Alessandro Checco

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🖥 AlessandroChecco.github.io • 🔗 alessandrochecco

🐦 alex_checco • ⓖ AlessandroChecco • Generated on March 19, 2017

Education

○ Ph.D. in Mathematics, Hamilton Institute — Feb 2015
Design of decentralised algorithms applied to channel/code selection and convex optimisation for throughput fairness of 802.11 networks

○ M.Sc. in Mathematical Engineering, University of Roma "Tor Vergata" — 2010
110/110 with great distinction. Thesis on Monte Carlo Markov Chain methods for the approximate solutions of feature selection problems

○ Erasmus Scholarship, Universiteit Gent, Department of Telecommunications — 2009
Queuing Behaviour of Statistical Multiplexer with Spacing

○ B.Sc. in Mathematical Engineering, University of Roma "Tor Vergata" — 2007
110/110 with great distinction. Thesis on Wavelet analysis for recognition of form document images with complicated background

Research Experience

○ Information School, University of Sheffield, Dr. Gianluca Demartini — 2017 – present
Research Associate on the H2020-funded project FashionBrain on Crowsourcing and recommender systems

○ Information School, University of Sheffield, Dr. Gianluca Demartini — 2016
Research Associate on the EPSRC-funded project BetterCrowd on Crowsourcing and recommender systems

○ Science Foundation Ireland and Trinity College Dublin, Prof. Doug Leith — 2016
Recipient of Technology Innovation Development Award (TIDA) 2016 on Privacy issues in recommender systems and probabilistic matrix factorisation

○ Statistics and Computer Science Department, Trinity College Dublin, Prof. Doug Leith — 2015
Postdoctoral Researcher on Privacy issues in recommender systems and probabilistic matrix factorisation

Selected Publications
Google Scholar ID: crhkrNcAAAAJ

[1] **A. Checco**, G. Bianchi, D. J. Leith, "Blc: Private matrix factorization recommenders via automatic group learning," *ACM Transactions on ACM Transactions on Privacy and Security (TOPS)*, (accepted for publication), 2017, (accepted for publication). [Online]. Available: https://arxiv.org/pdf/1509.05789.

[2] **A. Checco** and D. J. Leith, "Learning-based constraint satisfaction with sensing restrictions," *IEEE Journal of Selected Topics in Signal Processing*, vol. 7, pp. 811–820, 2013. [Online]. Available: http://arxiv.org/pdf/1210.7156.

[3] ——, "Fast, responsive decentralised graph colouring," *ArXiv preprint arXiv:1405.6987*, 2014.

[4] ——, "Fair virtualisation of 802.11 networks," *IEEE/ACM Transactions on Networking*, vol. to appear, 2013. [Online]. Available: http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=6689352.

[5] ——, "Proportional fairness in 802.11 wireless LANs," *IEEE Communications Letters*, vol. 15, no. 8, pp. 807–809, 2011. [Online]. Available: http://www.hamilton.ie/net/single-hop-propfair.pdf.

[6] B. Bellalta, A. Faridi, J. Barcelo, **A. Checco**, P. Chatzimisios, "Channel bonding in short-range WLANs," in *European Wireless*, 2014. [Online]. Available: http://www.tecn.upf.es/~bbellalt/ChannelBondingShortRangeWLANs.pdf.

[7] B. Bellalta, A. Zocca, C. Cano, **A. Checco**, J. Barcelo, A. Vinel, "Throughput analysis in CSMA/CA networks using continuous time markov networks: A tutorial," *ArXiv preprint arXiv:1404.0180*, 2014. [Online]. Available: http://arxiv.org/pdf/1404.0180.

[8] **A. Checco**, C. Lancia, D. J. Leith, "Using crowd sourcing for local topology discovery in wireless networks," *ArXiv preprint arXiv:1401.1551*, 2014. [Online]. Available: http://arxiv.org/pdf/1401.1551.

[9] **A. Checco**, R. Razavi, D. J. Leith, H. Claussen, "Self-configuration of scrambling codes for WCDMA small cell networks," in *IEEE 23rd International Symposium on Personal Indoor and Mobile Radio Communications (PIMRC)*, IEEE, 2012, pp. 149–154. [Online]. Available: http://www.hamilton.ie/net/pimrc2012.pdf.

[10] B. Bellalta, **A. Checco**, A. Zocca, J. Barcelo, "On the interactions between multiple overlapping WLANs using channel bonding," *IEEE Transactions on Vehicular Technology*, vol. 65, no. 2, pp. 796–812, 2016.

Industry Experience

- Intern, Bell Laboratories Ireland — 2011 – 2012
  - Decentralised algorithms design for scrambling code selection in femtocell networks

Skills

Languages	Bash, C, C++, CSS, Matlab, JavaScript, Fortran, HTML, LATEX, *Mathematica*, Python, R
Frameworks	Spark, Cloudera, Pandas, NumPy, SciPy, SimPy, scikit-learn
Algorithm design	Design, convergence rate and complexity analysis of decentralised algorithms on graphs
Convex optimisation	Convex optimisation, with application to discrete problems. Numerical methods for approximate solution of optimisation problems
Data Mining	Monte Carlo Markov chains techniques for data mining and feature selection
Privacy in recommender systems	Probabilistic matrix factorisation applied to recommender systems, with focus on privacy issues
Simulatots	Event-based simulators design for wireless network analysis
Statistical inference	Bayesian modelling and exploratory data analysis, with focus on big data