

ÖMER İLERİ

Scientific Programs Expert
Technology and Innovation Funding Directorate, TÜBİTAK
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HIGHLIGHTS

- Experience in development and management of research projects and teams
- Research projects with major telecom companies such as Ericsson and Lucent as well as the Swedish Telecommunications Regulator (PTS)
- Significant international experience in the US and Europe

EDUCATION

RUTGERS, The State University of NJ, USA

Ph.D., Electrical and Computer Engineering (Wireless Communications), June 2007
Thesis Topic: "Dynamic Spectrum Access Models: Towards an Engineering Perspective in the Spectrum Debate"
GPA: 3.93

RUTGERS, The State University of NJ, USA

M.S., Electrical and Computer Engineering (Wireless Communications), October 2003.
Thesis Topic: "Pricing as Enabler of Forwarding in Wireless Ad Hoc Networks"
GPA: 3.88

BOĞAZİÇİ UNIVERSITY, Istanbul, TURKEY

B.S., Electrical and Electronics Engineering (Telecommunications), June 2001.
GPA: 3.09 – Honors

RESEARCH

- Wireless Networks & Communications
- Radio Resource Management
- Microeconomic Models in Communications Networks (Pricing and Game Theory)
- Spectrum Management & Regulation (Focus: Dynamic Spectrum Access Networks)
- Teleconomics (Telecom business models and infrastructure cost modeling)
- Wireless Standards and Protocols (IEEE 802.11/Wi-Fi, 802.16/Wi-Max, UMTS, etc.)

POSITIONS HELD

Scientific Programs Expert, TÜBİTAK

Technology and Innovation Funding Directorate (TEYDEB). April, 2009 – Present

- Member of the team which evaluates and follows up on funding proposals related to industrial R&D in communications technology field.

Research Associate, KTH (Royal Institute of Technology - Sweden)

Information and Communication Technology Dept. August, 2008 – March, 2009

- Project manager for the ongoing "Multi-Operator Dynamic Spectrum Management (MODYS)" project.

Post-doctoral Researcher, KTH (Royal Institute of Technology - Sweden)

Information and Communication Technology Dept. August, 2007 – August, 2008

- Contributed in preparation of the joint research proposal with Ericsson Research and Swedish Regulator for the "Multi-Operator Dynamic Spectrum Management (MODYS)" project (funded by Vinnova- Swedish state agency sponsoring academic and industrial

research). This project aims at developing market based tools for more efficient utilization of scarce spectrum resources for future communication systems.

- Functioned as the KTH contact for the above mentioned project.
- Co-advised 2 junior PhD students and 2 MSc students.
- Directed MSc thesis "Impact on System Performance for Squeezing in Additional UMTS Carriers", by Laith Kamal Ibrahim.
- Undertook teaching duties in "Teleconomics" course (**Game theory lectures**).

Engineering Intern, Wireless Communications Research Dept, Bell Laboratories, Lucent Technologies (NJ- USA), Summer, 2005

- Collaborated with a research engineer to investigate alternatives to the existing spectrum governance regimes and proposed a dynamic spectrum sharing scheme (publication item 7). The aim of this project was to develop Lucent opinion in spectrum management issues, when interacting with operators and the regulator.

Research Assistant - WINLAB, Rutgers University June, 2002 – June, 2007

- Conducted research on Resource Allocation Algorithms for Ad-Hoc Networks.
- Developed a pricing scheme for inducing cooperation in wireless Ad-Hoc Networks and demonstrated the feasibility of the scheme through simulations.
- Worked on models for spectrum governance and Dynamic Spectrum Access Networks (DySPAN).

Teaching Assistant, ECE dept., Rutgers University September, 2001 – June, 2002

- Fulfilled the assigned teaching duties for the Telecommunications Networks and Principles of Electrical Engineering II courses.
- Held problem solving sessions presenting to an audience of 40 students.

SKILLS

Programming: • C/C++ • Java
Tools: • MATLAB • Latex

PUBLICATIONS

Journal:

1. Ö. Ileri and N. Mandayam, "Dynamic Spectrum Access Models: Towards an Engineering Perspective in the Spectrum Debate", in **IEEE Communications Magazine** vol. 46, No. 1, pp. 153-160, January 2008. (Winner of the **2009 IEEE Communications Society Fred W. Ellersick Prize** which is given annually to the best article published in a Communications Society magazine in the past year.)
2. Ö. Ileri, S.-C. Mau, N. Mandayam, "Pricing for Enabling Forwarding in Self-Configuring Ad Hoc Networks", **IEEE Journal on Selected Areas in Communications (IEEE J-SAC)**, Special Issue on Wireless Ad Hoc Networks, vol. 23, No. 1, pp. 151-162, January 2005.
3. J. Hultell, Ö. Ileri, J. Zander, "Selfish Users in Energy Constrained Aloha Systems with Power Capture", submitted to Springer Journal on Wireless Networks.

Conference:

4. Ö. Ileri and J. Zander, "Broker Coordination in Demand Responsive Dynamic Spectrum Access Settings", to appear in IEEE ICC, June 2009, Dresden, Germany.

5. D. Zhang, Ö. Ileri and N. B. Mandayam, "Bandwidth Exchange as an Incentive for Relaying", CISS Conference, March 2008, Princeton NJ.
6. Ö. Ileri, D. Samardzija and N. B. Mandayam, "Dynamic Property Rights Spectrum Access: Flexible Ownership Based Spectrum Management", IEEE Symposium on new frontiers in Dynamic Spectrum Access Networks (DySpan), April 2007, Dublin, Ireland.
7. Ö. Ileri, D. Samardzija, T. Sizer and N. B. Mandayam, "Demand Responsive Pricing and Competitive Spectrum Allocation via a Spectrum Server", IEEE Symposium on new frontiers in Dynamic Spectrum Access Networks (DySpan) 2005, November 2005, Baltimore.
8. Ö. Ileri, S.-C. Mau, N. Mandayam, "Pricing for Enabling Forwarding in Self-Configuring Ad Hoc Networks", IEEE Wireless Communications and Networking Conference (WCNC) 2004, Atlanta.
9. S. Seker, A. Morgul, Ö. Ileri, "A discrete approach for modelling the EM wave attenuation in tunnels", The 9th Asia-Pacific Conference on Communications APCC 2003.

INVITED TALKS

- "Pricing for Enabling Forwarding in Wireless Ad Hoc Networks", Bell Laboratories, Murray Hill, New Jersey, October, 2003.
- "Pricing for Enabling Forwarding in Self-Configuring Ad Hoc Networks", IIS Seminar, Integrated Information Systems Laboratory, Polytechnic University in Brooklyn, New York, April 28, 2004.
- "Microeconomic Models for Inducing Cooperation and Enabling Spectrum Sharing", Wireless@KTH Seminar, Kista, Sweden, August 24, 2008.

HONORS& MEMBERSHIPS

- Reviewer for IEEE and EURASIP publications.
- **2009 IEEE Communications Society Fred W. Ellersick Prize** which is given annually to the best article published in a Communications Society magazine in the past year.
- **'Isbank Golden Youth Award'** for ranking **24th** out of **1,500,000** in the Turkish National University Entrance Exam. June 1997

MILITARY OBLIGATION

Completed (April 2006)

REFERENCES

- Prof. Jens Zander, (Director)
Radio Communications Systems, Royal Inst. of Technology- Sweden (KTH).
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- Prof. Narayan B. Mandayam, WINLAB, Dept. of ECE, Rutgers University.
Phone: 732-932-6857 Ext. 642, e-mail: narayan@winlab.rutgers.edu
- Dr. Mikael Prytz, (Direct. of Radio Network Deployment & Spectrum Management gr.)
Ericsson Research- Stockholm, Wireless Systems, e-mail: mikael.prytz@ericsson.com
- Dr. Dragan M. Samardzija, (Research Engineer, MTS)
Alcatel-Lucent Technologies, Bell Labs (New Jersey - USA)
Phone: 732-888-7194, e-mail: dragan@alcatel-lucent.com