

# Ivana Marić

Ericsson Research  
1125 Merrimac Drive, Sunnyvale, CA 94087

website: [www.ivanamaric.net](http://www.ivanamaric.net)  
email: [ivana.mmari@gmail.com](mailto:ivana.mmari@gmail.com)  
mobile: 650-739-3650

## Professional Qualifications

- Research focus on 5G wireless systems, specifically, channel coding algorithms and algorithms for mesh networks.
- Co-editor and co-author of a book on 5G; co-author of a monograph on cooperative communications; published 13 journal and 42 conference papers; presented invited talks on 5G; taught a tutorial on cooperative communications; served as a technical program committee member for international conferences on wireless communications; presented numerous talks on these topics; co-organized a summer school on Information Theory; co-chair for IEEE WCNC'17 Workshops.
- Adjunct Faculty at Santa Clara University during Spring 2016.
- Performed research in the field of wireless communications and network information theory. Proposed novel designs for future wireless networks. Main research topics: cooperative communications, cognitive radio, network security, ad hoc and sensor networks, self-organizing networks.
- Currently member of Ericsson Research (ER) Young Advisory Board directly interacting with the ER Leadership Team on the topics of ER strategy and planning.
- Co-recipient of the 2013 IEEE Communication Society Best Tutorial Paper Award.

## Education

|                             |   |
|-----------------------------|---|
| <b>Postdoctoral Scholar</b> | Stanford University, Dept. of Electrical Engineering,<br>Jun. 2006 - Aug. 2010. Performed research in the field of network information theory and wireless communications                             |
| <b>Ph.D.</b>                | Rutgers University, WINLAB, Electrical and Computer Engineering Dept.<br>May 2006, Advisor: Prof. Roy D. Yates, <b>G.P.A.</b> 4.0<br><i>Thesis: Cooperative Strategies in Wireless Relay Networks</i> |
| <b>M.Sc.</b>                | Rutgers University, WINLAB, Electrical and Computer Engineering Dept.<br>Oct. 2000, Advisor: Prof. Roy D. Yates, <b>G.P.A.</b> 4.0<br><i>Thesis: Connection Establishment in the Bluetooth System</i> |
| <b>B. Sc.</b>               | University of Novi Sad, Dept. of Electrical Engineering<br>Dec. 1995, Advisor: Prof. Vojin Senk, <b>G.P.A.</b> 8.83/10<br><i>Thesis: The Role of CDMA in Wireless Networks</i>                        |

## Experience

|                   |  |
|-------------------|--|
| 05/2013 - present | <b>Senior Researcher</b> , Ericsson Research<br>Performing research on 5G systems. ER Young Advisory Board member. |
| 03/2016 - 06/2016 | <b>Adjunct Faculty</b> , Santa Clara University<br>Taught a graduate level course titled Information Theory.       |

- 08/2010 - 05/2013 **Senior Systems Engineer**, Aviat Networks  
Developed algorithms for self-organizing wireless networks.
- 09/1999 - 06/2006 **Graduate Research Assistant**, WINLAB, Rutgers University  
Performed research in the field of wireless communications and network information theory.
- 06/1998 - 09/1998 **Summer Intern**, AT&T Research Labs, Red Bank, NJ  
Modeled and simulated GSM cellular system. Proposed a novel frequency-hopping scheme for increased spectrum efficiency in GSM.
- 09/1997 - 08/1999 **Teaching Assistant**, ECE Department, Rutgers University  
Courses: Probability and Random Processes, Analog Electronics, Principles of Communication Systems.
- 03/1996 - 07/1997 **Research Fellow**, Dept. of Electrical Engineering, University of Novi Sad  
Evaluated performance of wireless systems through simulations and analysis.

### Associate Editor

- Transactions on Emerging Telecommunications Technologies, Wiley & Sons, 09/2016 - present
- IEEE Communication Letters, 05/2009 - 06/2012.

### Tutorials

- I. Marić and R. Dabora, **Cooperation in Wireless Networks**  
*IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC)*, Cannes, France, Sept. 2008.

### Invited Talks

- **Information Theoretic Concepts of 5G**
  - IEEE 5G Silicon Valley Summit, Santa Clara University, Nov. 2015
  - 8th North American School of Information Theory, UC San Diego, Aug. 2015.
- **5G Mobile Trends**
  - IEEE Webinar, Nov. 2015, presented together with Judy Little
- **The Future of Wireless Access**
  - 5G Workshop, Center for Wireless Communications, UC San Diego, Nov. 2015.
- **Noisy Network Coding for 5G?**
  - Seminar, ECE Dept. UC San Diego, Apr. 2015.
- **Short-Message Noisy Network Coding with Rate Splitting**
  - Information Theory and Applications Workshop (ITA), UCSD, Feb. 2015.
- **Analog Network Coding in the High-SNR Regime**
  - Information Theory and Applications (ITA) Workshop, UCSD La Jolla, CA, Feb. 2010.

- **Relaying for Multiple Sources**
  - Information Theory and Applications (ITA) Workshop, UCSD La Jolla, CA, Feb. 2009.
- **Cognitive Radio Networks: An Information Theoretic Perspective**
  - Intel Research, Santa Clara, CA, Aug. 2008.
- **Recent Results for Cognitive Radio**
  - Information Theory and Applications (ITA) Workshop, UCSD La Jolla, CA, Feb. 2008.
- **The Capacity of Interference Channels with Partial Transmitter Cooperation**
  - University of Southern California (USC), Viterbi School of Engineering, Feb. 2007
  - Networking, Communications, and DSP Seminar, UC Berkeley, Nov. 2006
  - Laboratory for Information and Decision Systems (LIDS), MIT, Oct. 2006.
- **Cooperation in Wireless Networks and Capacity Results for Channels with Conferencing**
  - Information Systems Colloquium, Stanford University, CA, Nov. 2005
  - Intel Research, Santa Clara, CA, Nov. 2005.
- **Capacity Results for Channels With Conferencing**
  - Information Sciences and Systems (ISS) Seminar, Princeton University, Oct. 2005.
- **Bandwidth and Power Allocation for Cooperative Strategies in Gaussian Relay Networks**
  - Bell Labs, Lucent Technologies, Murray Hill, Dec. 2004.
- **Cooperative Broadcast for Maximum Network Lifetime**
  - Dept. of Electrical Engineering, Polytechnic University, Brooklyn, NY, May 2004.
  - Dept. of Electrical and Computer Engineering, Polytechnic Institute, Worcester, MA, Apr. 2004.
- **Performance of Repetition and Punctured Codes for Accumulative Broadcast**
  - Institut Eurecom, Sophia-Antipolis, France, March 2003.

## Keynote Speech

- **Exploiting Interference through Cooperation and Cognition**  
*IEEE Cooperative Mobile Networks - CoCoNet Workshop (collocated with IEEE ICC)*, Dresden, Germany, June 2009.

## Technical Program Committee Member

- IEEE Int. Conference on Communications (ICC 2017) Green Communications Systems and Networks Symposium, Paris, France, May 2017.
- IEEE ICC Signal Processing for Communications Symposium 2015, London, UK, June 2015.
- The Third IEEE Int. Workshop on Emerging Cognitive Radio Applications and algorithms (CORAL 2015), Boston, June 2015.
- 2013 IEEE Int. Conference on Communications (*ICC*), Cognitive Radio and Networks Symposium, Budapest, Hungary, June 2013.
- 8th IEEE Int. Wireless Communications and Mobile Computing Conference (*IWCMC* 2012), Communication and Information Theory Symposium, Cyprus, Aug. 2012.
- 9th Int. Symposium on Wireless Communication Systems (*ISWCS 2012*), Paris, France, Aug. 2012
- 2012 IEEE Global Communications Conference (*GLOBECOM 2012*), Cognitive Radio and Networks Symposium, Anaheim, CA, Dec. 2012.
- 2011 IEEE Global Communications Conference (*GLOBECOM 2011*), Cognitive Radio and Networks Symposium, Houston, Tx, Dec. 2011.
- 8th Int. Symposium on Wireless Communication Systems, (*ISWCS 2011*) Aachen, Nov. 2011.
- 22nd IEEE Personal Indoor Mobile Radio Communications, Cognitive Radio and Spectrum Management Track (*PIMRC'11 - CRSM*), Toronto, Canada, Sept. 2011.
- Int. ICST Conference on Cognitive Radio Oriented Wireless Networks and Communications (*CROWNCOM 2011*), Yokohama, Japan, Jun. 2011.
- 2011 IEEE Int. Conference on Communications (*ICC*), Cognitive Radio and Networks Symposium, Kyoto, Japan, Jun. 2011.
- IEEE Symposia on New Frontiers in Dynamic Spectrum Access Networks (*DySPAN 2011*), Aachen, Germany, May 2011.
- The First Int. Conference on Advances in Cognitive Radio ( *COCORA 2011*), Budapest, Hungary, Apr. 2011.
- The Second ACM SIGMOBILE Workshop on Cognitive Wireless Networking (*CoRoNet 2010*), Illinois, Chicago, Sept. 2010.
- Int. Symposium on Wireless Communications Systems 2010 (*ISWCS 2010*), The University of York, York, United Kingdom, Sept. 2010.
- *IEEE INFOCOM 2010*, Workshop on Cognitive Wireless Communications and Networking, San Diego, CA, USA, March 2010.
- 2010 IEEE Int. Conference on Communications (*ICC*), Cape Town, South Africa, May 2010.
- 5th Int. Conference on Cognitive Radio Oriented Wireless Networks and Communications (*CROWNCOM* 2010), Cannes, France, 2010.
- Int. Workshop on Cognitive Information Processing (*CIP 2010*), Elba Island, Italy, Jun. 2010.

- IEEE Symposia on New Frontiers in Dynamic Spectrum Access Networks (*DySPAN 2010*), Singapore, April 2010.
- 2010 IEEE 72nd Vehicular Technology Conference (*VTC 2010 - Fall*), Ottawa, Canada, Sep. 2010.
- Int. Conference on Cognitive Radio Oriented Wireless Networks and Communications (*CROWN-COM 2009*), Hannover, Germany, Jun. 2009.
- The Fourth Workshop on Networking Technologies for Software Defined Radio (*SDR*) Networks (held in conjunction with IEEE SECON 2009), Rome, Italy, June 2009.
- Int. Conference on Distributed Computing for Sensor Systems (*DCOSS 2009*), Marina Del Rey, USA, June 2009.
- IEEE Wireless Communications & Networking Conference (*WCNC 2009*), Budapest, Hungary, Apr. 2009.
- Int. Workshop on Wireless Networks: Communication, Cooperation and Competition, Apr. 2006.
- IEEE Int. Conference on Communications (*ICC 2006*), Istanbul, Turkey, June 2006.

### **Other Professional Services**

- Member of the Organizing Committee of the Wireless Communications and Networking Conference (WCNC 2017) Workshops.
- Co-organizer of the First Annual School of Information Theory, June 2008.
- The Information Theory Student Committee co-chair, June 2005 - Sept 2009.

## Publications - Ivana Marić

### Books and Book chapters

1. I. Marić, S. Shamai (Shitz) and O. Simeone, Editors, Information-Theoretic Perspectives on 5G Systems and Beyond”, Cambridge University Press, to be published.
2. A. Goldsmith and I. Marić, Capacity of Cognitive Radio Networks, Book Chapter: ”Principles of Cognitive Radio”, Cambridge University Press, 2013.
3. G. Kramer, I. Marić and R. D. Yates, Cooperative Communications, Foundations and Trends in Networking. Hanover, MA: NOW Publishers Inc., vol. 1, no. 3-4, 2006.
4. I. Marić and R. D. Yates, Efficient Multihop Broadcast for Wideband Systems, Book chapter: ”Multiantenna Channels: Capacity, Coding and Signal Processing”, Eds: G. J. Foschini and S. Verdu, *DIMACS Workshop on Signal Processing for Wireless Transmission*, pp. 285-299, Oct. 2002.

### Journal

1. S. Hong, I. Marić and D. Hui, Short Message Noisy Network Coding with Sliding-Window Decoding for Half-Duplex Multihop Relay Networks, *IEEE Trans. Wireless Communications*, Jul. 2016.
2. D. Zahavi, L. Zhang, I. Marić, R. Dabora, A. Goldsmith, S. Cui, Diversity-Multiplexing Tradeoff for the Interference Channel With a Relay, *IEEE Trans. Information Theory*, 963-982, vol. 61, no. 2, Feb. 2015.
3. N. Liu, I. Marić, A. Goldsmith and S. Shamai (Shitz), Capacity Bounds and Exact Results for the Cognitive Z-Interference Channel, *IEEE Trans. Information Theory*, vol. 59, no. 2, pp. 886-893, Feb. 2013.
4. I. Marić, R. Dabora and A. Goldsmith, Relaying in the Presence of Interference: Achievable Rates, Interference Forwarding, and Outer Bounds, *IEEE Trans. Information Theory*, vol. 58, no. 7, pp. 4342-4354, Jul. 2012.
5. I. Marić, A. Goldsmith and M. Médard, Multihop Analog Network Coding via Amplify-and-Forward: The High-SNR Regime, *IEEE Trans. Information Theory*, vol. 58, no. 2 pp. 793-803, Feb. 2012.
6. I. Marić, A. Goldsmith, G. Kramer and S. Shamai (Shitz), On the Capacity of Interference Channels with One Cooperating Transmitter, *European Transactions on Telecommunications, invited*, vol. 19, pp. 405-420, Apr. 2008.
7. A. Goldsmith, S. A. Jafar, I. Marić and S. Srinivasa, Breaking Spectrum Gridlock with Cognitive Radios: An Information Theoretic Perspective, *Proceedings of the IEEE, invited*, vol. 97, no. 5, pp. 894-914, May 2009. **2013 IEEE Communications Society Best Tutorial Paper Award.**
8. R. Liu, I. Marić, P. Spasojević and R. D. Yates, Discrete Memoryless Interference and Broadcast Channels with Confidential Messages: Secrecy Rate Regions, *IEEE Trans. Information Theory*, vol. 54, no. 6, Jun. 2008.

9. I. Marić and R. D. Yates and G. Kramer, Capacity of Interference Channels with Partial Transmitter Cooperation, *IEEE Trans. Information Theory*, vol. 53, no. 10, pp. 3536-3548, Oct. 2007.
10. I. Marić and R. D. Yates, Bandwidth and Power Allocation for Cooperative Strategies in Gaussian Relay Networks, *IEEE Trans. Information Theory*, vol. 56, no. 4, pp. 1880-1890, Apr. 2009.
11. I. Marić and R. D. Yates, Cooperative Multicast for Maximum Network Lifetime, *IEEE JSAC Special Issue on Wireless Ad Hoc Networks*, vol. 23(1):127 - 135, Jan. 2005.
12. I. Marić and R. D. Yates, Efficient Multihop Broadcast for Wireless Networks, *IEEE JSAC, Special Issue on Fundamental Performance Limits of Wireless Sensor Networks*, vol. 22(6): 1080 - 1088, Aug. 2004.
13. Z. Kostić, I. Marić and X. Wang, Fundamentals of Dynamic Frequency Hopping in Cellular Systems, *IEEE Journal on Selected Areas of Communications*, vol. 19(11): 2254 - 2266, Nov. 2001.

#### Journal (submitted)

1. S. Hong, D. Hui and I. Marić, Capacity-Achieving Rate-Compatible Polar Codes, *Submitted to IEEE Trans. Information Theory*, Jan. 2016, [arxiv.org/pdf/1510.01776v1.pdf](https://arxiv.org/pdf/1510.01776v1.pdf)

#### Conference (submitted)

1. M. Mondelli, H. Hassani, I. Marić, D. Hui and S. Hong, Capacity-Achieving Rate-Compatible Polar Codes for General Channels, *Submitted to 2016 IEEE Polar Coding Workshop, WCNC*, to be held San Francisco, CA, USA, Mar. 2017.

#### Conference

1. S. Hong, D. Hui and I. Marić, On the Catastrophic Puncturing Patterns for Finite-Length Polar Codes, *Asilomar Conference on Signals, Systems and Computers*, Pacific Grove, CA, Nov. 2016.
2. S. Hong, D. Hui and I. Marić, Capacity-Achieving Rate-Compatible Polar Codes, *2016 IEEE Int. Symposium on Information Theory (ISIT)*, Barcelona, Spain, Jun. 2016.
3. S. Hong, I. Marić, D. Hui and G. Caire, On the Achievable Rates of Multihop Virtual Full-Duplex Relay Channels, *2015 IEEE Int. Symposium on Information Theory (ISIT)*, Hong Kong, Jun. 2015.
4. S. Hong, I. Marić, D. Hui and G. Caire, Multihop Virtual Full-Duplex Relay Channels, *2015 IEEE Information Theory Workshop (ITW)*, Jerusalem, Israel, Apr. 2015.
5. I. Marić and D. Hui, Enhanced Relay Cooperation via Rate Splitting, *2014 Asilomar Conf. on Signals, Systems and Computers*, Pacific Grove, CA, Nov. 2014.
6. I. Marić, Low Latency Communications, Information Theory and Applications Workshop (ITA), UCSD, La Jolla, CA, Feb. 2013.
7. D. Zahavi, L. Zhang, I. Marić, R. Dabora, A. Goldsmith and S. Cui, Diversity-Multiplexing Tradeoff for the Interference Channel with a Relay, *2013 IEEE Int. Symposium on Information Theory (ISIT)*, Istanbul, Jul. 2013.

8. I. Marić, Low Latency Communications, *Information Theory and Applications Workshop (ITA)*, San Diego CA, Feb. 2013.
9. I. Marić and A. Goldsmith, Diversity-multiplexing tradeoff in a MIMO Gaussian interference channel with a relay, *2011 IEEE International Symposium on Information Theory (ISIT)*, Saint Petersburg, Aug. 2011.
10. I. Marić, B. Bostjančić A. Goldsmith, Resource Allocation for Constrained Backhaul in Picocell Networks, *Information Theory and Applications Workshop (ITA)*, UCSD, La Jolla, CA, Feb. 2011.
11. I. Marić, A. Goldsmith and M. Médard, Analog Network Coding in the High-SNR Regime, *2010 IEEE Wireless Network Coding Workshop*, Boston, Massachusetts, June 2010.
12. J. Sachs, I. Marić and A. Goldsmith, Cognitive Cellular Systems within the TV Spectrum, *IEEE Int. Symp. on New Frontiers in Dynamic Spectrum Access Networks (DySPAN 2010)*, Singapore, Apr. 2010.
13. I. Marić, R. Dabora and A. Goldsmith, An Outer Bound for the Gaussian Interference Channel with a Relay, *2009 IEEE Information Theory Workshop (ITW)*, Taormina, Italy, Oct. 2009.
14. J. Jiang, I. Marić, A. Goldsmith and S. Cui, Achievable Rate Regions for Broadcast Channels with Cognitive Radios, *2009 IEEE Information Theory Workshop (ITW)*, Taormina, Italy, Oct. 2009.
15. N. Liu, I. Marić, A. Goldsmith and S. Shamai(Shitz), Bounds and Capacity Results for the Cognitive Z-interference Channel, *2009 IEEE International Symposium on Information Theory (ISIT)*, Seoul, Korea, Jun. 2009.
16. I. Marić, N. Liu and A. Goldsmith, Encoding Against an Interferer's Codebook, *Allerton Conference on Communications, Control and Computing*, Monticello, IL, Sept. 2008.
17. I. Marić, R. Dabora and A. Goldsmith, Generalized Relaying in the Presence of Interference, *invited to The 42nd Asilomar Conference on Signals, Systems and Computers*, Pacific Grove, CA, Oct. 2008.
18. R. Dabora, I. Marić, and A. Goldsmith, Interference Forwarding in Multiuser Networks, *2008 IEEE GLOBECOM*, New Orleans, LA, Nov. 2008.
19. I. Marić, R. Dabora and A. Goldsmith, On the Capacity of the Interference Channel with a Relay, *2008 IEEE International Symposium on Information Theory (ISIT)*, Toronto, Canada, July 2008.
20. R. Dabora, I. Marić and A. Goldsmith, Relay Strategies for Interference Forwarding, *2008 IEEE Information Theory Workshop (ITW)*, Porto, Portugal, May 2008.
21. I. Marić, A. Goldsmith, G. Kramer and S. Shamai (Shitz), An Achievable Rate Region for Interference Channels with a Cognitive Transmitter, *The 41st Asilomar Conference on Signals, Systems and Computers*, Pacific Grove, CA, Nov. 2007.
22. I. Marić, A. Goldsmith and M. Médard, Information-Theoretic Relaying for Multicast in Wireless Networks , *2007 Military Communications Conference (MILCOM)*, Orlando, FL, Oct. 2007.



23. I. Marić, A. Goldsmith, G. Kramer and S. Shamai (Shitz), On the Capacity of Interference Channels with a Partially-Cognitive Transmitter, *2007 IEEE International Symposium on Information Theory (ISIT)*, Nice, France, June 2007.
24. S. Katti, I. Marić, A. Goldsmith, D. Katabi and M. Médard, Joint Relaying and Network Coding in Wireless Networks, *2007 IEEE International Symposium On Information Theory (ISIT)*, Nice, France, June 2007.
25. I. Marić, A. Goldsmith, G. Kramer and S. Shamai (Shitz), On the Capacity of Interference Channels with a Cognitive Transmitter, *Information Theory and Applications Workshop (ITA)*, UCSD, La Jolla, CA, Jan. 2007.
26. R. Liu, I. Marić, P. Spasojević and R. D. Yates, Multiterminal Communications with Confidential Messages, *Information Theory and Applications Workshop (ITA)*, UCSD, LA Jolla, CA, Jan. 2007.
27. R. Liu, I. Marić, P. Spasojević and R. D. Yates, Discrete Memoryless Interference and Broadcast Channels with Confidential Messages, *Allerton Conference on Communications, Control and Computing, Monticello, IL*, Sept. 2006
28. R. Liu, I. Marić, R. D. Yates and P. Spasojević, The Discrete Memoryless Multiple Access Channel with Confidential Messages, *2006 IEEE International Symposium On Information Theory, Seattle, WA*, July 2006.
29. I. Marić, R. D. Yates and G. Kramer, The Strong Interference Channel With Unidirectional Cooperation, *Information Theory and Applications Inaugural Workshop (ITA)*, La Jolla, CA, Feb. 2006.
30. C. T. K. Ng, I. Marić, A. J. Goldsmith, S. Shamai, R. D. Yates, Iterative and One-shot Conferencing in Relay Channels, *2006 IEEE Information Theory Workshop, Punta del Este, Uruguay*, March 2006.
31. I. Marić, R. D. Yates and G. Kramer, The Capacity Region of the Strong Interference Channel With Common Information, *The Asilomar Conference On Signals, Systems and Computers*, Pacific Grove, CA, Nov. 2005.
32. I. Marić, R. D. Yates and G. Kramer, The Strong Interference Channel With Common Information, *Allerton Conference on Communications, Control and Computing*, Monticello, IL, Sept. 2005.
33. I. Marić, R. D. Yates and G. Kramer, The Discrete Memoryless Compound Multiple Access Channel With Conferencing Encoders, *The IEEE International Symposium On Information Theory (ISIT'05)*, Adelaide, Australia, Sept. 2005.
34. I. Marić and R. D. Yates, Bandwidth and Power Allocation for Cooperative Strategies in Gaussian Relay Networks, *The 38th Asilomar Conference On Signals, Systems and Computers*, Pacific Grove, CA, Nov. 2004.
35. I. Marić and R. D. Yates, Static and Dynamic Cooperative Multicast for Maximum Network Lifetime, *Allerton Conference on Communications, Control and Computing*, Monticello, IL, Sep. 2004.
36. I. Marić and R. D. Yates, Forwarding Strategies for Parallel-Relay Networks, *IEEE International Symposium On Information Theory (ISIT'04)*, Chicago, IL, June 2004.

37. I. Marić and R. D. Yates, Cooperative Broadcast for Maximum Network Lifetime, *Conference on Information Sciences and Systems (CISS'04)*, March 2004.
38. I. Marić and R. D. Yates, Forwarding Strategies for Parallel-Relay Networks, *Conference on Information Sciences and Systems (CISS'04)*, March 2004.
39. I. Marić and R. D. Yates, Performance of Repetition Codes and Punctured Codes for Accumulative Broadcast, *WiOpt'03: Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks Workshop, Sophia-Antipolis, France*, March 2003.
40. I. Marić and R. D. Yates, Efficient Multihop Broadcast for Wideband Systems, *Allerton Conference on Communications, Control and Computing*, Monticello, IL, Oct. 2002.
41. I. Marić and R. D. Yates, Connection Establishment in the Bluetooth System, *Conference on Information Sciences and Systems (CISS'01)*, Baltimore, MD, March 2001.
42. Z. Kostić and I. Marić, Dynamic Frequency Hopping in Wireless Cellular Systems - Simulation of Full-Replacement and Reduced-Overhead Methods, *The IEEE Vehicular Technology Conference (VTC'99)*. Houston, TX, May 99.

## Patents

1. M. Mondelli, H. Hassani, I. Marić, D. Hui and S. Hong, Rate-compatible Polar Codes for Generalized Channels, Oct. 2016.
2. D. Hui, Y. Blankenship, I. Marić and M. Andersson, Soft Decoding of Rate-Compatible Polar Codes, Aug. 2016.
3. Y. Blankenship, T. Cheng, D. Larsson, M. Andersson, S. Sandberg, I. Marić, Mechanism for Determining Channel Coding Type, May 2016.
4. S. Hong, D. Hui and I. Marić, Rate-compatible Polar Codes, Aug. 2015.
5. S. Hong, I. Marić and D. Hui, Enhancing Data Throughputs in Multihop Wireless Networks via Energy-Efficient Routing and Quantize-Map-Forward, Apr. 2015.
6. I. Marić and D. Hui, Improving Data Rates of Short Message Noisy Network Coding and Decode-and-Forward Relaying, Nov. 2014.
7. I. Marić and D. Hui, Method for Improving Data Throughput in Wireless Networks via Practical Noisy Network Coding, Feb. 2014.
8. I. Marić and D. Hui, Selection of Cooperative Strategies for Relay Nodes in a Wireless Network to Enhance Data Throughput, Jan. 2014.
9. S. Licardie and I. Marić, Systems and Methods for Transporting a Clock Signal Over a Network, Jan. 2014.
10. I. Marić, B. Bostjančić and A. Goldsmith, Constrained Backhaul Optimization for Self Organizing Networks, Nov. 2011.
11. J. Sachs, I. Marić and A. Goldsmith, Spectrum sharing using power split between primary and secondary transmitters, Apr. 2011.