAU: Gratitude for Mentorship and Support"

**Bio :** Yan Pan was born in China in 1987. She received the Master degree in 2013 and the Ph.D. degree in 2019, both in system science at Qingdao University, China. From 2013 to 2016, she worked as a computer programmer in Qingdao Software Area, Qingdao, China. In 2019, sponsored by the Shandong Provincial Overseas Research Training Program, she conducted a six-month visiting scholar program under the guidance of Professor Francois CHAPEAU-BLONDEAU at the University of Angers, France. Since August 2019, she has been

with Shandong University of Science and Technology, where she is currently a faculty member of mathematics and system science. Her research interests include robust signal estimation and machine learning. Up to now, she has published nearly 10 academic papers, obtained 3 national invention patents, and led a research project funded by the National Natural Science Foundation of China.

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**Title:** Resonances in nonlinear electronic systems

**Bio:** S. Morfu received his MSc degree in electronic, computer science, image processing in 1998 and his Ph. D in 2002 from the University of Burgundy, France. During his Ph.D thesis, supervised by J.M. Bilbault and reviewed by François Chapeau-Blondeau and P.O Amblard, he addresses the impacts of defects and perturbations in dissipative nonlinear electronic network and their applications on signal filtering and transmission. He joined the university of burgundy in 2003 as associate professor and has been in charge of the first academic year of a new Department of the engineering school ESIREM at Dijon France. He defends his Habilitation (HDR degree) in the field of nonlinear electronic systems in 2010 with François Chapeau-Blondeau among the reviewers. Since his PhD thesis, the phenomena of nonlinear resonances, including stochastic resonance, have attracted his interest and have led him to be the supervisor or co-supervisor of 6 defended PhD thesis on these topics. François Chapeau-Blondeau has also reviewed one of these Ph.D thesis. His research activities include nonlinear models (simulation, theoretical analysis, and associated electrical models), the effects of noise in nonlinear systems as well as the analysis of deterministic and stochastic nonlinear dynamics.

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**Title:** "1981-2023: the saga of nearly 50 years of research on the Stochastic Resonance effect"

**Bio :** Steeve Zozor was born on August 19, 1972 in Colmar, France. He received the Dipl.-Ing. and the M.S. degrees in 1995 and the Ph.D. degree in 1999, both from the Grenoble Institute of Technology (G-INP), France, all in electrical engineering. In 2012 he received the habilitation to direct researches (Habilitation à Diriger des Recherches) from the G-INP. He joined the National Center of Scientific Research (CNRS), France, in 2001 as Full Researcher (Chargé de Recherche), working at the GIPSA-Lab (Grenoble Laboratory of Image, sPeech, Signals and Automatics), Grenoble, France. His current researches include noise-enhanced information processing(1) (stochastic resonance, noise-improved detection and information transmission, effect of noise in pooling networks and distributed signal sensors networks...), generalized measures of information (Lempel-Ziv complexity, classical and quantum(2) Csiszár divergences and Salicrú entropies, applications in biology, generalized entropic formulations of the uncertainty principle and of the Landau-Pollak inequality...), classical signal processing in special statistical contexts (estimation and detection in alpha-stable noise, elliptical distributions, interference modeling for information transmission...).

(1) SZ precisely made his PhD thesis on this topic. François Chapeau-Blondeau was one of the referees for the defence of his PhD thesis. Among others, SZ has given presentations on Stochastic Resonance jointly with former FCB's former PhD students; he was several times referee for the defenses of FCB's PhD students until very recently, and vice-versa.

(2) While Stochastic Resonance is THE topic on which SZ and FCB met and exchanged a lot, they also met on several other topics of common interest, such that information-theoretic tool and quantum information.

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