

CANDIDATES FOR AE POSITIONS, TRANSACTIONS ON IT

1) **Mari Kobayashi, AE for Communications**

Professor, CentraleSupélec, Gif-sur-Yvette, France
and a long-term visitor in TU Munich

2) **Mohammad Ali Maddah-Ali, AE for Communications**

Research Scientist, Nokia Bell Labs

3) **Stéphane Boucheron, AE for Statistical Learning**

Professor, Paris-Diderot (U. Paris VII)

Biographies of the candidates are attached here

Stéphane Boucheron

Biography: Stéphane Boucheron received the DEA in Pharmacology from Université Pierre et Marie Curie, Paris, in 1984, the Doctorat in Computer Science from the Université de Montpellier in 1988, the Habilitation in Computer Science from Université Paris-Sud in 2002. He is Professor of Mathematics at Université de Paris (formerly Université Paris-Diderot). He is affiliated with Laboratoire de Probabilités, Statistiques et Modèles aléatoires. His research interests are in stochastic inequalities, information theory, statistical learning, statistics, and random combinatorics.

Web site: <http://stephane-v-boucheron.fr>

Selected Publications:

1. Ben-Hamou, A., Boucheron, S., & Ohannessian, M. I. (2017). *Concentration inequalities in the infinite urn scheme for occupancy counts and the missing mass, with applications*. Bernoulli, 23(1), 249-287.
2. Boucheron, S., & Thomas, M. (2015). *Tail index estimation, concentration and adaptivity*. Electronic Journal of Statistics, 9(2), 2751-2792.
3. Boucheron, S., Gassiat, E., & Ohannessian, M. I. (2015). *About adaptive coding on countable alphabets: Max-stable envelope classes*. IEEE Transactions on Information Theory, 61(9), 4948-4967.
4. Boucheron, S., Lugosi, G., & Massart, P. (2013). *Concentration inequalities: A nonasymptotic theory of independence*. Oxford university press.
5. Boucheron, S., & Massart, P. (2011). *A high-dimensional Wilks phenomenon*. Probability theory and related fields, 150(3-4), 405-433.
6. Boucheron, S., Bousquet, O., & Lugosi, G. (2005). *Theory of classification: A survey of some recent advances*. ESAIM: probability and statistics, 9, 323-375.
7. Boucheron, S., Garivier, A., & Gassiat, E. (2009). *Coding on countably infinite alphabets*. IEEE Transactions on Information Theory, 55(1), 358-373.
8. Boucheron, S., Bousquet, O., Lugosi, G., & Massart, P. (2005). *Moment inequalities for functions of independent random variables*. The Annals of Probability, 33(2), 514-560.
9. Gassiat, E., & Boucheron, S. (2003). *Optimal error exponents in hidden Markov models order estimation*. IEEE Transactions on Information Theory, 49(4), 964-980.
10. Bartlett, P. L., Boucheron, S., & Lugosi, G. (2002). *Model selection and error estimation*. Machine Learning, 48(1-3), 85-113.

Mari Kobayashi

Biography: Mari Kobayashi received the B.E. degree in Electrical Engineering from Keio University, Yokohama, Japan, in 1999, and the M.S. degree in Mobile Radio and the Ph.D. degree from Ecole Nationale Supérieure des Télécommunications, Paris, France, in 2000 and 2005, respectively. From November 2005 to March 2007, she was a postdoctoral researcher at Centre Tecnològic de Telecomunicacions de Catalunya, Barcelona, Spain. In May 2007, she joined the Telecommunications department at Centrale-Supélec, Gif-sur-Yvette, France, where she is now a professor. She is the recipient of the Newcom++ Best Paper Award in 2010, and IEEE Comsoc/IT Joint Society Paper Award in 2011. Since September 2017, she is on a sabbatical leave at Technical University of Munich (TUM) as an Alexander von Humboldt Experienced Research Fellow.

Website: <http://www.l2s.centralesupelec.fr/perso/mari.kobayashi>

Selected Publications:

1. R. Combes, A. Ghorbel, M. Kobayashi, S. Yang, “Utility Optimal Scheduling for Coded Caching in General Topologies”, *IEEE J. Select. Areas Commun.*, vol. 36, no. 8, pp. 1692–1705, Aug. 2018
2. A. Ghorbel, M. Kobayashi, S. Yang, “Content Delivery in Erasure Broadcast Channels with Cache and Feedback”, *IEEE Trans. Info. Theory*, vol. 62, no.11, pp. 6407–6422, Nov. 2016
3. X. Yi, S. Yang, D. Gesbert, and M. Kobayashi, “The DoF Region for Temporally-Correlated MIMO Networks with Delayed CSIT”, *IEEE Trans. Info. Theory*, vol. 60, no 1, pp. 494-514, Jan. 2014
4. S. Yang, M. Kobayashi, P. Piantanida, and S. Shamai (Shitz), “Secrecy Degrees of Freedom of MIMO Broadcast Channels with Delayed CSIT”, *IEEE Trans. Info. Theory*, vol. 59, no. 9, pp. 5244-5256, Sep. 2013
5. S. Yang, M. Kobayashi, D. Gesbert, and X. Yi, “Degrees of Freedom of Time Correlated MISO Broadcast Channel with Delayed CSIT”, *IEEE Trans. Info. Theory*, vol. 59, no. 1, pp. 315-328, Jan. 2013
6. M. Kobayashi, N. Jindal, and G. Caire, “Training and Feedback Optimization for Multiuser MIMO Downlink”, *IEEE Trans. on Commun.*, vo. 59, no. 8, pp. 2228-2240, Aug. 2011
7. J. Hoydis, M. Kobayashi, and M. Debbah, “Green Small-Cell Networks”, *IEEE Veh. Technol. Mag.*, vol. 6, no. 1, pp. 37 - 43 Mar. 2011
8. J. Hoydis, M. Kobayashi and M. Debbah, “Optimal Channel Training in Uplink Network MIMO Systems”, *IEEE Trans. Signal Proc.*, vol. 59, no. 6, pp. 2824-2833, Jun. 2011
9. G. Caire, N. Jindal, M. Kobayashi, and N. Ravindran, “Multiuser MIMO Achievable Rates with Downlink Training and Channel State Feedback”, *IEEE Trans. Info. Theory*, vol. 56, no.6, pp. 2845-2866, Jun. 2010
10. M. Kobayashi and G. Caire, “An iterative water-filling algorithm for maximum weighted sum-rate of Gaussian MIMO-BC”, *IEEE J. Select. Areas Commun.*, vol. 24, no. 8, pp. 1640–1646, Aug. 2006

Mohammad Ali Maddah-Ali

Biography: Mohammad Ali Maddah-Ali (S'03-M'08) received the B.Sc. degree from Isfahan University of Technology, and the M.A.Sc. degree from the University of Tehran, both in electrical engineering. From 2002 to 2007, he was with the Coding and Signal Transmission Laboratory (CST Lab), Department of Electrical and Computer Engineering, University of Waterloo, Canada, working toward the Ph.D. degree. From 2007 to 2008, he worked at the Wireless Technology Laboratories, Nortel Networks, Ottawa, ON, Canada. From 2008 to 2010, he was a post-doctoral fellow in the Department of Electrical Engineering and Computer Sciences at the University of California at Berkeley. Since 2010, he is with Nokia Bell Labs as a research scientist on communication networks.

He is the recipient of the IEEE Communications Society and IEEE Information Theory Society Joint Paper Award in 2015 and the IEEE Information Theory Society Joint Paper Award in 2016.

Selected Publication:

1. M.A. Maddah-Ali and U. Niesen, "Fundamental Limits of Caching," *IEEE Transactions on Information Theory*, Volume 60, Issue 5, pp. 2856- 2867, May 2014
2. M.A. Maddah-Ali and D. Tse, "Completely Stale Transmitter Channel State Information is Still Very Useful," *IEEE Transactions on Information Theory*, Volume 58, Issue 7, pp. 4418 - 4431, July 2012
3. M.A. Maddah-Ali, S.A. Motarahi, and A.K. Khandani, "Communication Over MIMO X Channels: Interference Alignment, Decomposition, and Performance Analysis," *IEEE Transactions on Information Theory*, Volume 54, Issue 8, pp. 3457 – 3470, August 2008.
4. S. Li, M.A. Maddah-Ali, Q. Yu, and S. Avestimehr, "A Fundamental Tradeoff Between Computation and Communication in Distributed Computing," *IEEE Transactions on Information Theory*, pp. 109 - 128, Volume: 64, Issue: 1, January 2018.
5. Q. Yu, M.A. Maddah-Ali, and S. Avestimehr, "Polynomial codes: an optimal design for high-dimensional coded matrix multiplication," in Proceeding of Conference Advances in Neural Information Processing Systems (NIPS), pp. 4403- 4413, Los Angeles, CA, USA Dec. 2017.
6. M.A. Maddah-Ali and U. Niesen, "Cache-Aided Interference Channels," *IEEE Transactions on Information Theory*, pp.1714 – 1724, March 2019.
7. Q. Yu, M.A. Maddah-Ali, and S. Avestimehr, "The Exact Rate-Memory Tradeoff for Caching with Uncoded Prefetching," *IEEE Transactions on Information Theory*, pp. 1281 - 1296, Volume: 64, Issue: 2, Feb. 2018.
8. D. Kao, M. Maddah-Ali, S. Avestimehr, "Blind Index Coding," *IEEE Transactions on Information Theory*, p.p. 2076 - 2097, Volume: 63, Issue: 4, April 2017.
9. V. Ntranos, M.A. Maddah-Ali, and G. Caire, "Cellular Interference Alignment," *IEEE Transactions on Information Theory*, pp. 1194 – 1217, Volume: 61, Issue: 3, March 2015.