

Final Program

2019 IEEE International Symposium on Information Theory



Welcome to ISIT 2019 in Paris!

The International Symposium on Information Theory (ISIT) is the flagship yearly conference of the IEEE Information Theory Society. To make ISIT 2019 a special experience for you, we are trying a few new things this year:

- ISIT 2019 is being held at an atypical venue and historic site, La Maison de la Mutualité in the heart of Paris;
- The ISIT banquet will be held in an elegant historic setting, the Palais Brongniart, near the conference venue;
- We have split the recent results posters into different sessions, spread over three days. The posters will be available for viewing all day and they will be presented at appointed times;
- We have introduced a special invited session track into the ISIT technical program. This track consists of five sessions that will cover emerging trends and developments in information theory and its applications:
 - Applications to fine arts
 - Applications to scientific discovery
 - Deep learning for compression
 - Quantum information
 - Information Privacy and Fairness

We hope you like these innovations and we welcome your feedback.

The conference would not have been possible without the dedicated work of the ISIT 2019 volunteer organization, including the Organizing Committee and the Technical Program Committee. In particular, the Technical Program Committee coordinated reviewing of the paper submissions. The four TPC co-chairs, Giuseppe Caire, Venugopal V. Veeravalli, Aaron B. Wagner and Gilles Zémor, oversaw the entire process and put together the technical program. The special invited sessions were coordinated by Daniela Tuninetti and the recent results sessions were organized by David Gesbert. The ISIT 2019 Webmaster Matthieu Bloch handled all aspects of web presence. The tutorial chairs, Pierre Moulin and S. Sandeep Pradhan, put together an expansive tutorial program of 6 tutorials. The Publications chairs, Merouane Debbah and Samir M. Perlaza, were responsible for the conference proceedings and conference pamphlet. The Finance chair Charly Pouillat constructed and shepherded the ISIT 2019 budget. The local arrangements chairs Stéphane Boucheron, Patrice Abry and Sheng Yang helped sort through the complexities of local conference logistics. The publicity chair Negar Kiyavash ensured that the word about ISIT 2019 was disseminated far and wide. The chairs of student grants Elisabeth Gassiat and Iryna Andriyanova coordinated the EU portion of the student travel award program. The international liaison, David Neuhoff, with the help of S. Sandeep Pradhan, coordinated the US portion of the student travel award program. Special thanks go to Samir M. Perlazza for his very generous help with the planning and negotiation of ISIT 2019's social events. We also thank Aylin Yener and her awards sub-committee for selecting the Jack Keil Wolf Student Paper Award semi-finalists.

The Shannon Lecture this year will be presented by Erdal Arkan on "From Sequential Decoding to

Channel Polarization and Back Again". The TPC Co-chairs have lined up some excellent plenary speakers covering diverse topics. Muriel Médard will talk about the use of randomness for network code constructions; Alice Guionnet will talk about rare events in random matrix theory; Yoshua Bengio will talk about information theory and deep learning; George V. Moustakides will talk about quickest change detection.

We are very grateful to all of the organization who have provided generous financial support, or support in kind, to ISIT 2019. This includes Huawei, TéSA, Qualcomm, CentraleSupélec, INP Toulouse, and Mitsubishi Electric. We also thank Cambridge University Press, Princeton University Press, NOW publishers, and Entropy for participating as publisher exhibitors. We especially thank the United States National Science Foundation, Île de France, and Université de Cergy-Pontoise, Entropy for their generous support of ISIT 2019's student travel grant program.

We wish you a fruitful and productive time at ISIT 2019 and an enjoyable visit to the City of Light!

Alfred Hero, Pablo Piantanida

General Co-chairs

Organizing Committee

General co-chairs

Alfred Hero
University of Michigan, USA
Pablo Piantanida
CentraleSupélec, France

TPC co-chairs

Giuseppe Caire
TU Berlin, Germany
Venugopal V. Veeravalli
UIUC, USA
Aaron B. Wagner
Cornell Univ, USA
Gilles Zémor
Univ de Bordeaux, France

Finance

Charly Poulliat
INP Toulouse, France

Publications

Merouane Debbah
Huawei, France
Samir M. Perlaza
INRIA, France

Local Arrangements

Patrice Abry
CNRS, France
Stéphane Boucheron
Univ Paris, France
Sheng Yang
CentraleSupélec, France

Tutorials

Pierre Moulin
UIUC, USA
S. Sandeep Pradhan
University of Michigan, USA

Web Master

Matthieu Bloch
Georgia Tech, USA

Travel Grant Coordinators

Elisabeth Gassiat
Univ Paris-Saclay, France
Iryna Andriyanova
University Cergy-Pontoise, France

Recent Results

David Gesbert
Eurecom, France

Publicity

Negar Kiyavash
Georgia Institute of Technology, USA

IEEE French Chapter Liaison

Sihem Mesnager
Univ Paris 13, France

IEEE French Liaison - Finance Technical Support

Pascal Lorenz
University of Haute Alsace, France

Special Sessions

Daniela Tuninetti
Univ Illinois, Chicago, USA

International Liaison

David Neuhoff
Univ of Michigan, USA

Technical Program Committee

Jayadev Acharya	Guangyue Han	Arian Maleki	Changho Suh
Fady Alajaji	Hamed Hassani	Arya Mazumdar	Hua Sun
Salman Avestimehr	Masahito Hayashi	Muriel Médard	Rajesh Sundaresan
Salman Beigi	Alexander Holevo	Soheil Mohajer	Ananda Theertha
Shirin Saeedi Bidokhti	Syed Jafar	Marco Mondelli	Suresh
Matthieu Bloch	Sidharth Jaggi	Guido Montorsi	Ali Tajer
Georg Böcherer	Rahul Jain	Stefan Moser	Ido Tal
Martin Bossert	Shirin Jalali	Mehul Motani	Vincent Tan
Joseph Jean Boutros	Adel Javanmard	Chandra Nair	Toshiyuki Tanaka
Fredrik Brännström	Tara Javidi	Prakash Narayan	Ravi Tandon
Guy Bressler	Mingyue Ji	Krishna Narayanan	Leandros Tassioulas
David Burshtein	Varun Jog	Urs Niesen	Aslan Tchamkerten
Ning Cai	Thomas Johansson	Aria Nosratinia	Andrew Thangaraj
Giuseppe Caire	Oliver Johnson	Frederique Oggier	Jean-Pierre Tillich
Flavio Calmon	Eduard Jorswieck	Lawrence Ong	Antonia Tulino
Jun Chen	Gauri Joshi	Ayfer Özgür	Ertem Tuncel
Mahdi Cheraghchi	Sreeram Kannan	Farzad Parvaresh	Daniela Tuninetti
Todd Coleman	Kenta Kasai	Ramtin Pedarsani	Himanshu Tyagi
Max Costa	Navin Kashyap	Haim Permuter	Sennur Ulukus
Daniel Costello	Young-Han Kim	Li Ping	Jay Unnikrishnan
Thomas Courtade	Joerg Kliewer	Yury Polyanskiy	Vinay Vaishampayan
Marco Dalai	Kingo Kobayashi	H.Vincent Poor	Alexander Vardy
Sahas Diggavi	Tobias Koch	Maxim Raginsky	Venugopal Veeravali
Dariush Divsalar	Ioannis Kontoyiannis	Aditya Ramamoorthy	Sriram Vishwanath
Lara Dolecek	Victoria Kostina	Sundeeep Rangan	Emanuele Viterbo
Tolga Duman	Oliver Kosut	Stefano Rini	Pascal Vontobel
Michelle Effros	Gerhard Kramer	Ron Roth	Shun Watanabe
Uri Erez	Frank R. Kschischang	Lalitha Sankar	Marcelo Weinberger
Elza Erkip	Gitta Kutyniok	Narayana Prasad	Michele Wigger
Tuvi Etzion	Michael Langberg	Santhanam	Andreas Winter
Farzad Farnoud	Amos Lapidoth	Anand Sarwate	Stefan Wolf
Robert Fischer	Luis Lastras-Montaño	Jossy Sayir	David Woodruff
Christina Fragouli	Gottfried Lechner	Robert Schober	Mary Wootters
Michael Gastpar	Anthony Leverrier	Moshe Schwartz	Yihong Wu
Amin Gohari	Yingbin Liang	Christian Senger	Eitan Yaakobi
Norbert Götz	Tamas Linder	Aydin Sezgin	Roy Yates
Markus Grassl	Nan Liu	Vladimir Sidorenko	Sergey Yekhanin
Pulkit Grover	Gianluigi Liva	Oswaldo Simeone	Aylin Yener
Albert Guillén I	Hans-Andrea Loeliger	Ankit Singh Rawat	Raymond Yeung
Fàbregas	Angel Lozano	Mikael Skoglund	Wei Yu
Deniz Gündüz	Nicolas Macris	Anelia Somekh-	Gilles Zémor
Dongning Guo	Mokshay Madiman	Baruch	Lizhong Zheng
András György	Hessam MahdaviFar	Vijay Subramanian	

Sponsors & Exhibitors

Platinum Sponsor



Gold Sponsors



Silver Sponsors



Bronze Sponsor



Student Travel Sponsors



Exhibitors



Symposium Overview

Sunday, 7 July

09:00 - 11:30	Tutorials T1, T2
12:00 - 14:30	Tutorials T3, T4
15:00 - 17:30	Tutorials T5, T6
17:30 - 19:00	Welcome Reception.....Salon Jussieu, Level 3 & Espace Lounge, Level 5

Monday, 8 July

08:30 - 09:30	Plenary Talk: Muriel Médard - "Le jeu du réseau et du hasard - exploiting randomness" .....Le Théâtre (Parterre), Level -1
09:50 - 11:10	Technical Sessions
11:10 - 11:40	Coffee Break and Recent Results Session
11:40 - 13:00	Technical Sessions
13:00 - 14:30	WITHITS - Women In the Information Theory Society..... Monge, Level 3
14:30 - 16:10	Technical Sessions
16:10 - 16:40	Coffee Break and Recent Results Session
16:40 - 18:00	Technical Sessions
18:00 - 19:30	Diversity, Equity and Inclusion Workshop Monge, Level 3

Tuesday, 9 July

08:30 - 09:30	Plenary Talk: Alice Guionnet - "Rare events in Random Matrix Theory" ... Le Théâtre (Parterre), Level -1
09:50 - 11:10	Technical Sessions
11:10 - 11:40	Coffee Break and Recent Results Session
11:40 - 13:00	Technical Sessions
14:30 - 16:10	Technical Sessions
16:10 - 16:40	Coffee Break and Recent Results Session
16:40 - 18:00	Technical Sessions
18:00 - 19:30	Awards Session.....Le Théâtre (Parterre), Level -1
19:30 - 20:00	Awards Cocktail..... Bar Galerie Théâtre, Level -1 & Salon Jussieu, Level 3

Wednesday, 10 July

08:30 - 09:30	Shannon Lecture: Erdal Ankan - "From Sequential Decoding to Channel Polarization and Back Again" .....Le Théâtre (Parterre), Level -1
09:50 - 11:10	Technical Sessions
11:10 - 11:40	Coffee Break
11:40 - 13:20	Technical Sessions

Thursday, 11 July

08:30 - 09:30	Plenary Talk: Yoshua Bengio - "Information Theory for and by Deep Learning" Le Théâtre (Parterre)
09:50 - 11:10	Technical Sessions
11:10 - 11:40	Coffee Break and Recent Results Session
11:40 - 13:00	Technical Sessions
13:00 - 14:30	Meet the Shannon Lecturer Monge, Level 3
14:30 - 16:10	Technical Sessions
16:10 - 16:40	Coffee Break and Recent Results Session
16:40 - 18:00	Technical Sessions
19:15 - 22:30	Conference Banquet..... Palais Brongniart

Friday, 12 July

08:30 - 09:30	Plenary Talk: George V. Moustakides - "Quickest Detection of Changes: Classical and Modern Approaches" .....Le Théâtre (Parterre), Level -1
09:50 - 11:10	Technical Sessions
11:10 - 11:40	Coffee Break
11:40 - 13:00	Technical Sessions
13:00 - 14:30	Outreach/Mentoring..... Sorbonne, Level 5
14:30 - 16:10	Technical Sessions
16:10 - 16:40	Coffee Break
16:40 - 18:00	Technical Sessions

Monday, 8 July
Plenary Talk by Muriel Médard – *Le jeu du réseau et du hasard - exploiting randomness*

Le Théâtre (Parterre) Level-1	Saint Germain Level 3	Monge Level 3	Odéon Level 3	Saint Victor Level 3	Sorbonne Level 5	Bièvre Level 5	Conseil Level 5	Pontoise Level 5
MO1.R1: Coded Caching I	MO1.R2: Polar and RM Codes	MO1.R3: Estimation I	MO1.R4: Quasi-cyclic LDPC codes	MO1.R5: DNA Coding	MO1.R6: Random Access and Group Testing	MO1.R7: Energy Harvesting	MO1.R8: Optical Channels	MO1.R9: Message Passing
MO2.R1: Information Theory in Biology I	MO2.R2: Network Coding I	MO2.R3: Distributed Storage - Regenerating Codes	MO2.R4: Testing and Classification I	MO2.R5: Quantum Channel Capacity and Codes	MO2.R6: State-Dependent Channels	MO2.R7: Substitution Errors	MO2.R8: Wiretap- and Side-Channels	
MO3.R1: Applications to Fine Arts	MO3.R2: Age of Information I	MO3.R3: Private Information Retrieval I	MO3.R4: Signal Processing	MO3.R5: Community Detection and Graphical Models	MO3.R6: Multiple Access Channels	MO3.R7: Network Information Theory	MO3.R8: Guessing I	
MO4.R1: Information Theory and Learning I	MO4.R2: Index Coding I	MO4.R3: Privacy	MO4.R4: Universal Compression	MO4.R5: Generalization Bounds	MO4.R6: Wireless Communications I	MO4.R7: Codes and Information Theoretic Cryptography	MO4.R8: Guessing II	MO4.R9: Gaussian Wiretap Channels

Tuesday, 9 July
Plenary Talk by Alice Guionnet – *Rare events in Random Matrix Theory*

Le Théâtre (Parterre) Level-1	Saint Germain Level 3	Monge Level 3	Odéon Level 3	Saint Victor Level 3	Sorbonne Level 5	Bièvre Level 5	Conseil Level 5	Pontoise Level 5
TU1.R1: Coded Caching II	TU1.R2: Information Theory and Statistics I	TU1.R3: Emerging Applications of IT I	TU1.R4: Interference I	TU1.R5: DNA-based Storage	TU1.R6: Wireless Communications II	TU1.R7: Voting and Biometric Privacy	TU1.R8: Codes for Privacy and Wiretap Channels	
TU2.R1: Jack Keil Wolf Award	TU2.R2: Network Coding II	TU2.R3: Estimation II	TU2.R4: Testing and Classification II	TU2.R5: Information Theory in Biology II	TU2.R6: Finite-Length Analysis	TU2.R7: Game Theory	TU2.R8: Covert Communication	TU2.R9: Channel Models
TU3.R1: Applications to Scientific Discovery	TU3.R2: Age of Information II	TU3.R3: Private Information Retrieval II	TU3.R4: Reed-Solomon and MDS Codes	TU3.R5: Private Computation I	TU3.R6: New Developments in Renyi Entropy	TU3.R7: Quantum Data Compression	TU3.R8: MIMO	TU3.R9: Boolean Functions
TU4.R1: Coded Caching III	TU4.R2: Index Coding II	TU4.R3: Private Information Retrieval III	TU4.R4: Interference II	TU4.R5: Graphical Models	TU4.R6: Joint Source Channel Coding	TU4.R7: Probabilistic Decoding	TU4.R8: Insertion-Deletion Correcting Codes I	TU4.R9: Information Inequalities

Wednesday, 10 July

Shannon Lecture by Erdal Arkan – *From Sequential Decoding to Channel Polarization and Back Again*

Le Théâtre (Parterre) Level-1	Saint Germain Level 3	Monge Level 3	Odeon Level 3	Saint Victor Level 3	Sorbonne Level 5	Bièvre Level 5	Conseil Level 5	Pontoise Level 5
WE1.R1: Polar Codes I	WE1.R2: Coded Computing I	WE1.R3: Regression and Estimation	WE1.R4: Cloud and Fog Networks	WE1.R5: Information Theory Methods in Graph Theory	WE1.R6: Wireless Networks	WE1.R7: Lossless Compression I	WE1.R8: Reed-Solomon Codes	
WE2.R1: Deep Learning for Compression	WE2.R2: Distributed Storage	WE2.R3: Coding for Memories	WE2.R4: Lattice Codes	WE2.R5: Broadcast Channels	WE2.R6: Private Computation II	WE2.R7: Lossless Compression II	WE2.R8: Quantum Security and Privacy	WE2.R9: Bounds on Codes

Thursday, 11 July

Plenary Talk by Yoshua Bengio – *Information Theory for and by Deep Learning*

Le Théâtre (Parterre) Level-1	Saint Germain Level 3	Monge Level 3	Odeon Level 3	Saint Victor Level 3	Sorbonne Level 5	Bièvre Level 5	Conseil Level 5	Pontoise Level 5
TH1.R1: Polar Codes II	TH1.R2: Coded Computing II	TH1.R3: Information Theory and Learning II	TH1.R4: Multiterminal Source Coding	TH1.R5: Extremal Distributions	TH1.R6: Missing Data	TH1.R7: Post-Quantum Cryptography I	TH1.R8: Capacity Computation	TH1.R9: Algebraic Coding Theory
TH2.R1: Polar Codes III	TH2.R2: Network Coding and Broadcasting	TH2.R3: Neural Networks and AI	TH2.R4: Testing and Classification III	TH2.R5: Caching for Networks	TH2.R6: Lossy Compression	TH2.R7: Rank Metric Codes	TH2.R8: Sparse Signal Recovery	
TH3.R1: Quantum Information	TH3.R2: Polarization	TH3.R3: Private Information Retrieval IV	TH3.R4: Information Theoretic Privacy	TH3.R5: Secure and Covert Communication	TH3.R6: Quickest Change Detection I	TH3.R7: New Directions in Rényi Entropy	TH3.R8: Coding for Feedback Channels	TH3.R9: Sequences
TH4.R1: Learning and Regression	TH4.R2: Index and Network Coding	TH4.R3: Estimation III	TH4.R4: Codes and Set Systems	TH4.R5: Insertion-Deletion Correcting Codes II	TH4.R6: Quickest Change Detection II	TH4.R7: Topics in Coding Theory	TH4.R8: Low-density Parity-check I	TH4.R9: Computational Complexity

Friday, 12 July

Plenary Talk by George V. Moustakides – *Quickest Detection of Changes: Classical and Modern Approaches*

Le Théâtre (Parterre) Level-1	Saint Germain Level 3	Monge Level 3	Odeon Level 3	Saint Victor Level 3	Sorbonne Level 5	Bièvre Level 5	Conseil Level 5	Pontoise Level 5
FR1.R1: Function Approximation and Learning	FR1.R2: Emerging Applications of IT II	FR1.R3: Estimation IV	FR1.R4: Resource Allocation and Scheduling	FR1.R5: Bandits	FR1.R6: Classical Meets Quantum	FR1.R7: Post-Quantum Cryptography II	FR1.R8: Low-density Parity-check II	
FR2.R1: Coded Caching IV	FR2.R2: Coded Computation and Networks	FR2.R3: Error Exponents I	FR2.R4: Compressed Sensing I	FR2.R5: Information Theory for Estimation	FR2.R6: Coding for Distributed Computation	FR2.R7: Active Adversaries	FR2.R8: Energy Efficient Communications	FR2.R9: Packings and Combinatorics
FR3.R1: Information Privacy and Fairness	FR3.R2: Coding for Stragglers	FR3.R3: Locally Repairable Codes	FR3.R4: Compressed Sensing II	FR3.R5: Capacity and Upper Bounds	FR3.R6: Quantum Stabilizer and Related Codes	FR3.R7: Relay Channels	FR3.R8: Error Exponents II	FR3.R9: Theoretical Cryptography
FR4.R1: Coded Caching V	FR4.R2: Quantum Entropy and Systems	FR4.R3: Coding for Matrix Multiplication	FR4.R4: Secret Keys	FR4.R5: Information Theory and Statistics II	FR4.R6: Streaming and Coding	FR4.R7: GDoF and Multiuser Channels	FR4.R8: Information Measures	

Plenary Talks

Claude E. Shannon Award Lecture

Wednesday, 10 July, 08:30

FROM SEQUENTIAL DECODING TO CHANNEL POLARIZATION AND BACK AGAIN

Erdal Arkan, Bilkent University

Abstract: This talk gives an account of the original ideas that motivated the development and polar coding and discusses some new ideas for exploiting channel polarization.

Biography: Erdal Arkan was born in Ankara, Turkey, in 1958. He received the B.S. degree from the California Institute of Technology, Pasadena, CA, in 1981, and the S.M. and Ph.D. degrees from the Massachusetts Institute of Technology, Cambridge, MA, in 1982 and 1985, respectively, all in Electrical Engineering. He served as an assistant professor at the University of Illinois at Urbana-Champaign during 1986-1987. Since Sept. 2017, he has been with the Electrical-Electronics Engineering Department of Bilkent University, Ankara, Turkey, where he works as a Professor. He is the recipient of the 2010 IEEE Information Theory Society Best Paper Award, the 2013 IEEE W. R. G. Baker Award, IEEE Turkey Section 2017 Life-Long Achievement Award, and the 2018 IEEE Hamming Medal. Arkan is a member of the IEEE and an IEEE Fellow.



Plenary Speakers

Monday, 8 July, 08:30

LE JEU DU RÉSEAU ET DU HASARD - EXPLOITING RANDOMNESS

Muriel Médard, Massachusetts Institute of Technology

Abstract: In this talk, we consider two different aspects of randomness as a design principle. In the first part, we overview the intentional use of randomness for network code constructions. Random linear network coding (RLNC) allows for endless composability and, in erasure networks, achieves network capacity. In the second part of the talk, we exploit the randomness of noise in channels for decoding. Guessing random additive noise to decode (GRAND) does not use the structure of the code, but instead considers the random properties of the noise itself. GRAND provides a maximum a posteriori decoder with any code, with attractive complexity properties for many channels.

Biography: Muriel Médard is the Cecil H. Green Professor in the Electrical Engineering and Computer Science (EECS) Department at MIT and leads the Network Coding and Reliable Communications Group at the Research Laboratory for Electronics at MIT. She has co-founded three companies to commercialize network coding, CodeOn, Steinwurf and Chocolate Cloud. She has served as editor for many publications of the Institute of Electrical and Electronics



Engineers (IEEE), of which she was elected Fellow, and she has served as Editor in Chief of the IEEE Journal on Selected Areas in Communications. She was President of the IEEE Information Theory Society in 2012, and served on its board of governors for eleven years. She has served as technical program committee co-chair of many of the major conferences in information theory, communications and networking. She received the 2009 IEEE Communication Society and Information Theory Society Joint Paper Award, the 2009 William R. Bennett Prize in the Field of Communications Networking, the 2002 IEEE Leon K. Kirchmayer Prize Paper Award, the 2018 ACM SIGCOMM Test of Time Paper Award and several conference paper awards. She was co-winner of the MIT 2004 Harold E. Edgerton Faculty Achievement Award, received the 2013 EECS Graduate Student Association Mentor Award and served as Housemaster for seven years. In 2007 she was named a Gilbreth Lecturer by the U.S. National Academy of Engineering. She received the 2016 IEEE Vehicular Technology James Evans Avant Garde Award, the 2017 Aaron Wyner Distinguished Service Award from the IEEE Information Theory Society and the 2017 IEEE Communications Society Edwin Howard Armstrong Achievement Award.

Tuesday, 9 July, 08:30

RARE EVENTS IN RANDOM MATRIX THEORY

Alice Guionnet, ENS Lyon

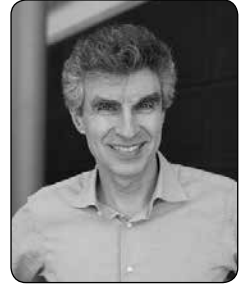
Abstract: The typical behaviour of random matrices is well understood in a rather large range of models, including deformed models of a signal+noise. Estimating the probability of deviating from these typical behaviours is a much more challenging question that we shall discuss in this talk.

Biography: Alice Guionnet entered Ecole Normale superieure in 1989. She earned her PhD in 1995 in probability theory under the supervision of Gerard Ben Arous, working on spin glass dynamics and aging. She is well known for her work on random matrices. She has established surprising links with various other fields of mathematics as spectral theory, operator algebra, free probability which lead her to several outstanding results. Her "single ring theorem" is a real masterpiece of analysis. One of the most important contribution of Alice Guionnet might be a series of work where she founds the theory of "Matrix Models". She has received a number of prestigious prizes like the Loeve prize, the silver medal of CNRS and the Blaise Pascal medal, showing her impressive impact beyond probability theory. After being an invited speaker at the International Congress of Mathematician, and at the International Congress of Mathematical Physics, she was elected in 2017 at the french Academy of Sciences.



INFORMATION THEORY FOR AND BY DEEP LEARNING

Yoshua Bengio, Université de Montréal



Abstract: One of the central goals of deep learning is to learn good representations, which ideally disentangle the underlying abstract explanatory factors of the observed data. How goodness of these representations should be defined is an active and open area of research, but an interesting hypothesis is that we should try to define this mostly in the high-level representation space itself, rather than in data space, because the interesting factors (e.g., the word sequence, in speech) may represent very few bits out of the actual sensory signal (e.g. the acoustic speech signal). Yet, standard machine learning objectives (like maximum likelihood) are defined in the data space. This has stimulated the exploration of training objectives based on information-theoretical ideas, like mutual information and entropy. Interestingly, the tools of deep learning, in particular of adversarial networks, is being used to learn these objective functions: the basic idea is that dependency can be measured by how well a classifier can separate samples from a joint distribution from samples of the marginals. Whereas classical non-parametric methods struggle to estimate quantities like entropy or mutual information when the variables are high-dimensional, a new wave of estimators has been proposed based on neural networks, which also raise other interesting questions and open new opportunities for learning high-level representations.

Biography: Recognized as one of the world's leading experts in artificial intelligence and a pioneer in deep learning, Yoshua Bengio studied in Montreal, earned his Ph.D. in computer science from McGill University in 1991, and did post-doctoral studies at MIT.

Since 1993, he has been a professor in the Department of Computer Science and Operations Research at the Université de Montréal, and he holds the Canada Research Chair in Statistical Learning Algorithms. In addition, he is Scientific Director of IVADO and Mila, the Quebec Artificial Intelligence Institute, the world's largest deep learning academic research group.

An Officer of the Order of Canada, he is also a Fellow of the Royal Society of Canada, the recipient of the Marie-Victorin Prize in 2017, and was named Radio-Canada's Scientist of the Year for 2017. In 2018, he was awarded the 50th anniversary medal of Quebec's Ministry of International Relations and La Francophonie.

Yoshua Bengio is one of the world's most cited computer scientists, thanks to his three books and more than 500 publications. His h-index stands at 131, with more than 149,000 Google Scholar citations. His ambition is to understand the principles that lead to intelligence through learning, as well as promote the development of artificial intelligence for the benefit of all.

Friday, 12 July, 08:30

QUICKEST DETECTION OF CHANGES: CLASSICAL AND MODERN APPROACHES

George V. Moustakides, University of Patras



Abstract: The problem of rapid detection of a change in the statistical behavior of an observed data sequence, finds application in a plethora of scientific fields. Quality control, detection of seismic wave onset time, epidemic detection, portfolio monitoring, health monitoring of structures, fraud detection, spectrum monitoring, attack and router failure detection in networks, are only a few examples where quickest (sequential) change detection can be adopted to mathematically formulate the corresponding application problem. In the first part of our presentation we introduce the notion of a stopping time which is the mathematical entity we employ for implementing a sequential detector. We continue with an effort to understand the various change imposing mechanisms that exist in nature and we provide a high-level model for their statistical description. This in turn allows us to define proper performance measures and related optimization problems which, when solved, give rise to optimum detection strategies. In the second part, we make an overview of the most popular metrics proposed in the literature along with their optimum detectors and discuss their applicability to real problems. Finally, in the last part of our presentation we focus on modern versions of the quickest change detection problem. In particular, we consider data that are acquired from multiple sources with the change occurring simultaneously either in all or in an unknown subset of the nodes. We also consider different classes of sequential detectors as centralized, decentralized, and the more recently investigated, distributed and discuss their corresponding optimality properties.

Biography: George V. Moustakides received the diploma in Electrical and Mechanical Engineering from the National Technical University of Athens, Greece in 1979, the MSE in Systems Engineering from the University of Pennsylvania in 1980, and the M.Sc and Ph.D in Electrical Engineering and Computer Science from Princeton University in 1983. Since 1988 he is with the University of Patras, Greece initially with the Computer Engineering and Informatics department and afterwards with the department of Electrical and Computer Engineering. In 2017 he also joined the Computer Science department at Rutgers University. In the past he held various visiting or long-term appointments with INRIA, Princeton University, University of Pennsylvania, Columbia University, University of Maryland, Georgia Institute of Technology, University of Southern California, University of Illinois at Urbana-Champaign and Rutgers University. His interests include Sequential Detection, Statistical Signal Processing and Machine Learning. From 2011 to 2014 and from 2016 to 2018 he served as Associate Editor for the IEEE Transactions on Information Theory.

Tutorials

Sunday, 7 July, 09:00 - 11:30

Tutorial T1: Privacy and Fairness in Data Science: An Information-theoretic Perspective..... Bièvre, Level 5

Tutorial T2: Understanding Non-convex Optimization Sorbonne, Level 5

Sunday, 7 July, 12:00 - 14:30

Tutorial T3: Robust Statistics: From Information Theory to Algorithms..... Sorbonne, Level 5

Tutorial T4: Private Information Retrieval: Old and New..... Bièvre, Level 5

Sunday, 7 July, 15:00 - 17:30

Tutorial T5: Statistical Physics, Phase-transition Analysis, and Message-passing Algorithms: Powerful Tools for High-dimensional Inference..... Sorbonne, Level 5

Tutorial T6: Interference Management in Wireless Networks: Fundamental Bounds and Recent Advances... Bièvre, Level 5

Social Events

(All held at the Conference Venue except for Banquet)

Sunday, 7 July

17:30-19:00 Welcome Reception Salon Jussieu (level 3) & Espace Lounge (level 5)

Monday, 8 July

13:00-14:30 WITHITS - Women In the Information Theory Society Event.....Monge (Level 3)

Catering (Lunch box).....Salon Jussieu (Level 3)

18:00-19:30 Diversity, Equity and Inclusion WorkshopMonge (Level 3)

19:30-20:00 Diversity, Equity and Inclusion Workshop (Cocktails).....Salon Jussieu (Level 3)

Tuesday, 9 July

18:00-19:30 Awards Ceremony..... Le Théâtre (Level -1)

19:30-20:00 Awards Reception (Cocktails)..... Bar Galerie Theatre (level -1) and Salon Jussieu (Level 3)

Thursday, 11 July

13:00-14:30 Meet the Shannon Lecturer EventMonge (Level 3)

Catering (Lunch box).....Salon Jussieu (Level 3)

19:15-22:30 Conference Banquet..... Palais Brongniart

Place de la Bourse, 75002 Paris

Bus: lines n° 20, 39, 48, 67, 74, 85 ('Bourse' stop)

Metro: Bourse (line 3), Grands Boulevards (lines 8 & 9)

Dress code: Smart Casual

Access is granted with your ISIT 2019 name badge

Friday, 12 July

13:00-13:30 Outreach Event Sorbonne (Level 5)

13:30-14:30 Lunch & Mentoring EventEspace Lounge (Level 5)

IEEE Meetings

Sunday, 7 July

12:30-17:30 Information Theory Society Board of Governors Meeting.....Saint Victor (Level 3)

Tuesday, 9 July

13:30-14:30 Publications Committee MeetingBièvre (Level 5)

Recent Results Poster Sessions

Monday, 8 July, 11:10–11:40 and 16:10–16:40, Salon Jussieu, Level 3

Yong Joon Song et al.

Channel decoding using auto encoder

Rawad Bitar et al.

Stochastic gradient coding for straggler mitigation in distributed learning

Kota Srinivas et al.

Online policies for content delivery

Christo Thomas et al.

Low complexity static and dynamic sparse bayesian learning combining BP, VB and EP message passing

Nicolas Skachkovsky et al.

Learning from offloaded data at the edge: an optimality gap bound

Ishank Arora et al.

High-dimensional bayesian optimization via tree-structured generalized additive models

Tuesday, 9 July, 11:10–11:40 and 16:10–16:40, Salon Jussieu, Level 3

Ying Li et al.

Two-dimensional QAM complete complementary codes

Xingran Chen et al.

Benefits of coding on age of information in broadcast networks

Pedro Soto et al.

Distributed decoding for coded matrix multiplication

Naohiro Uchida et al.

On searching for optimal non-alphabetic arithmetic codes with low delay based on A algorithm

Eleonesio Strey et al.

On lattices from q-ary codes

Yi-Sheng Su et al.

Constructions of optimal locally recoverable fractional repetition codes via masking

Ryutaroh Matsumoto et al.

Message randomization and strong security in quantum stabilizer-based secret sharing for classical secrets

Thursday, 11 July, 11:10–11:40 and 16:10–16:40, Salon Jussieu, Level 3

Swanand Kadhe et al.

A secure digital fountain architecture for slashing storage costs in blockchains

Eli Shmuel et al.

Feedback capacity of finite-state channels with causal state information available at the encoder

Wei Cao et al.

Robust power allocation for approximately gaussian inputs

Philippe Regnault et al.

Explicit expressions for Rényi divergence rates of Markov chains

Quan Geng et al.

Tight analysis of privacy and utility tradeoff in approximate differential privacy

Monday, 8 July**09:50-11:10**

09:50	10:10	10:30	10:50
MO1.R1: Coded Caching I			Le Théâtre (Parterre), Level 1
Untrusted Caches in Two-layer Networks <i>Ahmed A Zewail, Aylin Yener</i>	Coded Caching with Full Heterogeneity: Exact Capacity of The Two-User/Two-File Case <i>Chih-Hua Chang, Chih-Chun Wang</i>	Coded Caching with Heterogeneous File Demand Sets – The Insufficiency of Selfish Coded Caching <i>Chih-Hua Chang, Chih-Chun Wang</i>	Cache-Aided Two-User Broadcast Channels with State Information at Receivers <i>Hadi Reiszadeh, Mohammad Ali Maddah-Ali, Soheil Mohajer</i>

MO1.R2: Polar and RM Codes			Saint Germain, Level 3
Permutation-based Decoding of Reed-Muller Codes in Binary Erasure Channel <i>Kirill Ivanov, Rüdiger Urbanke</i>	A New Permutation Decoding Method for Reed-Muller Codes <i>Mikhail Kamenev, Yulia Kameneva, Oleg Kurmaev, Alexey Maevskiy</i>	Backtracking and Look-Ahead Decoding Algorithms for Improved Successive Cancellation Decoding Performance of Polar Codes <i>Myna Vajha, V. S. Chaitanya Mukka, P. Vijay Kumar</i>	

MO1.R3: Estimation I			Monge, Level 3
On Estimation under Noisy Order Statistics <i>Alex Dytso, Martina Cardone, Mishfad S. Veedu, H. Vincent Poor</i>	Iterative Collaborative Filtering for Sparse Noisy Tensor Completion <i>Devavrat Shah, Christina Lee Yu</i>	Convergence of Chao Unseen Species Estimator <i>Nived Rajaraman, Profulla Chandra, Andrew Thangaraj, Ananda Theertha Suresh</i>	Context Block Estimation for Random Fields <i>Zolt Talata</i>

MO1.R4: Quasi-cyclic LDPC codes			Odéon, Level 3
AVN-based elimination of short cycles in Tanner graphs of QC LDPC codes <i>Irina Bocharova, Boris Kudryashov, Vitaly Skachek</i>	Construction of Partial Geometries and LDPC codes based on Reed-Solomon Codes <i>Juane Li, Keke Liu, Shu Lin, Khaled Abdel-Ghaffar</i>	Linear Permutation Polynomial Codes <i>Ryoichiro Yoshida, Kenta Kasai</i>	Quasi-Cyclic LDPC Codes for Correcting Multiple Phased Bursts of Erasures <i>Xin Xiao, Bane Vasic, Shu Lin, Khaled Abdel-Ghaffar, William E. Ryan</i>

MO1.R5: DNA Coding			Saint Victor, Level 3
LDPC Codes for Portable DNA Storage <i>Peng Fei, Zhiying Wang</i>	Clustering-Correcting Codes <i>Tal Shinkar, Eitan Yaakobi, Andreas Lenz, Antonia Wachter-Zeh</i>	Sequence-Subset Distance and Coding for Error Control for DNA-based Data Storage <i>Wentu Song, Kui Cai, Kees A. Schouhamer Immink</i>	Efficient and Explicit Balanced Primer Codes <i>Yeow Meng Chee, Han Mao Kiah, Hengjia Wei</i>

MO1.R6: Random Access and Group Testing			Sorbonne, Level 5
A Group Testing Approach to Random Access for Short-Packet Communication <i>Huseyin Atahan Inan, Surin Ahn, Peter Kairouz, Ayler Ozgur</i>	A New Algorithm for Two-Stage Group Testing <i>Ilya Vorobyev</i>	Massive Random Access with Common Alarm Messages <i>Kristoffer Stern, Anders Ellersgaard Kalør, Beatriz Soret, Petar Popovski</i>	Non-asymptotic Coded Slotted ALOHA <i>Mohammad Feyyerdounian, Xingran Chen, Hamed Hassani, Shirin Saeedi Bidokhti</i>

MO1.R7: Energy Harvesting			Bièvre, Level 5
The Optimal Power Control Policy for an Energy Harvesting System with Look-Ahead: Bernoulli Energy Arrivals <i>Ali Zibaeenejad, Jun Chen</i>	Analysis of Data Harvesting by Unmanned Aerial Vehicles <i>Chang-sik Choi, François Baccelli, Gustavo de Veciana</i>	Information and Energy Transmission with Experimentally-Sampled Harvesting Functions <i>Daewon Seo, Lav Varshney</i>	

MO1.R8: Optical Channels			Conseil, Level 5
On the Optimal Input of the Nondispersive Optical Fiber <i>Jihad Fahn, Aslan Tchamkerten, Mansoor I. Yousefi</i>	The Discrete-Time Poisson Optical Wiretap Channel with Peak Intensity Constraint <i>Morteza Soltani, Zouheir Rezki</i>	A Variational Signal-Space Distance Measure for Nondispersive Optical Fiber <i>Reza Rafiee Borujeny, Frank R. Kschischang</i>	The Interplay Between Block Design and Channel Estimation in VLC Systems <i>Siu-Wai Ho</i>

MO1.R9: Message Passing			Pontoise, Level 5
A Unified Framework of State Evolution for Message-Passing Algorithms <i>Keigo Takeuchi</i>	Simple Codes and Sparse Recovery with Fast Decoding <i>Mahdi Cheraghchi, João Ribeiro</i>	Learned Belief-Propagation Decoding with Simple Scaling and SNR Adaptation <i>Mengke Lian, Fabrizio Carpi, Christian Häger, Henry D. Pfister</i>	Evolution Analysis of Iterative BICM Receivers with Expectation Propagation over ISI Channels <i>Serdar Sahin, Antonio Maria Cipriano, Charly Poulliat, Marie-Laure Boucheret</i>

Monday, 8 July**11:40-13:00**

11:40	12:00	12:20	12:40
MO2.R1: Information Theory in Biology I			Le Théâtre (Parterre), Level -1
Private Shotgun DNA Sequencing Ali Gholami, Mohammad Ali Maddah-Ali, Seyed Abolfazl Moteahari	How should we define Information Flow in Neural Circuits? Praveen Venkatesh, Sanghamitra Dutta, Pulkit Grover	Symbolwise MAP for Multiple Deletion Channels Sundara Rajan Srinivasavaradhan, Michelle Du, Suhas Diggavi, Christina Fragouli	On the Bias of Directed Information Estimators Gabriel Schamberg, Todd Prentice Coleman
MO2.R2: Network Coding I			Saint Germain, Level 3
A local perspective on the edge removal problem Fei Wei, Michael Langberg, Michelle Effros	Undirected Unicast Network Capacity: A Partition Bound Satyajit Thakor, Mohammad Ishtiyaq Qureshi	Local-Encoding-Preserving Secure Network Coding for Fixed Dimension Xuan Guang, Raymond W. Yeung	On the Complexity of Computing the Shannon Outer Bound to a Network Coding Capacity Region Yirui Liu, John MacLaren Walsh
MO2.R3: Distributed Storage - Regenerating Codes			Monge, Level 3
Secure Determinant Codes: A Class of Secure Exact-Repair Regenerating Codes Michelle Kleckler, Soheil Mahajer	New Regenerating Codes over Binary Cyclic Codes Hanxu Hou, Yung-Hsiang S. Han, Patrick P. C. Lee, Qingfeng Zhou	Practical Functional Regenerating Codes for Broadcast Repair of Multiple Nodes Nitish Mital, Katina Kravlevska, Cong Ling, Deniz Gunduz	Explicit constructions of MSR codes for the rack-aware storage model Zitan Chen, Alexander Barg
MO2.R4: Testing and Classification I			Odéon, Level 3
Second-Order Asymptotically Optimal Statistical Classification Lin Zhou, Vincent Y. F. Tan, Mehul Motani	Rates of Adaptive Group Testing in the Linear Regime Matthew Aldridge	The Rate Distortion Test of Normality Peter Harremoës	Distributed False Discovery Rate Control with Quantization Yu Xiang
MO2.R5: Quantum Channel Capacity and Codes			Saint Victor, Level 3
Entropy Bound for the Classical Capacity of a Quantum Channel Assisted by Classical Feedback Dawei Ding, Yihui Quek, Peter Shor, Mark M. Wilde	A Blahut-Arimoto Type Algorithm for Computing Classical-Quantum Channel Capacity Haobo Li, Ning Cai	Quantum Coding via Semidefinite Programming Mario Berta, Francesco Borderi, Omar Fawzi, Volkher Scholz	Optimizing Bounds on the Classical Information Rate of Quantum Channels with Memory Michael Xuan Cao, Pascal Olivier Vontobel
MO2.R6: State-Dependent Channels			Sorbonne, Level 5
Joint State Sensing and Communication over Memoryless Multiple Access Channels Mari Kobayashi, Hassan Hamad, Gerhard Kramer, Giuseppe Caire	Broadcasting Information subject to State Masking over a MIMO State Dependent Gaussian Channel Michael Dikstein, Anelia Somekh-Baruch, Shlomo Shamai (Shitz)	Message and State Communication over Channels with Action Dependent States Viswanathan Ramachandran, Sibi Raj B Pillai, Vinod M. Prabhakaran	Constrained Communication Over the Gaussian Dirty Paper Channel Yinfei Xu, Jian Lu, Guojun Chen
MO2.R7: Substitution Errors			Bièvre, Level 5
Reconstruction of Sequences in DNA Storage Maria Abu Sini, Eitan Yaakobi	The Levenshtein's Channel and the List Size in Information Retrieval Ville Junnila, Tero Laihonen, Tuomo Antipoinka Lehtilä	Single-Error Detection and Correction for Duplication and Substitution Channels Yuanyuan Tang, Yonatan Yehezkeally, Mashe Schwartz, Farzad Farnoud	
MO2.R8: Wiretap- and Side-Channels			Conseil, Level 5
Secure Broadcasting of Two Encrypted Sources under Side-Channel Attacks Bagus Santoso, Yasutada Oohama	An Information-Theoretic Model for Side-Channel Attacks in Embedded Hardware Eloi de Cherisey, Sylvain Guilley, Olivier Rioul, Pablo Piantanida	Wiretap Secret Key Capacity of Tree-PIN Alireza Poostindouz, Reihaneh Safavi-Naini	Manufacturing an Erasure Wiretap Channel from Channel Sounding Measurements Dakota Flanary, Benjamin Jensen, Bradford Clark, Kalin Norman, Nathan Nelson, Michael Rice, Willie K. Harrison

Monday, 8 July**14:30-16:10**

14:30	14:50	15:10	15:30	15:50
MO3.R1: Applications to Fine Arts			Le Théâtre (Parterre), Level 1	
F. Holland Day art photographic paper clustering: Automated procedures to assist photograph conservators? <i>Patrice Abry</i>	Tri-modal imaging spectroscopy of paintings <i>John K. Delaney</i>	Information Processing for Art: a conservator's view <i>Ella Hendriks</i>	Seeing the unseen <i>Barbara Zitová</i>	Panel Discussion: Applications to Fine Arts <i>Ingrid Daubechies, Miguel Rodrigues, Aleksandra Pizurica</i>

MO3.R2: Age of Information I			Saint Germain, Level 3	
Age of Information With Prioritized Streams: When to Buffer Preempted Packets? <i>Ali Maatouk, Mohamad Assaad, Anthony Ephremides</i>	Queue Management for Age Sensitive Status Updates <i>Antzela Kosta, Nikolaos Pappas, Anthony Ephremides, Vangelis Angelakis</i>	Optimal Age over Erasure Channels <i>Elie Najm, Emre Telatar, Rajai Nasser</i>	Age-Delay Tradeoffs in Single Server Systems <i>Rajat Talak, Eytan Modiano</i>	When a Heavy Tailed Service Minimizes Age of Information <i>Rajat Talak, Serdar Karaman, Eytan Modiano</i>

MO3.R3: Private Information Retrieval I			Monge, Level 3	
Single-Server Single-Message Online Private Information Retrieval with Side Information <i>Fatemeh Kazemi, Esmail Karimi, Anooosheh Heidarzadeh, Alex Sprintson</i>	Private Inner Product Retrieval for Distributed Machine Learning <i>Mohammad Hossein Mousavi, Mohammad Ali Maddah-Ali, Mahtab Mirmohseni</i>	Constructions of batch codes via finite geometry <i>Nikita Polyanskiy, Ilya Vorobyev</i>	Symmetric Private Information Retrieval with Mismatched Coded Messages and Randomness <i>Qiwen Wang, Hua Sun, Mikael Skoglund</i>	Capacity-Achieving Private Information Retrieval Codes from MDS-Coded Databases with Minimum Message Size <i>Ruida Zhou, Chao Tian, Tie Liu, Hua Sun</i>

MO3.R4: Signal Processing			Odéon, Level 3	
Asymptotics and Optimal Designs of SLOPE for Sparse Linear Regression <i>Hong Hu, Yue M. Lu</i>	Turing Computability of the Fourier Transform of Bandlimited Functions <i>Holger Boche, Ullrich J. Mönich</i>	Joint Sampling and Recovery of Correlated Sources <i>Nir Shlezinger, Salman Salamation, Yanina C. Eldar, Muriel Médard</i>	Task-Based Quantization for Recovering Quadratic Functions Using Principal Inertia Components <i>Salman Salamation, Nir Shlezinger, Yanina C. Eldar, Muriel Médard</i>	A Random Walk Approach to First-Order Stochastic Convex Optimization <i>Sattar Vakil, Qing Zhao</i>

MO3.R5: Community Detection and Graphical Models			Saint Victor, Level 3	
The Geometry of Community Detection via the MMSE Matrix <i>Galen Reeves, Vaishakhi Mayya, Alexander Volkovskiy</i>	Mutual Information for the Stochastic Block Model by the Adaptive Interpolation Method <i>Jean Barbier, Chun Lam Chan, Nicolas Macris</i>	Finding Better Web Communities in Digraphs via Max-Flow Min-Cut <i>Chung Chan, Ali Al-Babshshesh, Da Sun Handason Tam, Chao Zhao</i>	Exact Recovery for a Family of Community-Detection Generative Models <i>Luca Corinzia, Paolo Penna, Luca Mondada, Joachim M. Buhmann</i>	Community Detection with Side Information via Semidefinite Programming <i>Mohammad Esmaili, Hussein Saad, Aria Nosratinia</i>

MO3.R6: Multiple Access Channels			Sorbonne, Level 5	
Multi-User UD k-Ary Codes Recursively Constructed from Short-Length Multiary Codes for Multiple-Access Adder Channel <i>Shan Lu, Wei Hou, Jun Cheng, Hiroshi Kamabe</i>	Improved bounds on Gaussian MAC and sparse regression via Gaussian inequalities <i>Ilias Zadik, Yury Polyanskiy, Christos Thrampoulidis</i>	Multiple Access Channels with Adversarial Users <i>Neha Sangwan, Mayank Bakshi, Bikash Kumar Dey, Vinod M. Prabhakaran</i>	Quasi-static fading MAC with many users and finite payload <i>Suhas S Kowshik, Yury Polyanskiy</i>	The Capacity Region of the Arbitrarily Varying MAC: With and Without Constraints <i>Uzi Pereg, Yossef Steinberg</i>

MO3.R7: Network Information Theory			Bièvre, Level 5	
Dynamic Programming for Quantization of q-ary Input Discrete Memoryless Channels <i>Zhen Mei</i>	Achievable Rate Region for Iterative Multi-User Detection via Low-cost Gaussian Approximation <i>Xiaojie Wang, Chulong Liang, Li Ping, Stephan ten Brink</i>	Polynomial-time Capacity Calculation and Scheduling for Half-Duplex 1-2-1 Networks <i>Yahya H. Ezzeldin, Martina Cardone, Christina Fragouli, Giuseppe Caire</i>	On the Multicast Capacity of Full-Duplex 1-2-1 Networks <i>Yahya H. Ezzeldin, Martina Cardone, Christina Fragouli, Giuseppe Caire</i>	Identification Capacity of Correlation-Assisted Discrete Memoryless Channels: Analytical Properties and Representations <i>Holger Boche, Rafael F. Schaefer, H. Vincent Poor</i>

MO3.R8: Guessing I			Conseil, Level 5	
Two-Stage Guessing <i>Robert Graczyk, Amos Lapidoth</i>	Guessing random additive noise decoding with soft detection symbol reliability information - SGRAND <i>Ken Duffy, Muriel Médard</i>	Universal Randomized Guessing with Application to Asynchronous Decentralized Brute-Force Attacks <i>Neri Merhav, Asaf Cohen</i>	The Hat Guessing Number of Graphs <i>Noga Alon, Omri Ben-Eliezer, Chong Shangguan, Itzhak Tamo</i>	Refinement of Massey Inequality <i>Pantelimon George Popescu, Marios Omar Choudary</i>

Monday, 8 July**16:40-18:00**

16:40	17:00	17:20	17:40
MO4.R1: Information Theory and Learning I		Le Théâtre (Parterre), Level 1	
Non-Negative Matrix Factorization via Low-Rank Stochastic Manifold Optimization <i>Ahmed Douik, Babak Hassibi</i>	An information theoretic model for summarization, and some basic results <i>Eric Graves, Qiang Ning, Prithwish Basu</i>	A Method to Improve Consensus Averaging using Quantized ADMM <i>Nandan Sriranga, Chandra R. Murthy, Vaneet Aggarwal</i>	Solving linear inverse problems using generative models <i>Shirin Jalali, Xin Yuan</i>
MO4.R2: Index Coding I		Saint Germain, Level 3	
Locality in Index Coding for Large Min-Rank <i>Lakshmi Natarajan, Hoang Dau, Prasad Krishnan, V. Lalitha</i>	Optimal-Rate Characterisation for Pliable Index Coding using Absent Receivers <i>Lawrence Ong, Badri N. Vellambi, Joerg Klawier</i>	Code Construction for Pliable Index Coding <i>Shanuja Sasi, B. Sundar Rajan</i>	Decentralized Pliable Index Coding <i>Tang Liu, Daniela Tuninetti</i>
MO4.R3: Privacy		Monge, Level 3	
Profile-based Privacy for Locally Private Computations <i>Joseph Donald Geumlek, Kamalika Chaudhuri</i>	Synthesizing Differentially Private Datasets using Random Mixing <i>Kangwook Lee, Hoon Kim, Kyungmin Lee, Changho Suh, Kannan Ramchandran</i>	Optimal Mechanism for Randomized Responses under Universally Composable Security Measure <i>Yuuya Yoshida, Man-Hong Yung, Masahito Hayashi</i>	Information-Theoretic Privacy Watchdogs <i>Hsiang Hsu, Shahab Asodeh, Flavio P. Calmon</i>
MO4.R4: Universal Compression		Odéon, Level 3	
Tail redundancy and its characterizations of universal compression <i>Maryam Hosseini, Narayana Santhanam</i>	Time-universal data compression and prediction <i>Boris Ryabko</i>	Universal D-Semifairfull Coding for Countably Infinite Alphabets <i>Jorge F. Silva, Pablo Piantanida</i>	Local Decoding and Update of Compressed Data <i>Shashank Vatedka, Aslan Tchamkerten</i>
MO4.R5: Generalization Bounds		Saint Victor, Level 3	
An Information-Theoretic View of Generalization via Wasserstein Distance <i>Hao Wang, Mario Diaz, José Cándido Silveira Santos Filho, Flavio P. Calmon</i>	Strengthened Information-theoretic Bounds on the Generalization Error <i>Ibrahim Issa, Amedeo Roberto Esposito, Michael Gastpar</i>	Tightening Mutual Information Based Bounds on Generalization Error <i>Yuheng Bu, Shaofeng Zou, Venugopal V. Veeravalli</i>	Compressive Sensing with a Multiple Convex Sets Domain <i>Hang Zhang, Afshin Abdi, Faramarz Fekri</i>
MO4.R6: Wireless Communications I		Sorbonne, Level 5	
Tradeoff Between Delay and High SNR Capacity in Quantized MIMO Systems <i>Abbas Khalili, Farhad Shirani, Elza Erkip, Yonina C. Eldar</i>	On Multiterminal Communication over MIMO Channels with One-bit ADCs at the Receivers <i>Abbas Khalili, Farhad Shirani, Elza Erkip, Yonina C. Eldar</i>	Using Erasure Feedback for Online Timely Updating with an Energy Harvesting Sensor <i>Ahmed Arafa, Jing Yang, Sennur Ulukus, H. Vincent Poor</i>	Saddlepoint Approximations for Noncoherent Single-Antenna Rayleigh Block-Fading Channels <i>Alejandro Lancho, Johan Östman, Giuseppe Durisi, Tobias Koch, Gonzalo Vazquez-Vilar</i>
MO4.R7: Codes and Information Theoretic Cryptography		Bièvre, Level 5	
Structured Coding for Authentication in the Presence of a Malicious Adversary <i>Allison Beemer, Oliver Kosut, Joerg Klawier, Eric Graves, Paul Yu</i>	Composable, Unconditionally Secure Message Authentication without any Secret Key <i>Dimitar Ostrev</i>	Shared Randomness in Arbitrarily Varying Channels <i>Sagnik Bhattacharya, Amitalok J. Budkuley, Sidharth Jaggi</i>	When are large codes possible for AVCs? <i>Xishi (Nicholas) Wang, Amitalok J. Budkuley, Andrej Bogdanov, Sidharth Jaggi</i>
MO4.R8: Guessing II		Conseil, Level 5	
Privacy Against Brute-Force Inference Attacks <i>Seyed Ali Osia, Borzoo Rassouli, Hamed Haddadi, Hamid R. Rabiee, Deniz Gunduz</i>	Robustness of Maximal α -Leakage to Side Information <i>Jiachun Liao, Lalitha Sankar, Oliver Kosut, Flavio P. Calmon</i>	On the Conditional Smooth Renyi Entropy and Its Application in Guessing <i>Shigeaki Kuzuoka</i>	Non-Asymptotic Fundamental Limits of Guessing Subject to Distortion <i>Shota Saito, Toshiyasu Matsushima</i>
MO4.R9: Gaussian Wiretap Channels		Pontoise, Level 5	
The Dirty Paper Wiretap Feedback Channel with or without Action on the State <i>Bin Dai, Chong Li, Yingbin Liang, Zheng Ma, Shlomo Shamai (Shitz)</i>	Quantized Mechanisms for Gaussian Multiple Access Wiretap Channels <i>Hao Ge, Randall Berry</i>	Optimal Secure GDoF of Symmetric Gaussian Wiretap Channel with a Helper <i>Jinyuan Chen, Chunhua Geng</i>	The Degraded Gaussian Many-Access Wiretap Channel <i>Remi Chou, Aylin Yener</i>

Tuesday, 9 July

09:50-11:10

09:50	10:10	10:30	10:50
TU1.R1: Coded Caching II			Le Théâtre (Parterre), Level -1
Subspace Coding for Coded Caching: Decentralized and Centralized Placements Meet for Three Users <i>Hadi Reiszadeh, Mohammad Ali Maddah-Ali, Soheil Mohajer</i>	Coded Caching via Projective Geometry: A new low subpacketization scheme <i>Hari Hara Suthan Chittoor, Bhavana M, Prasad Krishnan</i>	Closing the Gap for Coded Caching with Distinct File Sizes <i>Junbei Zhang, Xiaojun Lin, Chih-Chun Wang</i>	On Coded Caching with Correlated Files <i>Kai Wan, Daniela Tuninetti, Mingyue Ji, Giuseppe Caire</i>
TU1.R2: Information Theory and Statistics I			Saint Germain, Level 3
Subadditivity Beyond Trees and the Chi-Squared Mutual Information <i>Emmanuel Abbe, Enric Boix Adserà</i>	An Information Theoretic Approach to Probability Mass Function Truncation <i>Ferdinando Cicalese, Luisa Gargano, Ugo Vaccaro</i>	Monotonicity of Entropy in Positively Correlated Ising Trees <i>Matthew Reyes, David Neuhoff</i>	Algebraic Properties of Wyner Common Information Solution under Graphical Constraints <i>Md Mahmudul Hasan, Shuangqing Wei, Ali Moharrer</i>
TU1.R3: Emerging Applications of IT I			Monge, Level 3
Coded Distributed Computing over Packet Erasure Channels <i>Dong-Jun Han, Ji-yong Sohn, Jaekyun Moon</i>	Coded Matrix Multiplication on a Group-Based Model <i>Muah Kim, Ji-yong Sohn, Jaekyun Moon</i>	Divergence Family Attains Blockchain Applications via alpha-EM Algorithm <i>Yasuo Matsuyama</i>	Information Storage in the Stochastic Ising Model at Low Temperature <i>Ziv Goldfeld, Guy Bresler, Yury Polyanskiy</i>
TU1.R4: Interference I			Odéon, Level 3
Cloud-Aided Interference Management with Cache-Enabled Edge Nodes and Users <i>Seyed Pooya Shariatpanahi, Jingjing Zhang, Osvaldo Simeone, Babak Hossein Khalaj, Mohammad Ali Maddah-Ali</i>	On the Capacity of Sampled Interference-Limited Communications Channels <i>Nir Shlezinger, Emeka Abakasanga, Ron Dabora, Yonina C. Eldar</i>	Interference Channels with Confidential Messages: Leveraging OFDM Transmission to Scale up Secure Degrees of Freedom with No CSIT <i>Jean de Dieu Mutangana, Ravi Tandon</i>	Channel Conditions for the Optimality of Interference Decoding Schemes for K-user Gaussian Interference Channels <i>Ragini Chahluwadi, Balli Madhuri, Srikrishna Bhashyam</i>
TU1.R5: DNA-based Storage			Saint Victor, Level 3
Anchor-Based Correction of Substitutions in Indexed Sets <i>Andreas Lenz, Paul H. Siegel, Antonia Wachter-Zeh, Eitan Yaakobi</i>	Capacity Results for the Noisy Shuffling Channel <i>Ilan Shomorony, Reinhard Heckel</i>	On Coding Over Sliced Information <i>Jim Sima, Netanel Raviv, Jehoshua Bruck</i>	Linear-Time Encoders for Codes Correcting a Single Edit for DNA-Based Data Storage <i>Yeow Meng Chee, Han Mao Kiah, Tuan Thanh Nguyen</i>
TU1.R6: Wireless Communications II			Sorbonne, Level 5
On the Degrees of Freedom of the Oversampled Wiener Phase Noise Channel <i>Luca Barletta, Stefano Rini</i>	On Decentralized Power Control for Ergodic MIMO Multiple Access Channels <i>Chirag C Shetty, Kamal Singh, Sibi Raj B Pillai</i>	Decentralized Massive MIMO Systems: Is There Anything to be Discussed? <i>Jesus Rodriguez Sanchez, Juan Vidal Alegria, Fredrik Rusek</i>	Capacity analysis of MISO channels with one-bit transceiver <i>Yunseo Nam, Heedong Do, Yosep Jeon, Namyoon Lee</i>
TU1.R7: Voting and Biometric Privacy			Bièvre, Level 5
On Error Exponents Under A Privacy-Preserving Voting Regime <i>Ertem Tuncel</i>	False-Accept/False-Reject Trade-offs for Ensembles of Biometric Authentication Systems <i>Neri Merhav</i>	Biometric Systems with Multiuser Access Structures <i>Remi Chou</i>	Identification, Secrecy, Template, and Privacy-Leakage of Biometric Identification System under Noisy Enrollment <i>Vamoua Yachongka, Hideki Yagi</i>
TU1.R8: Codes for Privacy and Wiretap Channels			Conseil, Level 5
ON-OFF Privacy with Correlated Requests <i>Carolina Naim, Fangwei Ye, Salim El Rouayheb</i>	A Graph-Based Modular Coding Scheme Which Achieves Semantic Security <i>Moritz Wiese, Holger Boche</i>	Attributes of Generators for Best Finite Blocklength Coset Wiretap Codes over Erasure Channels <i>Willie K. Harrison, Matthieu R. Bloch</i>	Proving Erasure <i>Xavier Coiteux-Roy, Stefan Wolf</i>

Tuesday, 9 July

11:40-13:00

11:40	12:00	12:20	12:40
TU2.R1: Jack Keil Wolf Award		Le Théâtre (Parterre), Level 1	
Computing the Feedback Capacity of Finite State Channels using Reinforcement Learning <i>Ziv Aharoni, Oron Sabag, Haim Henry Permuter</i>	Asymptotics of MAP Inference in Deep Networks <i>Parthe Pandit, Mojtaba Sahraee, Sundeeep Rangan, Alyson K. Fletcher</i>	Optimal k-Deletion Correcting Codes <i>Jin Sima, Jehoshua Bruck</i>	A Quadratic Field-Size Rate-Optimal Streaming Code for Channels with Burst and Random Erasures <i>Nikhil Krishnan Murallee Krishnan, Deepanshu Shukla, P. Vijay Kumar</i>
TU2.R2: Network Coding II		Saint Germain, Level 3	
Scalable Network-Coded PBFT Consensus Algorithm <i>Beongjun Choi, Jy-yong Sohn, Dong-Jun Han, Jaekyun Moon</i>	Network Coding Solutions for the Combination Network and its Subgraphs <i>Han Cai, Tuvit Etzion, Moshe Schwartz, Antonia Wachter-Zeh</i>	Weight Enumerating Function, Number of Full Rank Sub-matrices and Network Coding <i>Mahesh Babu Vaddi, B. Sundar Rajan</i>	A method to find the volume of a sphere in the Lee metric, and its applications <i>Sagnik Bhattacharya, Adrish Banerjee</i>
TU2.R3: Estimation II		Monge, Level 3	
Binary Recursive Estimation on Noisy Hardware <i>Elsa Dupraz, Lav Varshney</i>	Trading off Weak-Noise Estimation Performance and Outage Exponents in Nonlinear Modulation <i>Neri Merhav</i>	Asymptotic Properties of Recursive Particle Maximum Likelihood Estimation <i>Vladislav Tadic, Arnaud Doucet</i>	Optimality of the Plug-in Estimator for Differential Entropy Estimation under Gaussian Convolutions <i>Ziv Goldfeld, Kristjan Greenewald, Jonathan Weed, Yury Polyanskiy</i>
TU2.R4: Testing and Classification II		Odéon, Level 3	
Active Hypothesis Testing: Beyond Chernoff-Stein <i>Dhruva Kartik, Ashutosh Nayyar, Urbashi Mitra</i>	Stochastic Decision with Stationary Memoryless Sequence <i>Jun Muramatsu, Miyake Shigeki</i>	Adaptive Sequence Phase Detection <i>Lele Wang, Ofer Shayevitz</i>	Quantizing Signals for Linear Classification <i>Yahya H. Ezzeldin, Christina Fragouli, Suhas Diggavi</i>
TU2.R5: Information Theory in Biology II		Saint Victor, Level 3	
A General Upper Bound on Point-to-Point Particle Timing Channel Capacity Under Constant Particle Emission Intensity <i>Christopher Rose, I. S. Mian</i>	Procedure for Identifying Odd-sized Nucleotide Sequences as Codewords of BCH Codes over GF(4) <i>David Leonardo Rodriguez-Sarmiento, Mario Enrique Duarte-González, Tania Rodriguez-Quiñones, Reginaldo Palazzo Jr.</i>	Some Enumeration Problems in the Duplication-Loss Model of Genome Rearrangement <i>Mladen Kovačević, Sanja Brdar, Vladimir Crnojević</i>	Repeat-Free Codes <i>Ohad Elishco, Ryan Gabrys, Muriel Médard, Eitan Yaakobi</i>
TU2.R6: Finite-Length Analysis		Sorbonne, Level 5	
Second-Order Characterizations via Partial Smoothing <i>Anurag Anshu, Mario Berta, Rahul Jain, Marco Tomamichel</i>	A Unified Framework for One-shot Achievability via the Poisson Matching Lemma <i>Cheuk Ting Li, Venkat Anantharam</i>	One-Shot Perfect Secret Key Agreement for Finite Linear Sources <i>Chung Chan, Navin Kashyap, Praneeth Kumar Vippathalla, Qiaoqiao Zhou</i>	Semi-Finite Length Analysis for Secure Random Number Generation <i>Masahito Hayashi</i>
TU2.R7: Game Theory		Bièvre, Level 5	
Adversarial Influence Maximization <i>Justin Khim, Varun Jo, Po-Ling Loh</i>	Dynamic Pricing for Controlling Age of Information <i>Xuehe Wang, Lingjie Duan</i>	A New Proof of Nonsignalling Multiprover Parallel Repetition Theorem <i>Himanshu Tyagi, Shun Watanabe</i>	On the Number of Bins in Equilibria for Signaling Games <i>Serkan Saritas, Philippe Furrer, Sinan Gezici, Tamás Linder, Serdar Yüksel</i>
TU2.R8: Covert Communication		Conseil, Level 5	
Codes for Covert Communication over Additive White Gaussian Noise Channels <i>Ishaque Ashar Kadampot, Mehرداد Tahmasbi, Matthieu R. Bloch</i>	Covert Communication Over a Compound Discrete Memoryless Channel <i>Mehrasa Ahmadipour, Saadaf Salehkalaibar, Mohammad Hossein Yassaee, Vincent Y. F. Tan</i>	Multi-Antenna Jamming in Covert Communication <i>Ori Shmuel, Asaf Cohen, Omer Gurewitz, Alejandro Cohen</i>	Undetectable Radios: Covert Communication under Spectral Mask Constraints <i>Qiaosheng Zhang, Matthieu R. Bloch, Mayank Bakshi, Sidharth Jaggi</i>
TU2.R9: Channel Models		Pontoise, Level 5	
Towards a non-stochastic information theory <i>Anshuka Rangji, Massimo Franceschetti</i>	The Interplay of Causality and Myopia in Adversarial Channel Models <i>Bikash Kumar Dey, Sidharth Jaggi, Michael Langberg, Anand D. Sarwate, Carol Wang</i>	On the Capacity of the Flash Memory Channel with Inter-cell Interference <i>Yonglong Li, Guangyue Han, Paul H. Siegel</i>	Modeling Packet Losses in Communication Networks <i>Irina Bocharova, Boris Kudryashov, Maben Rabi, Nikita Lyamin, Wouter Dankers, Erik Frick, Alexey Vinel</i>

Tuesday, 9 July

14:30-16:10

14:30	14:50	15:10	15:30	15:50
TU3.R1: Applications to Scientific Discovery			Le Théâtre (Parterre), Level 1	
The Information Bottleneck Theory of Deep Learning: Towards Interpretable Deep Neural Networks <i>Naftali Tishby</i>	Towards Deep Reasoning for Wireless <i>Jean-Claude Belfiore</i>	DNA Punch-Cards: Implementations and Coding-Theoretic Approaches <i>Olga Milenkovic</i>	Thermodynamics of cellular information transmission <i>Rein ten Wolde</i>	Panel Discussion: Applications to Scientific Discovery <i>Urbashi Mitra</i>

TU3.R2: Age of Information II			Saint Germain, Level 3	
Updates with Multiple Service Classes <i>Roy D. Yates, Jing Zhong, Wuyang Zhang</i>	Online Energy-Efficient Scheduling for Timely Information Downloads in Mobile Networks <i>Yi-Hsuan Tseng, Yu-Pin Hsu</i>	Scheduling to Minimize Age of Synchronization in Wireless Broadcast Networks with Random Updates <i>Haoyue Tang, Jintao Wang, Zihan Tang, Jian Song</i>	Minimizing Age in Gateway Based Update Systems <i>Sandeep Banik, Sanjit Krishnan Kaul, Sujit Pedda Ballyarasimhuni</i>	Status from a Random Field: How Densely Should One Update? <i>Zhiyuan Jiang, Sheng Zhou</i>

TU3.R3: Private Information Retrieval II			Monge, Level 3	
Single-Server Multi-Message Individually-Private Information Retrieval with Side Information <i>Anoosheh Heidarzadeh, Swanand Kadhe, Salim El Rouayheb, Alex Sprintson</i>	A Capacity-Achieving T-PIR Scheme Based On MDS Array Codes <i>Jingke Xu, Yaqian Zhang, Zhifang Zhang</i>	A New Design of Private Information Retrieval for Storage Constrained Databases <i>Nicholas Woolsey, Rong-Rong Chen, Mingyue Ji</i>	Private Information Retrieval from Locally Repairable Databases with Colluding Servers <i>Umberto Martinez-Penas</i>	A Generalization of the Blackburn-Etzion Construction for Private Information Retrieval Array Codes <i>Yeow Meng Chee, Han Mao Kiah, Eitan Yaakobi, Hui Zhang</i>

TU3.R4: Reed-Solomon and MDS Codes			Odéon, Level 3	
Systematic Construction of MDS Codes with Small Sub-packetization Level and Near Optimal Repair Bandwidth <i>Jie Li, Xiaohu Tang</i>	Improved Soft Decoding of Reed-Solomon Codes on Gilbert-Elliott Channels <i>Michel Kulkhandjian, Hovannes Kulkhandjian, Claude D'Amours</i>	Near-optimal Repair of Reed-Solomon Codes with Low Sub-packetization <i>Venkatesan Guruswami, Haotian Jiang</i>	Iterative Decoding of Reed-Solomon Codes based on Non-binary Matrices <i>Viduranga Bandara Wijekoon, Hoang Dau, Emanuele Viterbo</i>	On the I/O Costs in Repairing Short-Length Reed-Solomon Codes <i>Weiqi Li, Son Hoang Dau, Zhiyong Wang, Hamid Jafarkhani, Emanuele Viterbo</i>

TU3.R5: Private Computation I			Saint Victor, Level 3	
Distributed and Private Coded Matrix Computation with Flexible Communication Load <i>Malthe Aliasgari, Osvaldo Simeone, Joerg Klawer</i>	Private Secure Coded Computation <i>Minchul Kim, Jungwoo Lee</i>	Harmonic Coding: An Optimal Linear Code for Privacy-Preserving Gradient-Type Computation <i>Qian Yu, Amir Salman Avestimehr</i>	GASP Codes for Secure Distributed Matrix Multiplication <i>Rafael Gregorio Lucas D'Oliveira, Salim El Rouayheb, David Karpuk</i>	INTERPOL: Information Theoretically Verifiable Polynomial Evaluation <i>Saeid Sahaee, Amir Salman Avestimehr</i>

TU3.R6: New Developments in Rényi Entropy			Sorbonne, Level 5	
Remarks on Rényi versions of conditional entropy and mutual information <i>Gautam Aishwarya, Mokshay Madiman</i>	Strong Chain Rules for Min-Entropy under Few Bits Spoiled <i>Maciej Skorski</i>	Greedy additive approximation algorithms for minimum-entropy coupling problem. <i>Massimiliano Rossi</i>	A Correlation Measure Based on Vector-Valued L_p Norms <i>Mohammad Mahdi Mojahedian, Salman Beigi, Amin Gohari, Mohammad Hassein Yassaee, Mohammad Reza Aref</i>	Entropic Central Limit Theorem for Rényi Entropy <i>Jiange Li, Arnaud Marsiglietti, James Melbourne</i>

TU3.R7: Quantum Data Compression			Bièvre, Level 5	
Duality between source coding with quantum side information and c-q channel coding <i>Hao-Chung Cheng, Eric Hanson, Nilanjana Datta, Min-Hsiu Hsieh</i>	Entanglement-Assisted Quantum Data Compression <i>Zahra Baghali Khanian, Andreas Winter</i>	Distributed Compression of Correlated Classical-Quantum Sources <i>Zahra Baghali Khanian, Andreas Winter</i>	Convexity and Operational Interpretation of the Quantum Information Bottleneck Function <i>Nilanjana Datta, Christoph Hirche, Andreas Winter</i>	Faithful Simulation of Distributed Quantum Measurements with Applications in Distributed Rate-Distortion Theory <i>Mohsen Heidari, Touheed Anwar Atif, S. Sandeep Pradhan</i>

TU3.R8: MIMO			Conseil, Level 5	
RLS-Based Detection for Massive Spatial Modulation MIMO <i>Ali Bereyhi, Saba Asaad, Bernhard Gäde, Ralf R. Müller</i>	DNN assisted Sphere Decoder <i>Aymen Askri, Ghaya Rekaya-Ben Othman</i>	The Degrees of Freedom of MIMO Relay under Coherence Diversity <i>Fan Zhang, Aria Nosratinia</i>	Ergodic MIMO Mutual Information: Twenty Years After Emre Telatar <i>Lu Wei</i>	Orthogonal Precoder for Integer-Forcing MIMO <i>Mohammad Nur Hasan, Brian M. Kurkoski, Amin Sakzad, Emanuele Viterbo</i>

TU3.R9: Boolean Functions			Pontoise, Level 5	
Boolean Functions with Biased Inputs: Approximation and Noise Sensitivity <i>Mohsen Heidari, Sandeep Pradhan, Ramji Venkataramanan</i>	On the Mutual Information of Two Boolean Functions, with Application to Privacy <i>Germán Bassi, Mikael Skoglund</i>	On the Most Informative Boolean Functions of the Very Noisy Channel <i>Hengjie Yang, Richard D. Wesel</i>	Low-degree Pseudo-Boolean Function Recovery Using Codes <i>Orhan Ocal, Swanand Kadhe, Kannan Ramchandran</i>	Searching for Highly Nonlinear DPA-Resistant Balanced Boolean Functions in the Rotation Symmetric Class <i>Youle Xu, Qichun Wang</i>

Tuesday, 9 July

16:40-18:00

16:40	17:00	17:20	17:40
TU4.R1: Coded Caching III		Le Théâtre (Parterre), Level 1	
An Optimal Linear Error Correcting Delivery Scheme for Coded Caching with Shared Caches <i>Nujoom Sageer Karat, Spandan Dey, Anoop Thomas, B. Sundar Rajan</i>	The Exact Capacity-Memory Tradeoff for Caching with Uncoded Prefetching in the Two-Receiver Gaussian Broadcast Channel <i>Mohamed Salman, Mahesh K. Varanasi</i>	Coded Caching based on Combinatorial Designs <i>Shailja Agrawal, K V Sushena Sree, Prasadj Krishnan</i>	Rate-Memory Trade-off for Multi-access Coded Caching with Uncoded Placement <i>Srinivas Reddy Kota, Nikhil Karamchandani</i>
TU4.R2: Index Coding II		Saint Germain, Level 3	
Optimal Scalar Linear Codes for a Class of Jointly Extended Groupcast Index Coding Problems <i>Chinmayananda Arunachala, B. Sundar Rajan</i>	Generalized Alignment Chain: Improved Converse Results for Index Coding <i>Yucheng Liu, Parastoo Sadeghi</i>	Reduced Complexity Index Codes and Improved Upperbound on Broadcast Rate for Neighboring Interference Problems <i>Mahesh Babu Vaddi, B. Sundar Rajan</i>	A Generalisation of Interlinked Cycle Structures and Their Index Coding Capacity <i>Mahesh Babu Vaddi, B. Sundar Rajan</i>
TU4.R3: Private Information Retrieval III		Monge, Level 3	
Weakly-Private Information Retrieval <i>Hsuan-Yin Lin, Siddhartha Kumar, Eirik Rosnes, Alexandre Graell i Amat, Eitan Yaakobi</i>	On the Capacity of Leaky Private Information Retrieval <i>Islam Samy, Ravi Tandon, Loukas Lazos</i>	Private Information Retrieval from Heterogeneous Uncoded Caching Databases <i>Karim Banawan, Batuhan Arasli, Yi-Peng Wei, Sennur Ulukus</i>	Private Information Retrieval from Non-Replicated Databases <i>Karim Banawan, Sennur Ulukus</i>
TU4.R4: Interference II		Odéon, Level 3	
New Sum-Rate Capacity Results for Multi-User Interference Channels <i>Reza K. Farsani</i>	On the Capacity of Gaussian Multiple-Access Interference Channels <i>Subhajit Majhi, Patrick Mitran</i>	Opportunistic Topological Interference Management <i>Xinping Yi, Hua Sun</i>	Ergodic Spatial Nulling for Achieving Interference Free Rates <i>Amir Leshem, Uri Erez</i>
TU4.R5: Graphical Models		Saint Victor, Level 3	
Convergent Dynamics for Solving the TAP Equations of Ising Models with Arbitrary Rotation Invariant Coupling Matrices <i>Burak Çakmak, Manfred Oppert</i>	Gaussian Graphical Model Selection from Size Constrained Measurements <i>Gautam Dasarthy</i>	Structure Learning of Similar Ising Models: Information-theoretic Bounds <i>Saurabh Sihag, Ali Tajer</i>	Graph Learning with Partial Observations: Role of Degree Concentration <i>Vincenzo Matta, Augusto Santos, Ali H. Sayed</i>
TU4.R6: Joint Source Channel Coding		Sorbonne, Level 5	
Joint Source-Channel Coding for the Multiple-Access Channel with Correlated Sources <i>Arezou Rezazadeh, Josep Font-Segura, Alfonso Martinez, Albert Guillén i Fàbregas</i>	Joint Source-Channel Coding for the Transmission of Correlated Sources over Two-Way Channels <i>Jian-Jia Weng, Fady Alajaji, Tamás Linder</i>	Joint Source-Channel Coding for Gaussian Sources over AWGN Channels using Variational Autoencoders <i>Yashas Malur Saidutta, Afshin Abdi, Faramarz Fekri</i>	A Lower Bound on the Expected Distortion of Joint Source-Channel Coding <i>Yuval Kochman, Or Ordentlich, Yury Polyanskiy</i>
TU4.R7: Probabilistic Decoding		Bièvre, Level 5	
Hamming Distance Distribution of the 0-reprocessing Estimate of the Ordered Statistic Decoder <i>Chentao Yue, Mahyar Shrivanimaghaddam, Yonghui Li, Branka Vucetic</i>	Improved Iterative Decoding of Product Codes Based on Trusted Subsystems <i>Christian Senger</i>	Estimating the Maximum a Posteriori Threshold for Serially Concatenated Turbo Codes <i>Tarik Benaddi, Arti D. Yardi, Charly Poulliat, Iryna Andriyanova</i>	Statistical Learning Aided Decoding of BMST Tail-Biting Convolutional Code <i>Xiao Ma, Wenchao Lin, Suihua Cai, Baodian Wei</i>
TU4.R8: Insertion-Deletion Correcting Codes I		Conseil, Level 5	
Successive Cancellation Decoding of Polar Codes for Insertion/Deletion Error Correction <i>Hikari Koremura, Haruhiko Kaneko</i>	Polar Codes for the Deletion Channel: Weak and Strong Polarization <i>Ido Tal, Henry D. Pfister, Arman Fazeli, Alexander Vardy</i>	Correcting Deletions in Multiple-Heads Racetrack Memories <i>Jin Sima, Jehoshua Bruck</i>	Coding for Deletion Channels with Multiple Traces <i>Mahed Abroshan, Ramiji Venkataramanan, Lara Dolecek, Albert Guillén i Fàbregas</i>
TU4.R9: Information Inequalities		Pontoise, Level 5	
How to Use Undiscovered Information Inequalities: Direct Applications of the Copy Lemma <i>Emirhan Gürpınar, Andrei Romashchenko</i>	Scalable Automated Proving of Information Theoretic Inequalities with Proximal Algorithms <i>Lin Ling, Chee Wei Tan, Siu-Wai Ho, Raymond W. Yeung</i>	Almost Exact Analysis of Soft Covering Lemma via Large Deviation <i>Mohammad Hossein Yassaee</i>	An Elementary Proof of a Classical Information-Theoretic Formula <i>Xianming Liu, Ronit Rubinfeld, Guangyue Han, Shlomo Shamai (Shitz)</i>

Wednesday, 10 July**09:50-11:10**

09:50	10:10	10:30	10:50
WE1.R1: Polar Codes I			Le Théâtre (Parterre), Level -1

Convolutional Decoding of Polar Codes <i>Arman Fazeli, Alexander Vardy, Hanwen Yao</i>	On Polar Coding for Binary Dirty Paper <i>Barak Beilin, David Burshtein</i>	Polar Coding for Parallel Gaussian Channels <i>David Tse, Bin Li, Kai Chen, Ling Liu, Jiaqi Gu</i>	Reduced complexity window processing of binary polarization kernels <i>Grigori Trofimuk, Peter Trifonov</i>
---	--	---	--

WE1.R2: Coded Computing I			Saint Germain, Level 3
----------------------------------	--	--	-------------------------------

Distributed Stochastic Gradient Descent Using LDGM Codes <i>Shunsuke Hori, Takahiro Yoshida, Manabu Kobayashi, Toshiyasu Matsushima</i>	Mapping Heterogeneity Does Not Affect Wireless Coded MapReduce <i>Eleftherios Lampiris, Daniel Jiménez Zorrilla, Petros Elia</i>	CAMR: Coded Aggregated MapReduce <i>Konstantinos Konstantinidis, Aditya Ramamoorthy</i>	Machine Learning at the Wireless Edge: Distributed Stochastic Gradient Descent Over-the-Air <i>Mohammad Mohammadi Amiri, Deniz Gunduz</i>
--	---	--	--

WE1.R3: Regression and Estimation			Monge, Level 3
--	--	--	-----------------------

High-Dimensional Linear Regression and Phase Retrieval via PSLQ Integer Relation Algorithm <i>David Gamarnik, Eren C. Kizildag</i>	Improved MDL Estimators Using Local Exponential Family Bundles Applied to Mixture Families <i>Kohei Miyamoto, Andrew Barron, Jun'ichi Takeuchi</i>	Minimax Regression via Adaptive Nearest Neighbor <i>Puning Zhao, Lifeng Lai</i>	Learning Feature Nonlinearities with Regularized Binned Regression <i>Samet Oymak, Mehrdad Mahdavi, Jiayi Chen</i>
---	---	--	---

WE1.R4: Cloud and Fog Networks			Odéon, Level 3
---------------------------------------	--	--	-----------------------

Achieving Vanishing Rate Loss in Decentralized Network MIMO <i>Antonio Bazco Nogueiras, Lorenzo Miretti, Paul de Kerret, David Gesbert, Nicolas Gresset</i>	Cloud-Assisted On-Sensor Observation Classification in Latency-Impeded IoT Systems <i>Igor Burago, Marco Levorato</i>	Latency Limits for Content Delivery in a Fog-RAN with D2D Communication <i>Roy Karasik, Osvaldo Simeone, Shlomo Shamai (Shitz)</i>	Capacity Scaling for Cloud Radio Access Networks with Limited Orthogonal Fronthaul <i>Shouvik Ganguly, Young-Han Kim</i>
--	--	---	---

WE1.R5: Information Theory Methods in Graph Theory			Saint Victor, Level 3
---	--	--	------------------------------

Directed Intersection Representations and the Information Content of Digraphs <i>Alexandr Kostochka, Xujun Liu, Roberto Machado, Olgaica Milenkovic</i>	On the Connectivity of Inhomogeneous Random K-out Graphs <i>Rashad Elezby, Osman Yağan</i>	Counting Homomorphisms in Bipartite Graphs <i>Shahab Shams, Nicholas Ruozzi, Péter Csikvári</i>	Counting Graphs with a Given Degree Sequence: An Information-theoretic Perspective <i>Shahar Stein Ioushua, Ofer Shayevitz</i>
--	---	--	---

WE1.R6: Wireless Networks			Sorbonne, Level 5
----------------------------------	--	--	--------------------------

On Stochastic Orders and Fading Gaussian Multi-User Channels with Statistical CSIT <i>Pin-Hsun Lin, Eduard Jorswieck, Rafael F. Schoefer, Carsten Janda, Martin Mittelbach</i>	Using Quantization to Deploy Heterogeneous Nodes in Two-Tier Wireless Sensor Networks <i>Saeed Karimi-Bidhendi, Jun Guo, Hamid Jafarkhani</i>	On the Capacity Scalability of Line Networks with Buffer Size Constraints <i>Shenghao Yang, Jie Wang, Yanyan Dong, Yiheng Zhang</i>	A Fast Node Arrangement Algorithm of Wireless Sensor Networks for Two-dimensional Constraints <i>Takahiro Ota, Ryoji Nakamura, Akiko Manada</i>
---	--	--	--

WE1.R7: Lossless Compression I			Bièvre, Level 5
---------------------------------------	--	--	------------------------

Asymptotics of Entropy of the Dirichlet-Multinomial Distribution <i>Krzysztof Turowski, Philippe Jacquet, Wojciech Szpankowski</i>	Decision Procedure for the Existence of Two-Channel Prefix-Free Codes <i>Hoover H.F. Yin, Ka Hei Ng, Yu Ting Shing, Russell W. F. Lai, Xishi (Nicholas) Wang</i>	Enumeration and Coding of Compact Code Trees for Binary AIFV Codes <i>Kengo Hashimoto, Kenichi Iwata, Hirotsuke Yamamoto</i>	Variable-length compression and secrecy by design <i>Yanina Y. Shkel, Rick S. Blum, H. Vincent Poor</i>
---	---	---	--

WE1.R8: Reed-Solomon Codes			Conseil, Level 5
-----------------------------------	--	--	-------------------------

Reed-Solomon Codes over Fields of Characteristic Zero <i>Carmen Maria Sippel, Cornelia Ott, Sven Puchinger, Martin Bossert</i>	Polynomial Linear System Solving with Errors by Simultaneous Polynomial Reconstruction of Interleaved Reed-Solomon Codes. <i>Eleonora Guerrini, Romain Lebreton, Ilaria Zappatore</i>	Progressive Module Minimization for Re-encoding Transformed Soft Decoding of RS Codes <i>Jianguye Xing, Li Chen, Martin Bossert</i>	On Fractional Decoding of Reed-Solomon Codes <i>Wellington Santos</i>
---	--	--	--

Wednesday, 10 July

11:40-13:20

11:40	12:00	12:20	12:40	13:00
WE2.R1: Deep Learning for Compression			Le Théâtre (Parterre), Level 1	
Learned Data Compression <i>Johannes Ballé</i>	Bio-inspired problems in rate-distortion theory <i>Sarah Marzen</i>	Compressed sensing and generative models <i>Eric Price</i>	Deepcode: Feedback Codes via Deep Learning <i>Hyeyi Kim</i>	Panel Discussion: Deep Learning for Compression <i>Aaron B. Wagner, Lav Varshney</i>

WE2.R2: Distributed Storage			Saint Germain, Level 3	
On the Optimal Reconstruction Degree of Fractional Repetition Codes <i>Bing Zhu, Kenneth W. Shum, Hui Li, Weiping Wang</i>	Capacity of dynamical storage systems <i>Ohad Elishco, Alexander Barg</i>	On Epsilon-MSCR Codes for Two Erasures <i>Rekha Devi Bh, Lalitha V</i>	Convolutional LPDC codes for Distributed Storage Systems <i>Roberta Barbi, Pascal Felber, Laurent Hayez, Hugues Mercier</i>	Update Bandwidth for Distributed Storage <i>Zhengrui Li, Sian-Jheng Lin</i>

WE2.R3: Coding for Memories			Monge, Level 3	
Double and Triple Node-Erasure-Correcting Codes over Graphs <i>Lev Yohananov, Yuval Efron, Eitan Yaakobi</i>	Bounds on Codes for the Bit-Shift Channel with (d,k) -Constrained Inputs <i>Mladen Kovačević</i>	The Capacity of Count-Constrained ICI-Free Systems <i>Navin Kashyap, Ron M. Roth, Paul H. Siegel</i>	Coding for Write $\$ell$ -step-up Memories <i>Yeow Meng Chee, Han Mao Kiah, A. J. Han Vinck, Van Khu Vu, Eitan Yaakobi</i>	Efficient MDS Array Codes for Correcting Multiple Column Erasures <i>Zhijie Huang, Hong Jiang, Hao Che, Nong Xiao, Ning Li</i>

WE2.R4: Lattice Codes			Odéon, Level 3	
Perfect Codes in Euclidean Lattices: Bounds and Case Studies <i>Giselle Strey, Antonio Campello, João E. Strapasson, Sueli Irene Rodrigues Costa</i>	Constructive spherical codes in 2^k dimensions <i>Henrique Koji Miyamoto, Henrique Nogueira de Sá Earp, Sueli Irene Rodrigues Costa</i>	Double Nearest-Neighbor Error Correcting Codes on Hexagonal Signal Constellation <i>Hiroyoshi Morita</i>	On the CVP for the root lattices via folding with deep ReLU neural networks <i>Vincent Corlay, Joseph Boutros, Philippe Ciblat, Loïc Brunel</i>	List Decoding Random Euclidean Codes and Infinite Constellations <i>Yihan Zhang, Shashank Vatedka</i>

WE2.R5: Broadcast Channels			Saint Victor, Level 3	
Broadcasting on Random Networks <i>Anuran Makur, Elchanan Mossel, Yuri Polyanskiy</i>	Degrees of Freedom Region of the (M, N_1, N_2) MIMO Broadcast Channel with Partial CSIT: An Application of Sum-set Inequalities <i>Arash Gholami Davoodi, Syed Ali Jafar</i>	Capacity Results via Message Merging and Superposition Coding in the $\$K\$$ -Receiver Broadcast Channel with General Message Sets <i>Mohamed Salman, Mahesh K. Varanasi</i>	No Feedback, No Problem: Capacity of Erasure Broadcast Channels with Single-User Delayed CSI <i>Shih-Chun Lin, I-Hsiang Wang, Alireza Vahid</i>	Broadcasting correlated Gaussians and asymmetric data transmission <i>Shraga I. Brass</i>

WE2.R6: Private Computation II			Sorbonne, Level 5	
Private Computation with Side Information: The Single-Server Case <i>Anoosheh Heidarzadeh, Alex Sprintson</i>	Capacity of Single-Server Single-Message Private Information Retrieval with Private Coded Side Information <i>Anoosheh Heidarzadeh, Fatemeh Kazemi, Alex Sprintson</i>	Private Sequential Function Computation <i>Behrooz Tahmasebi, Mohammad Ali Maddah-Ali</i>	Private Polynomial Computation from Lagrange Encoding <i>Netanel Raviv, David Karpuk</i>	Private Polynomial Computation for Nonconcluding Coded Databases <i>Sarah A. Obead, Hsuan-Yin Lin, Eirik Rosnes, Joerg Klawner</i>

WE2.R7: Lossless Compression II			Bièvre, Level 5	
Fast Construction of Almost Optimal Symbol Distributions for Asymmetric Numeral Systems <i>Danny Dubé, Hidetoshi Yokoo</i>	Entropy Bounds for Grammar-Based Tree Compressors <i>Danny Huckle, Markus Lohrey, Louisa Seelbach Benkner</i>	Lossless Source Coding in the Point-to-Point, Multiple Access, and Random Access Scenarios <i>Shuqing Chen, Michelle Effros, Victoria Kostina</i>	Compression of Preferential Attachment Graphs <i>Tomasz Łuczak, Abram Magsner, Wojciech Szpankowski</i>	New Uniform Bounds for Almost Lossless Analog Compression <i>Yonatan Gutman, Adam Špiwak</i>

WE2.R8: Quantum Security and Privacy			Conseil, Level 5	
From Classical to Semi-Quantum Secure Communication <i>Allison Gagliano, Walter Oliver Krawec, Hasan Iqbal</i>	Publicness, Privacy and Confidentiality in the Single-Serving Quantum Broadcast Channel <i>Farzin Salek Shihavan, Min-Hsiu Hsieh, Javier R. Fonollosa</i>	Simultaneous transmission of classical and quantum information under channel uncertainty and jamming attacks <i>Holger Boche, Gisbert Janssen, Sajad Saedinaeani</i>	Message Transmission over Classical Quantum Channels with a Jammer with Side Information, Correlation as Resource and Common Randomness Generating <i>Holger Boche, Minglai Cai, Ning Cai</i>	Capacity of Quantum Private Information Retrieval with Multiple Servers <i>Seunghoan Song, Masahito Hayashi</i>

WE2.R9: Bounds on Codes			Pontoise, Level 5	
A Lower Bound on the Error Exponent of Linear Block Codes over the Erasure Channel <i>Enrico Paolini, Gianluigi Liva</i>	Generalized Sphere-Packing Bound for Subblock-Constrained Codes <i>Han Mao Kiah, Anshoo Tandon, Mehul Motani</i>	Improved Upper Bounds on the Hermite and KZ Constants <i>Jinming Wen, Xiao-Wen Chang, Jian Weng</i>	Linear Programming Bounds for Cardinality and Energy of Codes of Given Min and Max Distances <i>Peter Boyvalenkov, Peter Dragnev, Douglas Hardin, Edward Saff, Maya Stoyanova</i>	On the Maximum Number of Codewords of X-Codes of Constant Weight Three <i>Yu Tsunoda, Yuichiro Fujiwara</i>

Thursday, 11 July

09:50-11:10

09:50	10:10	10:30	10:50
TH1.R1: Polar Codes II			Le Théâtre (Parterre), Level 1
Explicit Polar Codes with Small Scaling Exponent <i>Hanwen Yao, Arman Fazeli, Alexander Vardy</i>	Polar Coding for Common Message Only Wiretap Broadcast Channel <i>Jaume del Olmo Alos, Javier R. Fonollosa</i>	Puncturing and Shortening for Polar Codes via the Partial Order by Binary Domination <i>Min Jang, Seok-Ki Ahn, Hongsil Jeong, Kyung-Jaong Kim, Seho Myung, Sang-Hyo Kim, Kyeongcheol Yang</i>	How to Modify Polar Codes for List Decoding <i>Mohammad Rowshan, Emanuele Viterbo</i>
TH1.R2: Coded Computing II			Saint Germain, Level 3
Universally Decodable Matrices for Distributed Matrix-Vector Multiplication <i>Aditya Ramamoorthy, Li Tang, Pascal Olivier Vontobel</i>	Irregular Product Coded Computation for High-Dimensional Matrix Multiplication <i>Hyeyeong Park, Jaekyun Moon</i>	Download and Access Trade-offs in Lagrange Coded Computing <i>Netanel Raviv, Qian Yu, Jehoshua Bruck, Amir Salman Avestimehr</i>	Distributed Matrix Multiplication with MDS Array BP-XOR Codes for Scaling Clusters <i>Suayb Arslan</i>
TH1.R3: Information Theory and Learning II			Monge, Level 3
Linearly Convergent Algorithms for Learning Shallow Residual Networks <i>Gauri Jagatap, Chinmay Hegde</i>	Cost-Aware Learning for Improved Identifiability with Multiple Experiments <i>Longyun Guo, Jean Honorio, John Morgan</i>	Classification in a Large Network <i>Vinay Anant Vaishampayan</i>	Shallow Neural Network can Perfectly Classify an Object following Separable Probability Distribution <i>Youngjae Min, Hye Won Chung</i>
TH1.R4: Multiterminal Source Coding			Odéon, Level 3
Exponential Strong Converse for Successive Refinement with Causal Decoder Side Information <i>Lin Zhou, Alfred Hero</i>	A New Proof for the Quadratic Gaussian Two-Encoder Source-Coding Problem <i>Omer Bilgen, Aaron B. Wagner</i>	Towards an Algebraic Network Information Theory: Distributed Lossy Computation of Linear Functions <i>Sung Hoon Lim, Chen Feng, Adriano Pastore, Bobak Nazer, Michael Gastpar</i>	Vector Gaussian Successive Refinement With Degraded Side Information <i>Yinfei Xu, Xuan Guang, Jian Lu</i>
TH1.R5: Extremal Distributions			Saint Victor, Level 3
On the question of the best additive noise among symmetric log-concave noises <i>Mokshay Madiman, Piotr Nayar, Tomasz Tkocz</i>	Equality in the Matrix Entropy-Power Inequality and Blind Separation of Real and Complex sources <i>Olivier Riou, Ram Zamir</i>	Unifying the Brascamp-Lieb Inequality and the Entropy Power Inequality <i>Venkat Anantharam, Varun Jog, Chandra Nair</i>	Exponent Trade-off for Hypothesis Testing Over Noisy Channels <i>Nir Weinberger, Yuval Kochman, Michèle Wigger</i>
TH1.R6: Missing Data			Sorbonne, Level 5
Permutation Recovery from Multiple Measurement Vectors in Unlabeled Sensing <i>Hang Zhang, Martin Slawski, Ping Li</i>	Concentration and Tail Bounds for Missing Mass <i>Prafulla Chandra, Andrew Thangaraj</i>	Provable Subspace Tracking with Missing Entries <i>Praneeth Narayanamurthy, Vahid Daneshpajoo, Namrata Vaswani</i>	
TH1.R7: Post-Quantum Cryptography I			Bièvre, Level 5
Improved Veron Identification and Signature Schemes in the Rank Metric <i>Emanuele Bellini, Florian Caullery, Philippe Gaborit, Marc Manzano, Victor Mateu</i>	Breaking HK17 in Practice <i>Haoyu Li, Renzhang Liu, Qutaibah M. Malluhi, Yanbin Pan, Yongge Wang, Tianyuan Xie</i>	Improved iterative decoding of QC-MDPC codes in the McEliece public key cryptosystem <i>Irina Bocharova, Thomas Johansson, Boris Kudryashov</i>	On Decoding and Applications of Interleaved Goppa Codes <i>Lukas Holzbaur, Hedongliang Liu, Sven Puchinger, Antonia Wachter-Zeh</i>
TH1.R8: Capacity Computation			Conseil, Level 5
Computable Upper Bounds for Unifilar Finite-State Channels <i>Bashar Huleihel, Oron Sabag, Haim Henry Permuter, Navin Kashyap, Shlomo Shamai (Shitz)</i>	A Deterministic Algorithm for the Capacity of Finite-State Channels <i>Chengyu Wu, Guangyue Han, Brian Marcus</i>	An Iterative Algorithm to Optimize the Average Performance of Markov Chains with Finite States <i>Ryusei Fujita, Kenichi Iwata, Hirosuke Yamamoto</i>	An Upper Bound on the Number of Mass Points in the Capacity Achieving Distribution for the Amplitude Constrained Additive Gaussian Channel <i>Semih Yaglı, Alex Dytso, H. Vincent Poor, Shlomo Shamai (Shitz)</i>
TH1.R9: Algebraic Coding Theory			Pontoise, Level 5
The punctured Dodecacode is uniformly packed <i>Denis S. Krotov, Patrick Solé</i>	On Dual Codes in the Doob Schemes <i>Denis S. Krotov</i>	Spectral Bounds for Quasi-Twisted Codes <i>Martianus Frederic Ezerman, San Ling, Buket Ozkaya, Jareena Tharnnukroh</i>	Speeding up decoding a code with a non-trivial automorphism group up to an exponential factor <i>Rodolfo Canto-Torres, Jean-Pierre Tillich</i>

Thursday, 11 July

11:40-13:00

11:40	12:00	12:20	12:40
TH2.R1: Polar Codes III		Le Théâtre (Parterre), Level -1	
On Construction of Polar Subcodes with Large Kernels <i>Peter Trifonov</i>	On the Polarization Levels of Automorphic-Symmetric Channels <i>Rajai Nasser</i>	Design of Polar Codes for Parallel Channels with an Average Power Constraint <i>Thomas Wiegart, Tobias Prinz, Fabian Steiner, Peihong Yuan</i>	Improved Hybrid Design of Polar Codes and Multi-Kernel Polar Codes <i>Valerio Bioglio, Ingmar Land, Carlo Condo</i>
TH2.R2: Network Coding and Broadcasting		Saint Germain, Level 3	
Probabilistic Forwarding of Coded Packets on Networks <i>B. R. Vinay Kumar, Navin Kashyap</i>	On the Minimum Delay of Block Interleaver for Batched Network Codes <i>Hoover H.F. Yin, Ka Hei Ng, Xishi (Nicholas) Wang, Qi Cao</i>	A Unified Adaptive Recoding Framework for Batched Network Coding <i>Hoover H.F. Yin, Bin Tang, Ka Hei Ng, Shenghao Yang, Xishi (Nicholas) Wang, Qiaoqiao Zhou</i>	Packet Efficiency of BATS Coding on Wireless Relay Network with Overhearing <i>Hoover H.F. Yin, Xiaoli Xu, Ka Hei Ng, Yang Liang Guan, Raymond W. Yeung</i>
TH2.R3: Neural Networks and AI		Monge, Level 3	
Local Geometry of Cross Entropy Loss in Learning One-Hidden-Layer Neural Networks <i>Haoyu Fu, Yuejie Chi, Yinbin Liang</i>	An Information-Theoretic Explanation for the Adversarial Fragility of AI Classifiers <i>Hui Xie, Jirong Yi, Weiyu Xu, Raguh Mudumbai</i>	Deep learning and MARS: dimensionality reduction and rates of convergence <i>Michael Kohler, Adam Krzyzak</i>	An Information Theoretic Interpretation to Deep Neural Networks <i>Shao-Lun Huang, Xiangxiang Xu, Lizhong Zheng, Gregory W. Wornell</i>
TH2.R4: Testing and Classification III		Odéon, Level 3	
Being correct eventually almost surely <i>Changlong Wu, Narayana Santhanam</i>	Strong Converse for Hypothesis Testing Against Independence over a Two-Hop Network <i>Daming Cao, Lin Zhou, Vincent Y. F. Tan</i>	Operational Equivalence of Distributed Hypothesis Testing and Identification Systems <i>Minh Thanh Vu, Tobias J. Oechtering, Mikael Skoglund</i>	Hypothesis Testing over a Noisy Channel <i>Sreejith Sreekumar, Deniz Gunduz</i>
TH2.R5: Caching for Networks		Saint Victor, Level 3	
Spatial Soft-Core Caching <i>Derya Malak, Muriel Médard, Edmund Yeh</i>	Wyner's Network on Caches: Combining Receiver Caching with a Flexible Backhaul <i>Eleftherios Lampiris, Aly El Gamal, Petros Elia</i>	Reduce Transmission Delay for Caching-Aided Two-Layer Network <i>Ke Wang, Youlong Wu, Jiahui Chen, Haoyu Yin</i>	Compress-and-Forward via Multilevel Coding <i>Heping Wan, Anders Høst-Madsen, Aria Nosratinia</i>
TH2.R6: Lossy Compression		Sorbonne, Level 5	
Gaussian Approximation of Quantization Error for Estimation from Compressed Data <i>Alan Kipnis, Galen Reeves</i>	The CEO Problem with r th Power of Difference Distortion <i>Daewon Seo, Lav Varshney</i>	Functional Covering of Point Processes <i>Nirmal V. Shende, Aaron B. Wagner</i>	From Parameter Estimation to Dispersion of Nonstationary Gauss-Markov Processes <i>Peida Tian, Victoria Kostina</i>
TH2.R7: Rank Metric Codes		Bièvre, Level 5	
Invariants and Inequivalence of Linear Rank-Metric Codes <i>Alessandra Neri, Sven Puchinger, Anna-Lena Horlemann-Trautmann</i>	Interpolation-based Decoding of Nonlinear Maximum Rank Distance Codes <i>Chunlei Li</i>	Decoding Gabidulin Codes via Partial Inverses of Linearized Polynomials <i>Jiun-Hung Yu, Hans-Andrea Loeliger</i>	Recursive projection-aggregation decoding of Reed-Muller codes <i>Min Ye, Emmanuel Abbe</i>
TH2.R8: Sparse Signal Recovery		Conseil, Level 5	
An Analysis of State Evolution for Approximate Message Passing with Side Information <i>Hangjin Liu, Cynthia Rush, Dror Baron</i>	Sparse Covariance Estimation from Quadratic Measurements: A Precise Analysis <i>Ehsan Abbasi, Fariborz Salehi, Babak Hassibi</i>	Sparse Non-Negative Recovery from Shifted Symmetric Subgaussian Measurements using NNLS <i>Yonatan Shadmi, Peter Jung, Giuseppe Caire</i>	Recovery of Structured Signals From Corrupted Non-Linear Measurements <i>Zhongxing Sun, Wei Cui, Yulong Liu</i>

Thursday, 11 July

14:30-16:10

14:30	14:50	15:10	15:30	15:50
TH3.R1: Quantum Information			Le Théâtre (Parterre), Level 1	
Quantum Information's birth, growth, and impact on fundamental questions <i>Charles Bennett</i>	Towards quantum cryptography for all <i>Eleni Diamanti</i>	The discovery of quantum error correction and quantum fault tolerant protocols <i>Peter Shar</i>	Quantum Supremacy in Noisy Intermediate-Scale Quantum Computers <i>Sergui Boixo</i>	Panel Discussion: Quantum Information <i>Emina Soljanin, Andreas Winter</i>
TH3.R2: Polarization			Saint Germain, Level 3	
Universal Polarization for Processes with Memory <i>Boaz Shuvral, Ida Tal</i>	On the Polarization of $R\backslash(e)$ nyi Entropy <i>Mengfan Zheng, Ling Liu, Cong Ling</i>	On the Convergence of the Polarization Process in the Noisiness/Weak-* Topology <i>Rajai Nasser</i>	A Lower Bound on Minimum Distance of Convolutional Polar Codes <i>Ruslan Morozov, Peter Trifonov</i>	Countably Infinite Multilevel Source Polarization for Non-Stationary Erasure Distributions <i>Yuta Sakai, Ken-ichi Iwata, Hiroshi Fujisaki</i>
TH3.R3: Private Information Retrieval IV			Monge, Level 3	
Private Information Retrieval from Decentralized Uncoded Caching Databases <i>Yi-Peng Wei, Batuhan Arasli, Karim Banawan, Sennur Ulukus</i>	Private Proximity Retrieval <i>Tuvi Etzion, Oliver Gnille, David Karpuk, Eitan Yaakobi, Yiwei Zhang</i>	The Capacity of Multi-round Private Information Retrieval from Byzantine Databases <i>Xinyu Yao, Nan Liu, Wei Kang</i>	Bounds on the Length of Functional PIR and Batch Codes <i>Yiwei Zhang, Eitan Yaakobi, Tuvi Etzion</i>	On the Access Complexity of PIR Schemes <i>Yiwei Zhang, Eitan Yaakobi, Tuvi Etzion, Moshe Schwartz</i>
TH3.R4: Information Theoretic Privacy			Odéon, Level 3	
Predicate Privacy and List Privacy for a rho-Recoverable Function <i>Ajaykrishnan Nageswaran, Prakash Narayan</i>	Privacy Amplification, Lossy Compression, and their Duality to Channel Coding <i>Joseph M. Renes</i>	Secure list decoding <i>Masahito Hayashi</i>	Universal Privacy Guarantees for Smart Meters <i>Miguel Arrieta, Iñaki Esnaola, Michelle Effros</i>	Optimal Privacy-Utility Trade-off under a Rate Constraint <i>Sreejith Sreekumar, Deniz Gunduz</i>
TH3.R5: Secure and Covert Communication			Saint Victor, Level 3	
Throughput Scaling of Covert Communication over Wireless Adhoc Networks <i>Kang-Hee Cho, Si-Hyeon Lee, Vincent Y. F. Tan</i>	Embedding Covert Information on a Given Broadcast Code <i>David Kibloff, Samir Medina Perლა, Ligong Wang</i>	Secure Multiterminal Source Coding With Actions <i>Jian Lu, Yinfei Xu, Ping Zhang, Qiao Wang</i>	Steganography Protocols for Quantum Channels <i>Mehrdad Tahmasbi, Matthieu R. Bloch</i>	In-Band Sensing of the Adversary's Channel for Secure Communication in Wireless Channels <i>Mehrdad Tahmasbi, Matthieu R. Bloch, Aylin Yener</i>
TH3.R6: Quickest Change Detection I			Sorbonne, Level 5	
Sequential Change Detection Based on Universal Compression for Markov Sources <i>Ashwin Verma, Rakesh K. Bansal</i>	Quickest Search for a Change Point <i>Javad Heydari, Ali Tajer</i>	Asynchronous Multi-Sensor Change-Point Detection for Seismic Tremors <i>Liyan Xie, Yao Xie, George Moustakides</i>	Bayesian Quickest Detection of Changes in Statistically Periodic Processes <i>Taposh Banerjee, Prudhvi Gurram, Gene Whipps</i>	On Byzantine Distributed Sequential Change Detection with Multiple Hypotheses <i>Yu-Jui Huang, Shih-Chun Lin, Yu-Chih Huang</i>
TH3.R7: New Directions in Rényi Entropy			Bièvre, Level 5	
Gambling and Rényi Divergence <i>Cédric Bleuler, Amos Lapidoth, Christoph Pfister</i>	Properties of Scaled Error-Correcting Codes with Noncommutative Rényi and Augustin Information <i>Hao-Chung Cheng, Li Gao, Min-Hsiu Hsieh</i>	Rényi Entropy Power Inequalities for s-concave Densities <i>Jiange Li, Arnaud Marsiglietti, James Melbourne</i>	On Exact and ϵ -Rényi Common Informations <i>Lei Yu, Vincent Y. F. Tan</i>	Source resolvability problem with respect to a certain subclass of f-divergence <i>Ryo Namura</i>
TH3.R8: Coding for Feedback Channels			Conseil, Level 5	
Real-time Binary Posterior Matching <i>Anusha Lalitha, Anatoly Khina, Tara Javidi, Victoria Kostina</i>	Algorithms for Q-ary Error-Correcting Codes with Partial Feedback and Limited Magnitude <i>Christian Deppe, Vladimir Lebedev</i>	Error Exponents of Parallel Two-way Discrete Memoryless Channels using Variable Length Coding <i>Kenneth Palacio-Baus, Meysam Asadi, Natasha Devroye</i>	Variable-length Coding Error Exponents for the AWGN Channel with Noisy Feedback at Zero-Rate <i>Kenneth Palacio-Baus, Natasha Devroye</i>	Capacity-Achieving Coding Scheme for the MAC with Degraded Message Sets and Feedback <i>Oron Sabag, Haim Henry Permuter, Shlomo Shamai (Shitz)</i>
TH3.R9: Sequences			Pontoise, Level 5	
Constructions of Two-Dimensional Binary Z-Complementary Array Pairs <i>Cheng-Yu Pai, Yong-Ting Ni, Yen-Cheng Liu, Meng-Hsien Kuo, Chao-Yu Chen</i>	Zero Correlation Zone Sequences from a Unified Construction of Perfect Polyphase Sequences <i>Dan Zhang</i>	The F_M -linear Complexity of M-ary Sidelnikov Sequences of Period $p-1 = F \cdot M^{\alpha}$ <i>Min Zeng, Yuan Luo, Min-Kyu Song, Hong-Yeop Song</i>	A Direct and Generalized Construction of Polyphase Complementary Set With Low PMEPR <i>Palash Sarkar, Sudhan Majhi, Zilong Liu</i>	Near-Optimal Zero Correlation Zone Sequence Sets from Paraurinary Matrices <i>Shibsankar Das, Udaya Parampalli, Sudhan Majhi, Zilong Liu</i>

Thursday, 11 July**16:40-18:00**

16:40	17:00	17:20	17:40
TH4.R1: Learning and Regression		Le Théâtre (Parterre), Level 1	
Universal Learning of Individual Data <i>Yaniv Fogel, Meir Feder</i>	Sample Complexity Bounds for Low-Separation-Rank Dictionary Learning <i>Mohsen Ghassemi, Zahra Shakeri, Waheed U. Bajwa, Anand D. Sarwate</i>	Harmless interpolation of noisy data in regression <i>Vidya Muthukumar, Kailas Vodrahalli, Anant Sahai</i>	A New Look at an Old Problem: A Universal Learning Approach to Linear Regression <i>Koby Bibas, Yaniv Fogel, Meir Feder</i>
TH4.R2: Index and Network Coding		Saint Germain, Level 3	
Secure Network Coding in the Setting in Which a Non-Source Node May Generate Random Keys <i>Debaditya Chaudhuri, Michael Langberg, Michelle Effros</i>	Optimal Index Codes for Some Interlinked Cycle Structures with Outer Cycles <i>Shanuja Sasi, B. Sundar Rajan</i>	On Index coding for Complementary Graphs with focus on Circular Perfect Graphs <i>Bhavana M, Prasad Krishnan</i>	Codes for Updating Linear Functions over Small Fields <i>Suman Ghosh, Lakshmi Prasad Natarajan</i>
TH4.R3: Estimation III		Monge, Level 3	
Blind Unwrapping of Modulo Reduced Gaussian Vectors: Recovering MSBs from LSBs <i>Elad Romanov, Or Ordentlich</i>	On the Distance Between the Rumor Source and Its Optimal Estimate in a Regular Tree <i>Tetsunao Matsuda, Tomahiko Uyematsu</i>	On the Price of Source Anonymity in Heterogeneous Parametric Point Estimation <i>Wei-Ning Chen, H-Hsiang Wang</i>	Secure Estimation under Causative Attacks <i>Saurabh Shihag, Ali Tajer</i>
TH4.R4: Codes and Set Systems		Odéon, Level 3	
Universally Sparse Hypergraphs with Applications to Coding Theory <i>Chong Shangguan, Itzhak Tamo</i>	On the size of pairwise-colliding permutations <i>Janos Korner, Chandra Nair, David Ng</i>	Set-Codes with Small Intersections and Small Discrepancies <i>Ryan Gabrys, Hoang Dau, Charlie Colbourn, Olga Milenkovic</i>	Lower Bounds for Total Storage of Multiset Combinatorial Batch Codes using Linear Programming <i>Yeow Meng Chee, Han Mao Kiah, Hui Zhang</i>
TH4.R5: Insertion-Deletion Correcting Codes II		Saint Victor, Level 3	
Constrained de Bruijn Codes and their Applications <i>Yeow Meng Chee, Juvy Etzion, Han Mao Kiah, Van Khu Vu, Eitan Yaakobi</i>	List Decoding of Deletions Using Guess & Check Codes <i>Serge Kas Hanna, Salim El Rouayheb</i>	Bounded Single Insertion/Deletion Correcting Codes <i>Takayuki Nozaki</i>	On Deletion/Insertion of Zeros and Asymmetric Error Control Codes <i>Luca Tallini, Nawaf Alqaifi, Bella Bose</i>
TH4.R6: Quickest Change Detection II		Sorbonne, Level 5	
Sequential anomaly detection with observation control <i>Aristomenis Tsipelakos, Georgios Fellouris, Venugopal V. Veeravalli</i>	Detecting Changes in Hidden Markov Models <i>George Moustakides</i>	Quickest Detection of a Moving Target in a Sensor Network <i>Georgios Rovatos, Shaofeng Zou, Venugopal V. Veeravalli</i>	A Tight Converse to the Asymptotic Performance of Byzantine Distributed Sequential Change Detection <i>Yu-Chih Huang, Shih-Chun Lin, Yu-Jui Huang</i>
TH4.R7: Topics in Coding Theory		Bièvre, Level 5	
Querying Policies Based on Sparse Matrices for Noisy 20 Questions <i>Qin Huang, Simeng Zheng, Yuanhan Ni, Zulin Wang, Shuai Wang</i>	Relaxed Locally Correctable Codes in Computationally Bounded Channels <i>Jeremiah Blocki, Venkata Gandikota, Elena Grigorescu, Samson Zhou</i>	Analog error-correcting codes <i>Ron M. Roth</i>	Decoding of Generalized Three-Layer Integrated Interleaved Codes <i>Xinmiao Zhang</i>
TH4.R8: Low-density Parity-check I		Conseil, Level 5	
On Decoding Random-Access SC-LDPC Codes <i>Eshed Ram, Yuval Cassuto</i>	A Modified Min-Sum Algorithm for Quantized LDPC Decoders <i>Homayoon Hatami, David G. M. Mitchell, Daniel J. Costello, Thomas E. Fuja</i>	Using algebraic structures to improve LDPC code reconstruction over a noisy channel <i>Pierre Loidreau</i>	Deep Learning-Aided Trainable Projected Gradient Decoding for LDPC Codes <i>Tadashi Wadayama, Satoshi Takabe</i>
TH4.R9: Computational Complexity		Pontoise, Level 5	
On the Computational Complexity of Blind Detection of Binary Linear Codes <i>Alexios Balatsoukas-Stimming, Aris Filos-Ratsikas</i>	Complexity and Similarity for Sequences using LZ77-based conditional information measure <i>François Cayre, Nicolas Le Bihan</i>	On the Algorithmic Solvability of the Spectral Factorization and the Calculation of the Wiener Filter on Turing Machines <i>Holger Boche, Volker Pohl</i>	Permutation Code Equivalence is Not Harder Than Graph Isomorphism When Hulls Are Trivial <i>Magali Bardet, Ayoub Otmari, Mohamed Saeed-Taha</i>

Friday, 12 July

09:50-11:10

09:50	10:10	10:30	10:50
-------	-------	-------	-------

FR1.R1: Function Approximation and Learning**Le Théâtre (Parterre), Level -1**

Fitting ReLUs via SGD and Quantized SGD

Seyed Mohammadreza Mousavi Kalan,
Mahdi Soltanolkotabi, Amir Salman Avestimehr

On the Robustness of Noisy ACE Algorithm and Multi-Layer Residual Learning

Shao-Lun Huang, Xiangxiang Xu

A Tunable Loss Function for Binary Classification

Tyler Sypherd, Mario Diaz, Lalitha Sankar, Peter Kairouz

FR1.R2: Emerging Applications of IT II**Saint Germain, Level 3**

Successive Refinement to Caching for Dynamic Content

Pinar Sen, Michael Gastpar

CodedSketch: Coded Distributed Computation of Approximated Matrix Multiplication

Tayyeb Jahani-Nezhad, Mohammad Ali Maddah-Ali

Multicasting Energy and Information Simultaneously

Ting-Yi Wu, Anshoo Tandon, Lav Varshney, Mehul Motani

Teaching and learning in uncertainty

Varun Jog

FR1.R3: Estimation IV**Monge, Level 3**

An Almost Perfectly Predictable Process with No Optimal Predictor

Dariusz Kalociński, Tomasz Steifer

A Proof of de Bruijn Identity based on Generalized Price's Theorem

Jaume Riba, Ferran de Cabrera

Mutual Information Estimation: Independence Detection and Consistency

Joe Suzuki

FR1.R4: Resource Allocation and Scheduling**Odéon, Level 3**

Optimal Resource Allocation for Cellular Networks with Virtual Cell Joint Decoding

Michal Yemini, Andrea Goldsmith

Whittle Index Policy for Multichannel Scheduling in Queueing Systems

Saad Kriouile, Maialen Larranaga, Mohamad Assaad

On Simple Scheduling in Half-Duplex Relay Diamond Networks

Sarthak Jain, Martina Cardone, Soheil Mahajer

On the Fundamental Limits of Multi-user Scheduling under Short-term Fairness Constraints

Shahram Shahsavari, Farhad Shirani, Elza Erkip

FR1.R5: Bandits**Saint Victor, Level 3**

Online Learning with Diverse User Preferences

Chao Gan, Jing Yang, Ruida Zhou, Cong Shen

Overlapping Multi-Bandit Best Arm Identification

Jonathan Scarlett, Ilija Bogunovic, Volkan Cevher

Interactions Between Learning and Broadcasting in Wireless Recommendation Systems

Linqi Song, Christina Fragouli, Devavrat Shah

Learning to Detect an Odd Markov Arm

P. N. Karthik, Rajesh Sundaresan

FR1.R6: Classical Meets Quantum**Sorbonne, Level 5**

Application of Complementary Dual AG Codes to Entanglement-Assisted Quantum Codes

Francisco Revson Fernandes Pereira, Ruud Pellikaan, Giuliano Gadioli La Guardia, Francisco Marcos de Assis

Stein's Lemma for Classical-Quantum Channels

Mario Berta, Christoph Hirche, Eneet Kaur, Mark M. Wilde

Approximation algorithms for classical-quantum channel coding

Omar Fawzi, Johanna Seif, Dániel Szilágyi

Channel Decoding with Quantum Approximate Optimization Algorithm

Toshiki Matsumine, Toshiaki Koike-Akino, Ye Wang

FR1.R7: Post-Quantum Cryptography II**Bièvre, Level 5**

The Asymptotic Complexity of Coded-BKW with Sieving Using Increasing Reduction Factors

Erik Mårtensson

Loong: a new IND-CCA-secure code-based KEM

Li-Ping Wang

Slice Sampling for Lattice Gaussian Distribution

Zheng Wang, Cong Ling

Cryptanalysis of a One-Time Code-Based Digital Signature Scheme

Paolo Santini, Marco Baldi, Franco Chiaraluce

FR1.R8: Low-density Parity-check II**Conseil, Level 5**

Girth Properties of Time-Varying SC-LDPC Convolutional Codes

Massimo Battaglioni, Marco Baldi, Franco Chiaraluce, Michael Lentmaier

Code Design Principles for Ultra-Reliable Random Access with Preassigned Patterns

Christopher Boyd, Roope Vehkalahti, Olav Tirkkonen, Antti Laaksonen

LDPC Coded Multiuser Shaping for the Gaussian Multiple Access Channel

Alexios Balatsoukas-Stimming, Stefano Rini, Joerg Kliewer

Spatially Coupled LDPC Codes via Partial Superposition

Qianfan Wang, Suihua Cai, Wenchao Lin, Li Chen, Xiao Ma

Friday, 12 July

11:40-13:00

11:40	12:00	12:20	12:40
FR2.R1: Coded Caching IV		Le Théâtre (Parterre), Level 1	
Coded Caching with Heterogeneous User Profiles <i>Su Wang, Borja Peleato</i>	Fundamental Limits of Coded Caching: The Memory Rate Pair $(K-1-1/K, 1/(K-1))$ <i>Vijith Kumar K P, Brijesh Kumar Rai, Jacob Tony</i>	Pareto Optimal Schemes in Coded Caching <i>Vijith Kumar K P, Brijesh Kumar Rai, Tony Jacob</i>	Towards Jointly Optimal Placement and Delivery: To Code or Not to Code in Wireless Caching Networks <i>Yusef AlHassoun, Faisal Alotaibi, Aly El Gamal, Hesham El Gamal</i>
FR2.R2: Coded Computation and Networks		Saint Germain, Level 3	
A Computation-Communication Tradeoff Study for Mobile Edge Computing Networks <i>Kuikui Li, Meixia Tao, Zhiyong Chen</i>	Cascaded Coded Distributed Computing on Heterogeneous Networks <i>Nicholas Woolsey, Rong-Rong Chen, Mingyue Ji</i>	Coded Federated Computing in Wireless Networks with Straggling Devices and Imperfect CSI <i>Sukjong Ha, Jingjing Zhang, Osvaldo Simeone, Joonhyuk Kang</i>	Coded elastic computing <i>Yaoqing Yang, Matteo Interlandi, Pulkit Grover, Soumya Kar, Saeed Amizadeh, Markus Weimer</i>
FR2.R3: Error Exponents I		Monge, Level 3	
A Simple Derivation of the Refined SPB for the Constant Composition Codes <i>Bariş Nakiboğlu</i>	Two Contributions to Error Exponents for Asynchronous Multiple Access Channel <i>Lóránt Farkas, Tamás Kói</i>	Error Exponents of Typical Random Codes for the Colored Gaussian Channel <i>Neri Merhav</i>	Error Exponents in Distributed Hypothesis Testing of Correlations <i>Uri Hadar, Jingbo Liu, Yury Polyanskiy, Ofer Shayevitz</i>
FR2.R4: Compressed Sensing I		Odéon, Level 3	
An Efficient Algorithm for Capacity-Appearing Noisy Adaptive Group Testing <i>Jonathan Scarlett</i>	Nearly Sharp Restricted Isometry Condition of Rank Aware Order Recursive Matching Pursuit <i>Junhan Kim, Byonghyo Shim</i>	JOBS: Joint-Sparse Optimization from Bootstrap Samples <i>Luolua Liu, Sang Chin, Trac Tran</i>	The Group Restricted Isometry Property for Subgaussian Block Diagonal Matrices <i>Niklas Koep, Arash Behboodi, Rudolf Mathar</i>
FR2.R5: Information Theory for Estimation		Saint Victor, Level 3	
A Family of Bayesian Cramer-Rao Bounds, and Consequences for Log-Concave Priors <i>Efe Aras, Kuan-Yun Lee, Ashwin Pananjady, Thomas Courtade</i>	Fisher Information for Distributed Estimation under a Blackboard Communication Protocol <i>Leighton Pate Barnes, Yanjun Han, Ayfer Ozgur</i>	Sample-Measurement Tradeoff in Support Recovery Under a Subgaussian Prior <i>Lekshmi Ramesh, Chandra R Murthy, Himanshu Tyagi</i>	Towards Theoretically-Founded Learning-Based Denoising <i>Wenda Zhou, Shirin Jalali</i>
FR2.R6: Coding for Distributed Computation		Sorbonne, Level 5	
Data Encoding Methods for Byzantine-Resilient Distributed Optimization <i>Deepesh Data, Linqi Song, Suhas Diggavi</i>	Byzantine-Tolerant Distributed Coordinate Descent <i>Deepesh Data, Suhas Diggavi</i>	Speeding Up Distributed Gradient Descent by Utilizing Non-persistent Stragglers <i>Mehmet Enre Ozfatura, Deniz Gunduz, Sennur Ulukus</i>	Robust Gradient Descent via Moment Encoding and LDPC Codes <i>Raj Kumar Maitry, Ankit Singh Rawat, Arya Mazumdar</i>
FR2.R7: Active Adversaries		Bièvre, Level 5	
A Construction of Traceability Set Systems with Polynomial Tracing Algorithm <i>Elena Egorova, Marcel Fernandez, Grigory Kabatiansky</i>	How to Break the Limits of Secrecy Constraints in Communication Networks <i>Fan Li, Jinyuan Chen</i>	A Concentration of Measure Approach to Database De-anonymization <i>Farhad Shirani, Siddharth Garg, Elza Erkip</i>	Non-Malleable Codes against Active Physical Layer Adversary <i>Fuchun Lin, Reihaneh Safavi-Naini, Mahdi Cheraghchi, Huaxiong Wang</i>
FR2.R8: Energy Efficient Communications		Conseil, Level 5	
On the Analysis of Energy-Distortion Tradeoff for Zero-Delay Transmission over Gaussian Broadcast Channels <i>Ceren Sevinc, Ertem Tuncel</i>	Capacity per Unit-Energy of Gaussian Many-Access Channels <i>Jithin Ravi, Tobias Koch</i>	Energy efficient random access for the quasi-static fading MAC <i>Suhas S Kowshik, Kirill Andreev, Alexey Frolov, Yury Polyanskiy</i>	
FR2.R9: Packings and Combinatorics		Pontoise, Level 5	
On two-fold packings of radius-1 balls in Hamming graphs <i>Denis S. Krotov, Vladimir N. Potapov</i>	Metrics which turn tilings into binary perfect codes <i>Gabriella Akemi Miyamoto, Marcelo Firer</i>	Unrestricted Generalized Column Distances: A wider definition <i>Sara Diaz Cardell, Diego Napp, Marcelo Firer</i>	Weights which respect support and NN-decoding <i>Roberto Machado, Marcelo Firer</i>

Friday, 12 July

14:30-16:10

14:30	14:50	15:10	15:30	15:50
-------	-------	-------	-------	-------

FR3.R1: Information Privacy and Fairness**Le Théâtre (Parterre), Level 1**

Advances in Graph Alignment and its Ramification for Privacy <i>Negar Kivayash</i>	Privacy-Utility Tradeoffs in Payment Channel Network Routing <i>Giulia Fanti</i>	Secure Distance Measurement: Challenges and Results <i>Srdjan Capkun</i>	An Information-Theoretic Look at Fair Machine Learning <i>Flavia P. Calmon</i>	Panel Discussion: Information Privacy and Fairness <i>Negar Kivayash, Prateek Mittal</i>
---	---	---	---	---

FR3.R2: Coding for Stragglers**Saint Germain, Level 3**

Rateless Codes for Distributed Computations with Sparse Compressed Matrices <i>Ankur Mallick, Gauri Joshi</i>	Timely Coded Computing <i>Chien-Sheng Yang, Ramtin Pedarsani, Amir Salman Avestimehr</i>	A Fundamental Storage-Communication Tradeoff in Distributed Computing with Straggling Nodes <i>Qifa Yan, Michèle Wigger, Sheng Yang, Xiaohu Tang</i>	Tree Gradient Coding <i>Amirhossein Reiszadeh, Sourav Prakash, Ramtin Pedarsani, Amir Salman Avestimehr</i>	Gradient Coding Based on Block Designs for Mitigating Adversarial Stragglers <i>Swanand Kadhe, Ozan Koyluoglu, Kannan Ramchandran</i>
--	---	---	--	--

FR3.R3: Locally Repairable Codes**Monge, Level 3**

On Optimal Locally Repairable Codes with Super-Linear Length <i>Han Cai, Ying Miao, Moshe Schwartz, Xiaohu Tang</i>	Improved bounds and Optimal Constructions of Locally Repairable Codes with distance 5 and 6 <i>Bin Chen, Shu-Tao Xia, Jie Hao</i>	Classification of Optimal Ternary (r, Δ) -Locally Repairable Codes Attaining the Singleton-like Bound <i>Jie Hao, Kenneth W. Shum, Shu-Tao Xia, Yi-Xian Yang</i>	The Complete Hierarchical Locality of the Punctured Simplex Code <i>Matthias Grezet, Camilla Hallanti</i>	Locally Repairable Convolutional Codes with Sliding Window Repair <i>Umberto Martinez-Penas, Diego Napp</i>
--	--	--	--	--

FR3.R4: Compressed Sensing II**Odéon, Level 3**

SPARCs and AMP for Unsourcesd Random Access <i>Alexander Fengler, Peter Jung, Giuseppe Caire</i>	Phase Transition in Mixed ℓ_2/ℓ_1 -norm Minimization for Block-Sparse Compressed Sensing <i>Toshiyuki Tanaka</i>	One-Bit ExpanderSketch for One-Bit Compressed Sensing <i>Vasileios Nakos</i>	Security Analysis of Compressed Encryption With Sparse Matrices Against Chosen Plaintext Attacks <i>Wonwoo Cho, Nam Yul Yu</i>
---	---	---	---

FR3.R5: Capacity and Upper Bounds**Saint Victor, Level 3**

Shannon Capacity is Achievable for a Large Class of Interactive Markovian Protocols <i>Assaf Ben-Yishai, Ofer Shayevitz, Young-Han Kim</i>	The Interactive Capacity of the Binary Symmetric Channel is at Least $1/40$ the Shannon Capacity <i>Assaf Ben-Yishai, Young-Han Kim, Or Ordentlich, Ofer Shayevitz</i>	An Upper Bound to the Mismatch Capacity <i>Ehsan Asadi Kangarshahi, Albert Guillén i Fàbregas</i>	New Converses for the Relay Channel via Reverse Hypercontractivity <i>Jingbo Liu, Ayfer Ozgur</i>	An Inequality Useful for Proofs of Strong Converse Theorems in Network Information Theory <i>Yasutada Oohama</i>
---	---	--	--	---

FR3.R6: Quantum Stabilizer and Related Codes**Sorbonne, Level 5**

Pseudocodeword-based Decoding of Quantum Stabilizer Codes <i>July X. Li, Pascal Olivier Vontobel</i>	The Encoding and Decoding Complexities of Entanglement-Assisted Quantum Stabilizer Codes <i>Kao-Yueh Kuo, Ching-Yi Lai</i>	Good Stabilizer Codes from Quasi-Cyclic Codes over \mathbb{F}_4 and \mathbb{F}_9 <i>Martianus Frederic Ezerman, San Ling, Buket Özkaya, Patrick Solé</i>	Stabilizer codes from modified symplectic forms <i>Tejas Gandhi, Piyush Kurur, Rajat Mittal</i>	Kerdock Codes Determine Unitary 2-Designs <i>Trung Can, Narayanan Rengaswamy, Robert Calderbank, Henry D. Pfister</i>
---	---	---	--	--

FR3.R7: Relay Channels**Bièvre, Level 5**

On the Optimal Delay Amplification Factor of Multi-Hop Relay Channels <i>Dennis Ogbe, Chih-Chun Wang, David J. Love</i>	Achievable Rates and Outer Bounds for Full-Duplex Relay Broadcast Channel with Side Message <i>Kaiming Shen, Reza K. Farsani, Wei Yu</i>	Asymptotic Analysis on LDPC-BICM Scheme for Compute-and-Forward Relaying <i>Satoshi Takabe, Tadashi Wadayama, Masahito Hayashi</i>	Relaying One Bit Across a Tandem of Binary-Symmetric Channels <i>Wasim Huleihel, Yury Polyanskiy, Ofer Shayevitz</i>
--	---	---	---

FR3.R8: Error Exponents II**Conseil, Level 5**

Large Deviations of Typical Random Codes <i>Ran Averbuch, Neri Merhav, Albert Guillén i Fàbregas</i>	A Recursive Cost-Constrained Construction that Attains the Expurgated Exponent <i>Anelia Somekh-Baruch, Jonathan Scarlett, Albert Guillén i Fàbregas</i>	On the Error Probability of Optimal Codes in Gaussian Channels under Maximal Power Constraint <i>Gonzalo Vazquez-Vilar</i>	Asymptotics of the random coding error probability for constant-composition codes <i>Josep Font-Segura, Alfonso Martinez, Albert Guillén i Fàbregas</i>
---	---	---	--

FR3.R9: Theoretical Cryptography**Pontoise, Level 5**

Continuous-Source Fuzzy Extractors: Source uncertainty and insecurity <i>Benjamin Fuller, Lowen Peng</i>	On $(2n/3-1)$ -Resilient $(n,2)$ -Functions <i>Denis S. Kratov</i>	On Isotopic Shift Construction for Planar Functions <i>Lilya Budaghyan, Marco Calderini, Claude Carlet, Robert Coulter, Irene Villa</i>	Scalable Information Flow Analysis of Secure Three-Party Affine Computations <i>Patrick Ah-Fat, Michael Huth</i>	On the Complexity of the 3XORSUM Problem <i>Serdar Boztas</i>
---	---	--	---	--

Friday, 12 July

16:40-18:00

16:40	17:00	17:20	17:40
FR4.R1: Coded Caching V			Le Théâtre (Parterre), Level -1
A Novel Cache-aided Fog-RAN Architecture <i>Kai Wan, Daniela Tuninetti, Mingyue Ji, Giuseppe Caire</i>	Coded Caching with Small Subpacketization via Spatial Reuse and Content Base Replication <i>Amirreza Asadzadeh, Giuseppe Caire</i>	Optimal coded caching under statistical QoS information <i>Emanuele Parrinello, Ayse Unsal, Petros Eita</i>	On D2D Caching with Uncoded Cache Placement <i>Çağkan Yapar, Kai Wan, Rafael F. Schaefer, Giuseppe Caire</i>
FR4.R2: Quantum Entropy and Systems			Saint Germain, Level 3
Interactive Leakage Chain Rule for Quantum Min-entropy <i>Ching-Yi Lai, Kai-Min Chung</i>	Moderate deviation analysis of majorisation-based resource interconversion <i>Christopher Thomas Chubb, Kamil Korzekwa, Marco Tomamichel</i>	One-Shot Randomized and Nonrandomized Partial Decoupling <i>Eyuri Wakakuwa, Yoshifumi Nakata</i>	Measuring Quantum Entropy <i>Jayadev Acharya, Ibrahim Issa, Nirmal V. Shende, Aaron B. Wagner</i>
FR4.R3: Coding for Matrix Multiplication			Monge, Level 3
Numerically Stable Polynomially Coded Computing <i>Mohammad Fahim, Viveck Cadambe</i>	Distributed Matrix-Vector Multiplication: A Convolutional Coding Approach <i>Anindya Bijoy Das, Aditya Ramamoorthy</i>	Systematic Matrix Multiplication Codes <i>Haewon Jeong, Yaoqing Yang, Pulkit Grover</i>	
FR4.R4: Secret Keys			Odéon, Level 3
Secret key distillation over a pure loss quantum wiretap channel under restricted eavesdropping <i>Ziwen Pan, Kaushik P. Seshadreesan, William Clark, Mark R. Adcock, Ivan B. Djordjevic, Jeffrey H. Shapiro, Saikat Guha</i>	Secret Key Generation via Pulse-Coupled Synchronization <i>Hessam Mahdaviyar, Najme Ebrahimi</i>	Unique Information and Secret Key Decompositions <i>Johannes Rauh, Pradeep Kr. Banerjee, Eckehard Olbrich, Juergen Jost</i>	Optimal Multiple Assignment Schemes Using Ideal Multipartite Secret Sharing Schemes <i>Reo Eriguchi, Noboru Kunihiro, Mitsugu Iwamoto</i>
FR4.R5: Information Theory and Statistics II			Saint Victor, Level 3
Mean estimation for entangled single-sample distributions <i>Ankit Pensia, Varun Jog, Po-Ling Loh</i>	Global Optimality of Encoders and MSE Decoders for Communicating Unstable Markov Processes over Unstable Gaussian Recursive Models with Feedback: A Nonanticipative RDF Approach <i>Charalambos Charalambous, Christos Kourtellis</i>	Maximum Likelihood Tensor Decomposition of Markov Decision Process <i>Chengzhuo Ni, Mengdi Wang</i>	Dual Loomis-Whitney inequalities via information theory <i>Jing Hao, Varun Jog</i>
FR4.R6: Streaming and Coding			Sorbonne, Level 5
State Estimation via Worst-Case Erasure and Symmetric Channels with Memory <i>Amir Saberi, Farhad Farokhi, Girish N. Nair</i>	Optimal Streaming Erasure Codes over the Three-Node Relay Network <i>Silas Fong, Ashish Khisti, Baochun Li, Wai-Tian Tan, Xiaoqing Zhu, John Apostolopoulos</i>	Optimal Multiplexed Erasure Codes for Streaming Messages with Different Decoding Delays <i>Silas Fong, Ashish Khisti, Baochun Li, Wai-Tian Tan, Xiaoqing Zhu, John Apostolopoulos</i>	Coded Map/Reduce Schemes Based on Placement Delivery Array <i>Vinayak Ramkumar, P. Vijay Kumar</i>
FR4.R7: GDoF and Multiuser Channels			Bièvre, Level 5
On Multi-Cell Uplink-Downlink Duality with Treating Inter-Cell Interference as Noise <i>Hamdi Joudeh, Xiping Yi, Bruno Clercx</i>	The Symmetric Capacity of the \mathbb{K} -Receiver Interleaved Broadcast Channel with Symmetric Side Information <i>Mohamed Salman, Mahesh K. Varanasi</i>	Towards an Extremal Network Theory – Robust GDoF Gain of Transmitter Cooperation over TIN <i>Yao-Chia Chan, Syed Ali Jafar</i>	On the Non-Adaptive Zero-Error Capacity of the Discrete Memoryless Two-Way Channel <i>Yujie Gu, Ofer Shayevitz</i>
FR4.R8: Information Measures			Conseil, Level 5
On the Importance of Asymmetry and Monotonicity Constraints in Maximal Correlation Analysis <i>Elad Domanovitz, Uri Erez</i>	Exact Channel Synthesis <i>Lei Yu, Vincent Y. F. Tan</i>	Mutual Information as a Function of Moments <i>Wael Alghamdi, Flavio P. Calmon</i>	A Measure of Synergy, Redundancy, and Unique Information using Information Geometry <i>Xueyan Niu, Christopher John Quinn</i>

Author Index

A

Abakasanga, Emeka 20
 Abbasi, Ehsan 27
 Abbe, Emmanuel 20, 27
 Abdel-Ghaffar, Khaled 16
 Abdi, Afshin 19, 23
 Abroshan, Mahed 23
 Abry, Patrice 18
 Abu Sini, Maria 17
 Acharya, Jayadev 33
 Adcock, Mark R. 33
 Aggarwal, Vaneet 19
 Agrawal, Shailja 23
 Aharoni, Ziv 21
 Ah-Fat, Patrick 32
 Ahmadipour, Mehrasa 21
 Ahn, Seok-Ki 26
 Ahn, Surin 16
 Aishwarya, Gautam 22
 Alajaji, Fady 23
 Al-Bashabsheh, Ali 18
 Aldridge, Matthew 17
 Alghamdi, Wael 33
 AlHassoun, Yousef 31
 Aliasgari, Malihe 22
 Alon, Noga 18
 Alotaibi, Faisal 31
 Alqwaifiy, Nawaf 29
 Amizadeh, Saeed 31
 Anantharam, Venkat 21, 26
 Andreev, Kirill 31
 Andriyanova, Iryna 23
 Angelakis, Vangelis 18
 Anshu, Anurag 21
 Apostolopoulos, John 33
 Arafa, Ahmed 19
 Aras, Efe 31
 Arasli, Batuhan 23, 28
 Aref, Mohammad Reza 22
 Arrieta, Miguel 28
 Arslan, Suayb 26
 Arunachala, Chinmayananda 23
 Asaad, Saba 22
 Asadi Kangarshahi, Ehsan 32
 Asadi, Meysam 28
 Asadzadeh, Amirreza 33

Askri, Aymen 22
 Asoodeh, Shahab 19
 Assaad, Mohamad 18, 30
 Atif, Touheed Anwar 22
 Averbuch, Ran 32
 Avestimehr, Amir Salman 22, 26,
 30, 32

B

Baccelli, François 16
 Baghali Khanian, Zahra 22
 Bajwa, Waheed U. 29
 Bakshi, Mayank 18, 21
 Balatsoukas-Stimming, Alexios 29, 30
 Baldi, Marco 30
 Ballé, Johannes 25
 Banawan, Karim 23, 28
 Banerjee, Adrish 21
 Banerjee, Pradeep Kr. 33
 Banerjee, Taposh 28
 Banik, Sandeep 22
 Bansal, Rakesh K. 28
 Barbier, Jean 18
 Barbi, Roberta 25
 Bardet, Magali 29
 Barg, Alexander 17, 25
 Barletta, Luca 20
 Barnes, Leighton Pate 31
 Baron, Dror 27
 Barron, Andrew 24
 Bassi, Germán 22
 Basu, Prithwish 19
 Battaglioni, Massimo 30
 Bazzo Nogueras, Antonio 24
 Beemer, Allison 19
 Behboodi, Arash 31
 Beigi, Salman 22
 Beilin, Barak 24
 Belfiore, Jean-Claude 22
 Bellini, Emanuele 26
 Benaddi, Tarik 23
 Ben-Eliezer, Omri 18
 Bennett, Charles 28
 Ben-Yishai, Assaf 32
 Beryehi, Ali 22

Berry, Randall 19
 Berta, Mario 17, 21, 30
 Bhashyam, Srikrishna 20
 Bhattacharya, Sagnik 19, 21
 Bh, Rekha Devi 25
 Bibas, Koby 29
 Bilgen, Omer 26
 Bioglio, Valerio 27
 Bleuler, Cédric 28
 Bloch, Matthieu R. 20, 21, 28
 Blocki, Jeremiah 29
 Blum, Rick S. 24
 Bocharova, Irina 16, 21, 26
 Boche, Holger 18, 20, 25, 29
 Bogdanov, Andrej 19
 Bogunovic, Ilija 30
 Boix Adserà, Enric 20
 Boixo, Sergui 28
 Borderi, Francesco 17
 Bose, Bella 29
 Bossert, Martin 24
 Boucheret, Marie-Laure 16
 Boutros, Joseph 25
 Boyd, Christopher 30
 Boyvalenkov, Peter 25
 Boztas, Serdar 32
 B Pillai, Sibi Raj 20
 Brdar, Sanja 21
 Bresler, Guy 20
 Bross, Shraga I. 25
 Bruck, Jehoshua .. 20, 21, 23, 26
 Brunel, Loïc 25
 Budaghyan, Lilya 32
 Budkuley, Amitalok J. 19
 Buhmann, Joachim M. 18
 Burago, Igor 24
 Burshtein, David 24
 Bustin, Ronit 23
 Bu, Yuheng 19

C

Cadambe, Viveck 33
 Cai, Han 21, 32
 Cai, Kui 16, 18
 Cai, Minglai 25
 Cai, Ning 17, 25

Caire, Giuseppe	. 17, 18, 20, 27, 32, 33	Chen, Xingran	..... 16	Datta, Nilanjana	..... 22
Cai, Suihua	..... 23, 30	Chen, Zhiyong	..... 31	Daubechies, Ingrid	..... 18
Çakmak, Burak	..... 23	Chen, Zitan	..... 17	Dau, Hoang	..... 19, 22, 29
Calderbank, Robert	..... 32	Cheraghchi, Mahdi	..... 16, 31	Dau, Son Hoang	..... 22
Calderini, Marco	..... 32	Chiaraluce, Franco	..... 30	de Assis, Francisco Marcos	..... 30
Calmon, Flavio P.	..... 19, 32, 33	Chin, Sang	..... 31	de Cabrera, Ferran	..... 30
Campello, Antonio	..... 25	Chittoor, Hari Hara Suthan	..... 20	de Cherisey, Eloi	..... 17
Canto-Torres, Rodolfo	..... 26	Chi, Yuejie	..... 27	de Kerret, Paul	..... 24
Can, Trung	..... 32	Choi, Beongjun	..... 21	Delaney, John K.	..... 18
Cao, Daming	..... 27	Choi, Chang-sik	..... 16	del Olmo Alos, Jaume	..... 26
Cao, Michael Xuan	..... 17	Cho, Kang-Hee	..... 28	Deppe, Christian	..... 28
Cao, Qi	..... 27	Choudary, Marios Omar	..... 18	de Veciana, Gustavo	..... 16
Capkun, Srdjan	..... 32	Chou, Remi	..... 19, 20	Devroye, Natasha	..... 28
Cardell, Sara Diaz	..... 31	Cho, Wonwoo	..... 32	Dey, Bikash Kumar	..... 18, 21
Cardone, Martina	..... 16, 18, 30	Chubb, Christopher Thomas	..... 33	Dey, Spandan	..... 23
Carlet, Claude	..... 32	Chung, Hye Won	..... 26	Diamanti, Eleni	..... 28
Carpi, Fabrizio	..... 16	Chung, Kai-Min	..... 33	Diaz, Mario	..... 19, 30
Cassuta, Yuval	..... 29	Ciblat, Philippe	..... 25	Diggavi, Suhas	..... 17, 21, 31
Caullery, Florian	..... 26	Cicalese, Ferdinando	..... 20	Dikshtein, Michael	..... 17
Cayre, François	..... 29	Cipriano, Antonio Maria	..... 16	Ding, Dawei	..... 17
Cevher, Volkan	..... 30	Clark, Bradford	..... 17	Djordjevic, Ivan B.	..... 33
Chaluvadi, Ragini	..... 20	Clark, William	..... 33	Do, Heedong	..... 20
Chan, Chung	..... 18, 21	Clerckx, Bruno	..... 33	Dolecek, Lara	..... 23
Chan, Chun Lam	..... 18	Cohen, Alejandro	..... 21	Domanovitz, Elad	..... 33
Chandra, Prafulla	..... 16, 26	Cohen, Asaf	..... 18, 21	Dong, Yanyan	..... 24
Chang, Chih-Hua	..... 16	Coiteux-Roy, Xavier	..... 20	Doucet, Arnaud	..... 21
Chang, Xiao-Wen	..... 25	Colbourn, Charlie	..... 29	Douik, Ahmed	..... 19
Chan, Yao-Chia	..... 33	Coleman, Todd Prentice	..... 17	Dragnev, Peter	..... 25
Charalambous, Charalambos	33	Condo, Carlo	..... 27	Duan, Lingjie	..... 21
Chaudhuri, Debaditya	..... 29	Corinzia, Luca	..... 18	Duarte-González, Mario Enrique	..... 21
Chaudhuri, Kamalika	..... 19	Corlay, Vincent	..... 25	Dubé, Danny	..... 25
Chee, Yeow Meng	..... 16, 20, 22, 25, 29	Costa, Sueli Irene Rodrigues	..... 25	Duffy, Ken	..... 18
Che, Hao	..... 25	Costello, Daniel J.	..... 29	Du, Michelle	..... 17
Chen, Bin	..... 32	Coulter, Robert	..... 32	Dupraz, Elsa	..... 21
Chen, Chao-Yu	..... 28	Courtade, Thomas	..... 31	Durisi, Giuseppe	..... 19
Cheng, Hao-Chung	..... 22, 28	Crnojević, Vladimir	..... 21	Dutta, Sanghamitra	..... 17
Cheng, Jun	..... 18	Csikvári, Péter	..... 24	Dytso, Alex	..... 16, 26
Chen, Guojun	..... 17	Cui, Wei	..... 27		
Chen, Jiahui	..... 27			D	
Chen, Jiasi	..... 24	Dabora, Ron	..... 20	Dai, Bin	..... 19
Chen, Jinyuan	..... 19, 31	D'Amours, Claude	..... 22	D'Amours, Claude	..... 22
Chen, Jun	..... 16	Daneshpajoo, Vahid	..... 26	Daneshpajoo, Vahid	..... 26
Chen, Kai	..... 24	Dankers, Wouter	..... 21	Dankers, Wouter	..... 21
Chen, Li	..... 24, 30	Das, Anindya Bijoy	..... 33	Das, Anindya Bijoy	..... 33
Chen, Rong-Rong	..... 22, 31	Dasarathy, Gautam	..... 23	Dasarathy, Gautam	..... 23
Chen, Shuqing	..... 25	Das, Shibsankar	..... 28	Das, Shibsankar	..... 28
Chen, Wei-Ning	..... 29	Data, Deepesh	..... 31	Data, Deepesh	..... 31
				E	
				Ebrahimi, Najme	..... 33
				Effros, Michelle	..... 17, 25, 28, 29
				Efron, Yuval	..... 25
				Egorova, Elena	..... 31
				Eldar, Yonina C.	..... 18, 19, 20
				Eletreby, Rashad	..... 24
				El Gamal, Aly	..... 27, 31
				El Gamal, Hesham	..... 31
				Elia, Petros	..... 24, 27, 33

Elishco, Ohad	21, 25	Fujisaki, Hiroshi	28	Guilley, Sylvain	17
El Rouayheb, Salim ...	20, 22, 29	Fujita, Ryusei	26	Gu, Jiaqi	24
Ephremides, Anthony	18	Fujiwara, Yuichiro	25	Gunduz, Deniz ...	17, 19, 24, 27, 28, 31
Erez, Uri	23, 33	Fuller, Benjamin	32	Guo, Jun	24
Eriguchi, Reo	33	Furrer, Philippe	21	Guo, Longyun	26
Erkip, Elza	19, 30, 31	G		Gurewitz, Omer	21
Esmaeili, Mohammad	18	Gaborit, Philippe	26	Gürpınar, Emirhan	23
Esnaola, Iñaki	28	Gabrys, Ryan	21, 29	Gurram, Prudhvi	28
Esposito, Amedeo Roberto	19	Gäde, Bernhard	22	Guruswami, Venkatesan	22
Etzion, Tuvia	21, 28, 29	Gadioli La Guardia, Giuliano	30	Gutman, Yonatan	25
Ezerman, Martianus Frederic	26, 32	Gagliano, Allison	25	Gu, Yujie	33
Ezzeldin, Yahya H.	18, 21	Gamarnik, David	24	H	
F		Gan, Chao	30	Hadar, Uri	31
Fahim, Mohammad	33	Gandhi, Tejas	32	Haddadi, Hamed	19
Fahs, Jihad	16	Gandikota, Venkata	29	Häger, Christian	16
Fanti, Giulia	32	Ganguly, Shouvik	24	Hamad, Hassan	17
Farkas, Lóránt	31	Gao, Li	28	Han, Dong-Jun	20, 21
Farnoud, Farzad	17	Gargano, Luisa	20	Han, Guangyue	21, 23, 26
Farokhi, Farhad	33	Garg, Siddharth	31	Hanson, Eric	22
Farsani, Reza K.	23, 32	Gastpar, Michael	19, 26, 30	Han, Yanjun	31
Fawzi, Omar	17, 30	Ge, Hao	19	Han, Yungshiang S.	17
Fazeli, Arman	23, 24, 26	Geng, Chunhua	19	Hao, Jie	32
Feder, Meir	29	Gesbert, David	24	Hao, Jing	33
Fei, Peng	16	Geumlek, Joseph Donald	19	Hardin, Douglas	25
Fekri, Faramarz	19, 23	Gezici, Sinan	21	Harremoes, Peter	17
Felber, Pascal	25	Gholami, Ali	17	Harrison, Willie K.	17, 20
Fellouris, Georgios	29	Gholami Davoodi, Arash	25	Hasan, Md Mahmudul	20
Feng, Chen	26	Ghosh, Suman	29	Hasan, Mohammad Nur	22
Fengler, Alexander	32	Gnilke, Oliver	28	Hashimoto, Kengo	24
Fereydounian, Mohammad ...	16	Gohari, Amin	22	Hassani, Hamed	16
Fernandes Pereira, Francisco		Goldfeld, Ziv	20, 21	Hassibi, Babak	19, 27
Revson	30	Goldsmith, Andrea	30	Ha, Sukjong	31
Fernandez, Marcel	31	Graczyk, Robert	18	Hatami, Homayoon	29
Filos-Ratsikas, Aris	29	Graell i Amat, Alexandre	23	Hayashi, Masahito ...	19, 21, 25, 28, 32
Firer, Marcelo	31	Graves, Eric	19	Hayez, Laurent	25
Flanary, Dakota	17	Greenewald, Kristjan	21	Heckel, Reinhard	20
Fletcher, Alyson K.	21	Gregorio Lucas D'Oliveira,		Hegde, Chinmay	26
Fogel, Yaniv	29	Rafael	22	Heidari, Mohsen	22
Fong, Silas	33	Gresset, Nicolas	24	Heidarzadeh, Anoosheh	18, 22, 25
Fonollosa, Javier R.	25, 26	Grezet, Matthias	32	Hendriks, Ella	18
Font-Segura, Josep	23, 32	Grigorescu, Elena	29	Hero, Alfred	26
Fragouli, Christina	17, 18, 21, 30	Grover, Pulkit	17, 31, 33	He, Xuan	18
Franceschetti, Massimo	21	Guang, Xuan	17, 26	Heydari, Javad	28
Frick, Erik	21	Guan, Yong Liang	27	Hirche, Christoph	22, 30
Frolov, Alexey	31	Guerrini, Eleonora	24	Hollanti, Camilla	32
Fu, Haoyu	27	Guha, Saikat	33		
Fuja, Thomas E.	29	Guillén i Fàbregas, Albert	23, 32		

Holzbour, Lukas	26	Jensen, Benjamin	17	Khina, Anatoly	28
Honorio, Jean	26	Jeong, Haewon	33	Khisti, Ashish	33
Horii, Shunsuke	24	Jeong, Hongsil	26	Kiah, Han Mao . 16, 20, 22, 25,	29
Horlemann-Trautmann, Anna- Lena	27	Jeon, Yoseb	20	Kibloff, David	28
Ho, Siu-Wai	16, 23	Jiang, Haotian	22	Kim, Hoon	19
Hosseini, Maryam	19	Jiang, Hong	25	Kim, Hyeji	25
Høst-Madsen, Anders	27	Jiang, Zhiyuan	22	Kim, Junhan	31
Hou, Hanxu	17	Ji, Mingyue	20, 22, 31, 33	Kim, Kyung-Joong	26
Hou, Wei	18	Jog, Varun	21, 26, 30, 33	Kim, Minchul	22
Hsieh, Min-Hsiu	22, 25, 28	Johansson, Thomas	26	Kim, Muah	20
Hsu, Hsiang	19	Jorswieck, Eduard	24	Kim, Sang-Hyo	26
Hsu, Yu-Pin	22	Joshi, Gauri	32	Kim, Young-Han	24, 32
Huang, Qin	29	Jost, Juergen	33	Kipnis, Alon	27
Huang, Shao-Lun	27, 30	Joudeh, Hamdi	33	Kivayash, Negar	32
Huang, Yu-Chih	28, 29	Jung, Peter	27, 32	Kizildag, Eren C.	24
Huang, Yu-Jui	28, 29	Junnila, Ville	17	Kleckler, Michelle	17
Huang, Zhijie	25	K		Kliewer, Joerg	19, 22, 25, 30
Hucke, Danny	25	Kabatiansky, Grigory	31	Kobayashi, Manabu	24
Hu, Hong	18	Kadampot, Ishaque Ashar	21	Kobayashi, Mari	17
Huleihel, Bashar	26	Kadhe, Swanand	22, 32	Kochman, Yuval	23, 26
Huleihel, Wasim	32	Kairouz, Peter	16, 30	Koch, Tobias	19, 31
Huth, Michael	32	Kalociński, Dariusz	30	Koep, Niklas	31
I		Kalør, Anders Ellersgaard	16	Kohler, Michael	27
Immink, Kees A. Schouhamer . 16		Kamabe, Hiroshi	18	Koike-Akino, Toshiaki	30
Inan, Huseyin Atahan	16	Kameneva, Yulia	16	Kói, Tamás	31
Interlandi, Matteo	31	Kamenev, Mikhail	16	Konstantinidis, Konstantinos	24
Iqbal, Hasan	25	Kaneko, Haruhiko	23	Koremura, Hikari	23
Issa, Ibrahim	19, 33	Kang, Joonhyuk	31	Korner, Janos	29
Ivanov, Kirill	16	Kang, Wei	28	Korzekwa, Kamil	33
Iwamoto, Mitsugu	33	Karaman, Sertac	18	Kosta, Antzela	18
Iwata, Ken-ichi	24, 26, 28	Karamchandani, Nikhil	23	Kostina, Victoria	25, 27, 28
J		Karasik, Roy	24	Kostochka, Alexandr	24
Jacob, Tony	31	Karat, Nujoom Sageer	23	Kosut, Oliver	19
Jacquet, Philippe	24	Karimi-Bidhendi, Saeed	24	Kota, Srinivas Reddy	23
Jafarkhani, Hamid	22, 24	Karimi, Esmail	18	Kourtellaris, Christos	33
Jafar, Syed Ali	25, 33	Karpuk, David	22, 25, 28	Kovačević, Mladen	21, 25
Jagatap, Gauri	26	Kar, Soumya	31	Kowshik, Suhas S	18, 31
Jaggi, Sidharth	19, 21	Karthik, P. N.	30	Koyluoglu, O. Ozan	32
Jahani-Nezhad, Tayyebeh	30	Kartik, Dhruva	21	K P, Vijith Kumar	31
Jain, Rahul	21	Kasai, Kenta	16	Kralevska, Katina	17
Jain, Sarthak	30	Kas Hanna, Serge	29	Kramer, Gerhard	17
Jalali, Shirin	19, 31	Kashyap, Navin . 21, 25, 26, 27		Krawec, Walter Oliver	25
Janda, Carsten	24	Kaul, Sanjit Krishnan	22	Kriouile, Saad	30
Jang, Min	26	Kaur, Eneet	30	Krishnan, Prasad 19, 20, 23, 29	
Janssen, Gisbert	25	Kazemi, Fatemeh	18, 25	Krotov, Denis S. 26, 31, 32	
Javidi, Tara	28	Khalaj, Babak Hossein	20	Krzyzak, Adam	27
		Khalilij, Abbas	19	Kschischang, Frank R. 16	
		Khim, Justin	21	Kudryashov, Boris	16, 21, 26

Kulhandjian, Hovannes	22	Li, Bin	24	Li, Zhengrui	25
Kulhandjian, Michel	22	Li, Cheuk Ting	21	Loeliger, Hans-Andrea	27
Kumar, B. R. Vinay	27	Li, Chong	19	Loh, Po-Ling	21, 33
Kumar, P. Vijay	16, 21, 33	Li, Chunlei	27	Lohrey, Markus	25
Kumar, Siddhartha	23	Li, Fan	31	Loidreau, Pierre	29
Kunihiro, Noboru	33	Li, Haobo	17	Love, David J.	32
Kuo, Kao-Yueh	32	Li, Haoyu	26	Luczak, Tomasz	25
Kuo, Meng-Hsien	28	Li, Hui	25	Lu, Jian	17, 26, 28
Kurkoski, Brian M.	22	Li, Jiange	22, 28	Luo, Yuan	28
Kurmaev, Oleg	16	Li, Jie	22	Lu, Shan	18
Kurur, Piyush	32	Li, Juane	16	Lu, Yue M.	18
Kuzuoka, Shigeaki	19	Li, July X.	32	Lyamin, Nikita	21
L					
Laaksonen, Antti	30	Li, Kuikui	31	M	
Lai, Ching-Yi	32, 33	Lim, Sung Hoon	26	Maatouk, Ali	18
Laihonen, Tero	17	Linder, Tamás	21, 23	Machado, Roberto	24, 31
Lai, Lifeng	24	Lin, Fuchun	31	Macris, Nicolas	18
Lai, Russell W. F.	24	Ling, Cong	17, 28, 30	Maddah-Ali, Mohammad Ali	16, 17, 18, 20, 25, 30
Lalitha, Anusha	28	Ling, Lin	23	Madhuri, Bolli	20
Lalitha, V.	19	Ling, San	26, 32	Madiman, Mokshay	22, 26
Lampiris, Eleftherios	24, 27	Lin, Hsuan-Yin	23, 25	Maeveskiy, Alexey	16
Lancho, Alejandro	19	Li, Ning	25	Magner, Abram	25
Land, Ingmar	27	Lin, Pin-Hsun	24	Mahdavifar, Hessam	33
Langberg, Michael	17, 21, 29	Lin, Shih-Chun	25, 28, 29	Mahdavi, Mehrdad	24
Lapidoth, Amos	18, 28	Lin, Shu	16	Maitry, Raj Kumar	31
Larranaga, Maialen	30	Lin, Sian-Jheng	25	Majhi, Subhajit	23
Lazos, Loukas	23	Lin, Wenchao	23, 30	Majhi, Sudhan	28
Lebedev, Vladimir	28	Lin, Xiaojun	20	Makur, Anuran	25
Le Bihan, Nicolas	29	Li, Ping	26	Malak, Derya	27
Lebreton, Romain	24	Liu, Hangjin	27	Mallick, Ankur	32
Lee, Jungwoo	22	Liu, Hedongliang	26	Malluhi, Qutabih M.	26
Lee, Kangwook	19	Liu, Jingbo	31, 32	Manada, Akiko	24
Lee, Kuan-Yun	31	Liu, Keke	16	Manzano, Marc	26
Lee, Kyungmin	19	Liu, Ling	24, 28	Marcus, Brian	26
Lee, Namyoon	20	Liu, Luoluo	31	Marsiglietti, Arnaud	22, 28
Lee, Patrick P. C.	17	Liu, Nan	28	Mårtensson, Erik	30
Lee, Si-Hyeon	28	Liu, Renzhang	26	Martinez, Alfonso	23, 32
Lehtilä, Tuomo Antinpoika	17	Liu, Tang	19	Martinez-Penas, Umberto	22, 32
Lentmaier, Michael	30	Liu, Tie	18	Marzen, Sarah	25
Lenz, Andreas	16, 20	Liu, Xianming	23	Mateu, Victor	26
Leshem, Amir	23	Liu, Xujun	24	Mathar, Rudolf	31
Levorato, Marco	24	Liu, Yen-Cheng	28	Matsumine, Toshiki	30
Liang, Chulong	18	Liu, Yirui	17	Matsushima, Toshiyasu	19, 24
Liang, Yinbin	27	Liu, Yucheng	23	Matsuta, Tetsunao	29
Liang, Yingbin	19	Liu, Yulong	27	Matsuyama, Yasuo	20
Lian, Mengke	16	Liu, Zilong	28	Matta, Vincenzo	23
Liao, Jiachun	19	Liva, Gianluigi	25	Ma, Xiao	23, 30
Li, Baochun	33	Li, Weiqi	22	Mayya, Vaishakhi	18
		Li, Yonghui	23		
		Li, Yonglong	21		

Ma, Zheng	19	Krishnan	21	Olbrich, Eckehard	33
Mazumdar, Arya	31	Muramatsu, Jun	21	Ong, Lawrence	19
M, Bhavana	20, 29	Murthy, Chandra R	31	Oohama, Yasutada	17, 32
Médard, Muriel	18, 21, 27	Murthy, Chandra R.	19	Opper, Manfred	23
Mei, Zhen	18	Mutangana, Jean de Dieu	20	Ordentlich, Or	23, 29, 32
Melbourne, James	22, 28	Muthukumar, Vidya	29	Osia, Seyed Ali	19
Mercier, Hugues	25	Myung, Seho	26	Östman, Johan	19
Merhav, Neri 18, 20, 21, 31, 32				Ostrev, Dimiter	19
Mian, I. S.	21	N		Ota, Takahiro	24
Miao, Ying	32	Nageswaran, Ajaykrishnan	28	Otmani, Ayoub	29
Milenkovic, Olgica	22, 24, 29	Naim, Carolina	20	Ott, Cornelia	24
Min, Youngjae	26	Nair, Chandra	26, 29	Oymak, Samet	24
Miretti, Lorenzo	24	Nair, Girish N.	33	Ozfatura, Mehmet Emre	31
Mirmohseni, Mahtab	18	Najm, Elie	18	Ozgur, Ayfer	16, 31, 32
Mital, Nitish	17	Nakamura, Ryoji	24	Özkaya, Buket	26, 32
Mitchell, David G. M.	29	Nakata, Yoshifumi	33		
Mitran, Patrick	23	Nakiboğlu, Barış	31	P	
Mitra, Urbashi	21, 22	Nakos, Vasileios	32	Pai, Cheng-Yu	28
Mittal, Prateek	32	Nam, Yunseo	20	Palacio-Baus, Kenneth	28
Mittal, Rajat	32	Napp, Diego	31, 32	Palazzo Jr., Reginaldo	21
Mittelbach, Martin	24	Narayanamurthy, Praneeth	26	Pananjady, Ashwin	31
Miyamoto, Gabriella Akemi	31	Narayan, Prakash	28	Pandit, Parthe	21
Miyamoto, Henrique Koji	25	Nasser, Rajai	18, 27, 28	Pan, Yanbin	26
Miyamoto, Kohei	24	Natarajan, Lakshmi	19	Pan, Ziwen	33
Modiano, Eytan	18	Natarajan, Lakshmi Prasad	29	Paolini, Enrico	25
Mohajer, Soheil ... 16, 17, 20, 30		Nayar, Piotr	26	Pappas, Nikolaos	18
Mohammadi Amiri, Mohammad		Nayyar, Ashutosh	21	Parampalli, Udaya	28
	24	Nazer, Bobak	26	Park, Hyeyeong	26
Moharrer, Ali	20	Nelson, Nathan	17	Parrinello, Emanuele	33
Mojahedian, Mohammad Mahdi		Neri, Alessandro	27	Pastore, Adriano	26
	22	Neuhoff, David	20	Pedarsani, Ramtin	32
Mondada, Luca	18	Ng, David	29	Pedda Baliyarasimhuni, Sujit	22
Mönich, Ullrich J.	18	Ng, Ka Hei	24, 27	Peleato, Borja	31
Moon, Jaekyun	20, 21, 26	Nguyen, Tuan Thanh	20	Pellikaan, Ruud	30
Morgan, John	26	Ni, Chengzhuo	33	Peng, Lowen	32
Morita, Hiroyoshi	25	Ning, Qiang	19	Penna, Paolo	18
Morozov, Ruslan	28	Niu, Xueyan	33	Pensia, Ankit	33
Mossel, Elchanan	25	Ni, Yong-Ting	28	Pereg, Uzi	18
Motahari, Seyed Abolfazl	17	Ni, Yuanhan	29	Perlaza, Samir Medina	28
Motani, Mehul	17, 25, 30	Nomura, Ryo	28	Permuter, Haim Henry	21, 26,
		Norman, Kalin	17		28
Mousavi Kalan, Seyed		Nosratinia, Aria	18, 22, 27	Pfister, Christoph	28
Mohammadreza	30	Nozaki, Takayuki	29	Pfister, Henry D.	16, 23, 32
Mousavi, Mohammad Hossein ...	18			Piantanida, Pablo	17, 19
Moustakides, George	28, 29	O		Pillai, Sibi Raj B	17
Mudumbai, Raguh	27	Obead, Sarah A.	25	Ping, Li	18
Mukka, V. S. Chaitanya	16	Ocal, Orhan	22	Pizurica, Aleksandra	18
Müller, Ralf R.	22	Oechtering, Tobias J.	27	Pohl, Volker	29
		Ogbe, Dennis	32	Polyanskii, Nikita	18
Muralee Krishnan, Nikhil					

Polyanskiy, Yury . 18, 20, 21, 23, 25, 31, 32	Reyes, Matthew 20	Salehkalaibar, Sadaf 21
Poor, H. Vincent . 16, 18, 19, 24, 26	Rezazadeh, Arezou 23	Salek Shishavan, Farzin 25
Poostindouz, Alireza 17	Rezki, Zouheir 16	Salman, Mohamed ... 23, 25, 33
Popescu, Pantelimon George . 18	Riba, Jaime 30	Samy, Islam 23
Popovski, Petar 16	Ribeiro, João 16	Sangwan, Neha 18
Potapov, Vladimir N. 31	Rice, Michael 17	Sankar, Lalitha 19, 30
Poulliat, Charly 16, 23	Rini, Stefano 20, 30	Santhanam, Narayana 19, 27
Prabhakaran, Vinod M. 17, 18	Rioul, Olivier 17, 26	Santini, Paolo 30
Pradhan, Sandeep 22	Rodrigues, Miguel 18	Santos, Augusto 23
Pradhan, S. Sandeep 22	Rodríguez-Quñones, Tania 21	Santoso, Bagus 17
Prakash, Saurav 32	Rodríguez Sanchez, Jesus 20	Santos, Wellington 24
Price, Eric 25	Rodríguez-Sarmiento, David	Sartaş, Serkan 21
Prinz, Tobias 27	Leonardo 21	Sarkar, Palash 28
Puchinger, Sven 24, 26, 27	Romanov, Elad 29	Sarwate, Anand D. 21, 29
Q	Romashchenko, Andrei 23	Sasi, Shanuja 19, 29
Quek, Yihui 17	Rose, Christopher 21	Sayed, Ali H. 23
Quinn, Christopher John 33	Rosnes, Eirik 23, 25	Scarlett, Jonathan 30, 31, 32
Qureshi, Mohammad Ishtiyaq 17	Rossi, Massimiliano 22	Schaefer, Rafael F. 18, 24, 33
R	Roth, Ron M. 25, 29	Schamberg, Gabriel 17
Rabiee, Hamid R. 19	Rovatsos, Georgios 29	Scholz, Volkher 17
Rabi, Maben 21	Rowshan, Mohammad 26	Schwartz, Moshe 17, 21, 28, 32
Rafie Borujeny, Reza 16	Ruoizzi, Nicholas 24	Seelbach Benkner, Louisa 25
Rai, Brijesh Kumar 31	Rusek, Fredrik 20	Seif, Johanna 30
Rajan, B. Sundar . 19, 21, 23, 29	Rush, Cynthia 27	Senger, Christian 23
Rajaraman, Nived 16	Ryabko, Boris 19	Sen, Pinar 30
Ramachandran, Viswanathan 17	Ryan, William E. 16	Seo, Daewon 16, 27
Ramamoorthy, Aditya 24, 26, 33	S	Seshadreesan, Kaushik P. 33
Ramchandran, Kannan ... 19, 22, 32	Saad, Hussein 18	Sevinc, Ceren 31
Ram, Eshed 29	Sabag, Oron 21, 26, 28	Shadmi, Yonatan 27
Ramesh, Lekshmi 31	Saber, Amir 33	Shah, Devavrat 16, 30
Ramkumar, Vinayak 33	Sadeghi, Parastoo 23	Shahsavari, Shahram 30
Rangan, Sundeeep 21	Sá Earp, Henrique Nogueira de . 25	Shakeri, Zahra 29
Rangi, Anshuka 21	Saeedi Bidokhti, Shirin 16	Shamai (Shitz), Shlomo ... 17, 19, 23, 24, 26, 28
Rassouli, Borzoo 19	Saeedinaeeni, Sajad 25	Shams, Shahab 24
Rauh, Johannes 33	Saeed-Taha, Mohamed 29	Shangguan, Chong 18, 29
Ravi, Jithin 31	Safavi-Naini, Reihaneh 17, 31	Shapiro, Jeffrey H. 33
Raviv, Netanel 20, 25, 26	Saff, Edward 25	Shariatpanahi, Seyed Pooya .. 20
Rawat, Ankit Singh 31	Sahai, Anant 29	Shayevitz, Ofer ... 21, 24, 31, 32, 33
Reeves, Galen 18, 27	Sahin, Serdar 16	Shen, Cong 30
Reisizadeh, Amirhossein 32	Sahraee, Mojtaba 21	Shende, Nirmal V. 27, 33
Reisizadeh, Hadi 16, 20	Sahraei, Saeid 22	Shen, Kaiming 32
Rekaya-Ben Othman, Ghaya . 22	Saidutta, Yashas Malur 23	Shetty, Chirag C 20
Reis, Joseph M. 28	Saito, Shota 19	Shigeki, Miyake 21
Rengaswamy, Narayanan 32	Sakai, Yuta 28	Shim, Byonghyo 31
	Sakzad, Amin 22	Shing, Yu Ting 24
	Salamatian, Salman 18	Shinkar, Tal 16
	Salehi, Fariborz 27	Shirani, Farhad 19, 30, 31

Shirvanimoghaddam, Mahyar	23	Stoyanova, Maya	25	Thrapoulidis, Christos	18
Shkel, Yanina Y.	24	Strapasson, João E.	25	Tian, Chao	18
Shlezinger, Nir	18, 20	Strey, Giselle	25	Tian, Peida	27
Shmuel, Ori	21	Suh, Changho	19	Tillich, Jean-Pierre	26
Shomorony, Ilan	20	Sundaresan, Rajesh	30	Tirkkonen, Olav	30
Shor, Peter	17, 28	Sun, Hua	18, 23	Tishby, Naftali	22
Shukla, Deepanshu	21	Sun, Zhongxing	27	Tkocz, Tomasz	26
Shum, Kenneth W.	25, 32	Suresh, Ananda Theertha	16	Tomamichel, Marco	21, 33
Shuval, Boaz	28	Suzuki, Joe	30	Tony, Jacob	31
Siegel, Paul H.	20, 21, 25	Sypherd, Tyler	30	Tran, Trac	31
Sihag, Saurabh	23, 29	Szilágyi, Dániel	30	Trifonov, Peter	24, 27, 28
Silva, Jorge F.	19	Szpankowski, Wojciech ..	24, 25	Trofimiuk, Grigorii	24
Silveira Santos Filho, José				Tse, David	24
Cândido	19	T		Tseng, Yi-Hsuan	22
Sima, Jin	20, 21, 23	Tadic, Vladislav	21	Tsopelakos, Aristomenis	29
Simeone, Osvaldo ...	20, 22, 24	Tahmasbi, Mehrdad	21, 28	Tsunoda, Yu	25
	31	Tahmasebi, Behrooz	25	Tuncel, Ertem	20, 31
Singh, Kamal	20	Tajer, Ali	23, 28, 29	Tuninetti, Daniela	19, 20, 33
Sippel, Carmen Maria	24	Takabe, Satoshi	29, 32	Turowski, Krzysztof	24
Skachek, Vitaly	16	Takeuchi, Jun'ichi	24	Tyagi, Himanshu	21, 31
Skoglund, Mikael	18, 22, 27	Takeuchi, Keigo	16		
Skorski, Maciej	22	Talak, Rajat	18	U	
Slawski, Martin	26	Talata, Zsolt	16	Ulukus, Sennur	19, 23, 28, 31
Sohn, Jy-yong	20, 21	Tal, Ido	23, 28	Unsal, Ayse	33
Solé, Patrick	26, 32	Tallini, Luca	29	Urbanke, Rüdiger	16
Soljanin, Emina	28	Tam, Da Sun Handason	18	Uyematsu, Tomohiko	29
Soltani, Morza	16	Tamo, Itzhak	18, 29		
Soltanolkotabi, Mahdi	30	Tanaka, Toshiyuki	32	V	
Somekh-Baruch, Anelia	17, 32	Tan, Chee Wei	23	Vaccaro, Ugo	20
Song, Hong-Yeop	28	Tan, Chee Wei	23	Vaddi, Mahesh Babu	21, 23
Song, Jian	22	Tandon, Anshoo	25, 30	Vahid, Alireza	25
Song, Linqi	30, 31	Tandon, Ravi	20, 23	Vaishampayan, Vinay Anant ..	26
Song, Min-Kyu	28	Tang, Bin	27	Vajha, Myna	16
Song, Seunghoan	25	Tang, Haoyue	22	Vakili, Sattar	18
Song, Wentu	16, 18	Tang, Li	26	Varanasi, Mahesh K. .	23, 25, 33
Soret, Beatriz	16	Tang, Xiaohu	22, 32	Vardy, Alexander	23, 24, 26
Śpiewak, Adam	25	Tang, Yuanyuan	17	Varshney, Lav	16, 21, 25, 27, 30
Sprintson, Alex	18, 22, 25	Tang, Zihan	22	Vasic, Bane	16
Sreekumar, Sreejith	27, 28	Tan, Vincent Y. F.	17, 21, 27, 28,	Vaswani, Namrata	26
Sree, K V Sushena	23		33	Vatedka, Shashank	19, 25
Srinivasavaradhan, Sundara		Tan, Wai-Tian	33	Vazquez-Vilar, Gonzalo ...	19, 32
Rajan	17	Tao, Meixia	31	Veedu, Mishfad S.	16
Sriranga, Nandan	19	Tchamkerten, Aslan	16, 19	Veeravalli, Venugopal V. ..	19, 29
Steifer, Tomasz	30	Telatar, Emre	18	Vehkalahti, Roope	30
Steinberg, Yossef	18	ten Brink, Stephan	18	Vellambi, Badri N.	19
Steiner, Fabian	27	ten Wolde, Rein	22	Venkataramanan, Ramji ...	22, 23
Stein Ioushua, Shahar	24	Thakor, Satyajit	17	Venkatesh, Praveen	17
Stern, Kristoffer	16	Thangaraj, Andrew	16, 26	Verma, Ashwin	28
		Tharnnukhroh, Jareena	26	Vidal Alegria, Juan	20
		Thomas, Anoop	23		

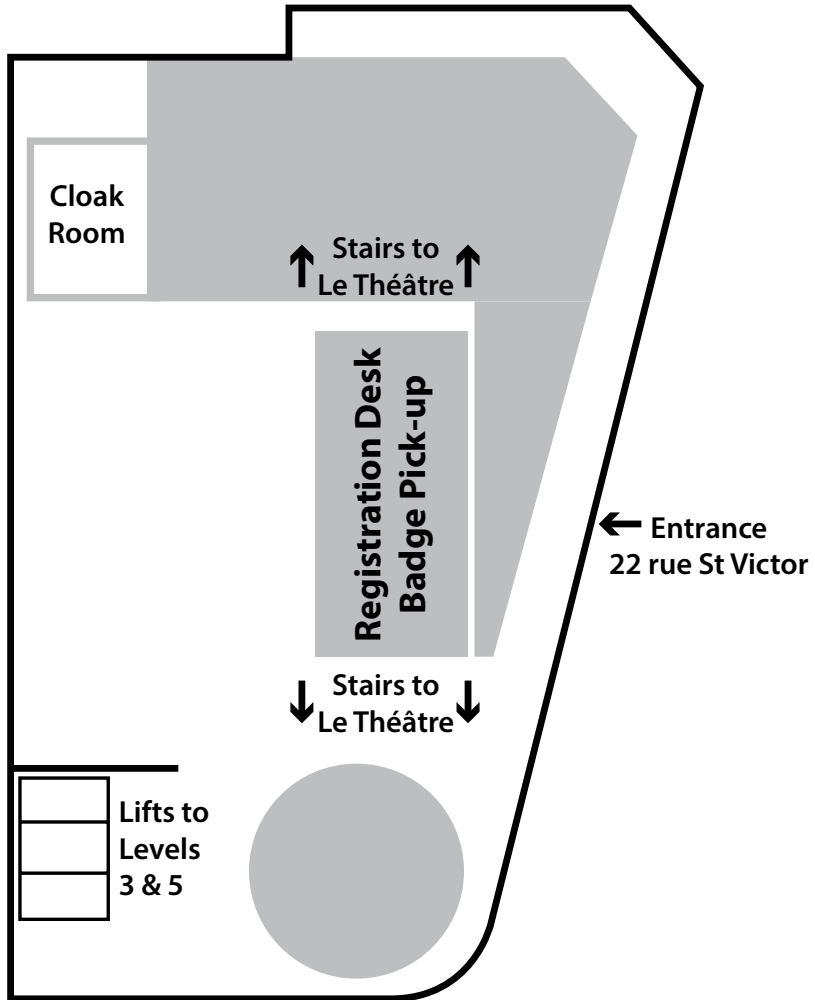
Villa, Irene	32	Wang, Zhiying	16, 22	Xu, Youle	22
Vinck, A. J. Han	25	Wang, Zulin	29	Y	
Vinel, Alexey	21	Wan, Heping	27	Yaakobi, Eitan	16, 17, 20, 21, 22, 23, 25, 28, 29
Vipathalla, Praneeth Kumar ..	21	Wan, Kai	20, 33	Yachongka, Vamoua	20
Viterbo, Emanuele	22, 26	Watanabe, Shun	21	Yağan, Osman	24
V, Lalitha	25	Weed, Jonathan	21	Yagi, Hideki	20
Vodrahalli, Kailas	29	Wei, Baodian	23	Yagli, Semih	26
Volfovsky, Alexander	18	Wei, Fei	17	Yamamoto, Hirotsuke	24, 26
Vontobel, Pascal Olivier ..	17, 26, 32	Wei, Hengjia	16	Yang, Chien-Sheng	32
Vorobyev, Ilya	16, 18	Wei, Lu	22	Yang, Hengjie	22
Vucetic, Branka	23	Weimer, Markus	31	Yang, Jing	19, 30
Vu, Minh Thanh	27	Weinberger, Nir	26	Yang, Kyeongcheol	26
Vu, Van Khu	25, 29	Wei, Shuangqing	20	Yang, Sheng	32
W		Wei, Yi-Peng	23, 28	Yang, Shenghao	24, 27
Wachter-Zeh, Antonia	16, 20, 21, 26	Weng, Jian	25	Yang, Yaoqing	31, 33
Wadayama, Tadashi	29, 32	Weng, Jian-Jia	23	Yang, Yi-Xian	32
Wagner, Aaron B.	25, 26, 27, 33	Wen, Jinming	25	Yan, Qifa	32
Wakakuwa, Eyuri	33	Wesel, Richard D.	22	Yao, Hanwen	24, 26
Walsh, John MacLaren	17	Whipps, Gene	28	Yao, Xinyu	28
Wang, Carol	21	Wiegart, Thomas	27	Yapar, Çağkan	33
Wang, Chih-Chun	16, 20, 32	Wiese, Moritz	20	Yardi, Arti D.	23
Wang, Hao	19	Wigger, Michèle	26, 32	Yassae, Mohammad Hossein ..	21, 22, 23
Wang, Huaxiong	31	Wijekoon, Viduranga Bandara ...	22	Yates, Roy D.	22
Wang, I-Hsiang	25, 29	Wilde, Mark M.	17, 30	Ye, Fangwei	20
Wang, Jie	24	Winter, Andreas	22, 28	Yeh, Edmund	27
Wang, Jintao	22	Wolf, Stefan	20	Yehezkeally, Yonatan	17
Wang, Ke	27	Woolsey, Nicholas	22, 31	Ye, Min	27
Wang, Lele	21	Wornell, Gregory W.	27	Yemini, Michal	30
Wang, Ligong	28	Wu, Changlong	27	Yener, Aylin	16, 19, 28
Wang, Li-Ping	30	Wu, Chengyu	26	Yeung, Raymond W. ..	17, 23, 27
Wang, Mengdi	33	Wu, Ting-Yi	30	Yi, Jirong	27
Wang, Qianfan	30	Wu, Youlong	27	Yin, Haoyu	27
Wang, Qiao	28	X		Yin, Hoover H.F.	24, 27
Wang, Qichun	22	Xiang, Yu	17	Yi, Xinping	23, 33
Wang, Qiwen	18	Xiao, Nong	25	Yohanonov, Lev	25
Wang, Shuai	29	Xiao, Xin	16	Yokoo, Hidetoshi	25
Wang, Su	31	Xia, Shu-Tao	32	Yoshida, Ryoichiro	16
Wang, Weiping	25	Xie, Hui	27	Yoshida, Takahiro	24
Wang, Xiaojie	18	Xie, Liyan	28	Yoshida, Yuuya	19
Wang, Xishi (Nicholas) ..	19, 24, 27	Xie, Tianyuan	26	Yousefi, Mansoor I.	16
Wang, Xuehe	21	Xie, Yao	28	Yuan, Peihong	27
Wang, Ye	30	Xing, Jiongyue	24	Yuan, Xin	19
Wang, Yongge	26	Xu, Jingke	22	Yu, Christina Lee	16
Wang, Zheng	30	Xu, Weiyu	27	Yue, Chentao	23
		Xu, Xiangxiang	27, 30	Yu, Jiun-Hung	27
		Xu, Xiaoli	27	Yüksel, Serdar	21
		Xu, Yinfei	17, 26, 28		

Yu, Lei	28, 33
Yu, Nam Yul	32
Yung, Man-Hong	19
Yu, Paul	19
Yu, Qian	22, 26
Yu, Wei	32

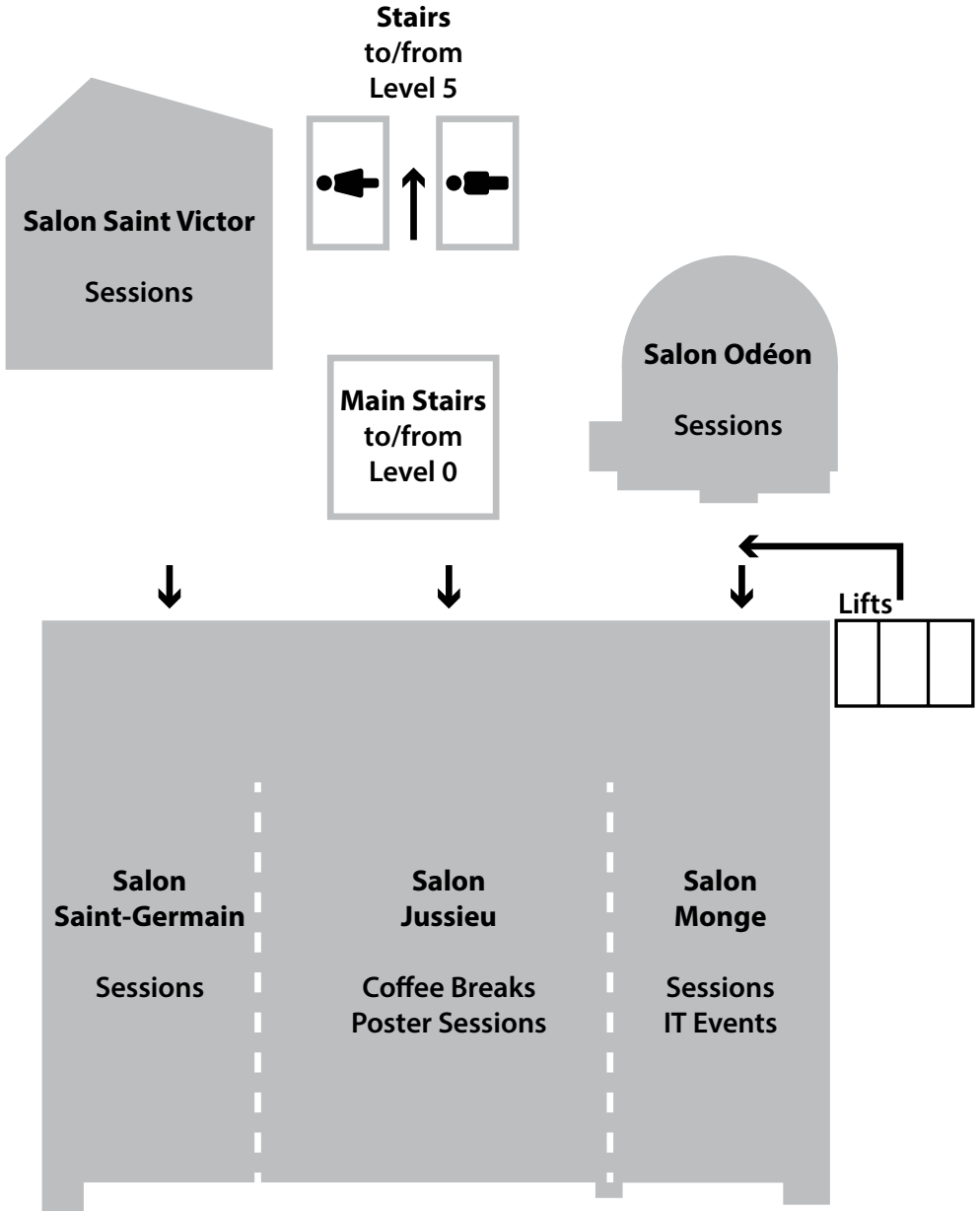
Z

Zadik, Ilias	18
Zamir, Ram	26
Zappatore, Ilaria	24
Zeng, Min	28
Zewail, Ahmed A	16
Zhang, Dan	28
Zhang, Fan	22
Zhang, Hang	19, 26
Zhang, Hui	22, 29
Zhang, Jinbei	20
Zhang, Jingjing	20, 31
Zhang, Ping	28
Zhang, Qiaosheng	21
Zhang, Wuyang	22
Zhang, Xinmiao	29
Zhang, Yaqian	22
Zhang, Yihan	25
Zhang, Yiheng	24
Zhang, Yiwei	28
Zhang, Zhifang	22
Zhao, Chao	18
Zhao, Puning	24
Zhao, Qing	18
Zheng, Lizhong	27
Zheng, Mengfan	28
Zheng, Simeng	29
Zhong, Jing	22
Zhou, Lin	17, 26, 27
Zhou, Qiaoqiao	21, 27
Zhou, Qingfeng	17
Zhou, Ruida	18, 30
Zhou, Samson	29
Zhou, Sheng	22
Zhou, Wenda	31
Zhu, Bing	25
Zhu, Xiaoqing	33
Zibaenejad, Ali	16
Zitová, Barbara	18
Zorrilla, Daniel Jiménez	24
Zou, Shaofeng	19, 29

Maison de la Mutualité – Level 0 / Entrance



Maison de la Mutualité – Level 3



Maison de la Mutualité – Level 5



Notes

Notes

Notes

Notes

Notes

