

# Osama M. H. Amin

PhD

Electrical Engineering Department  
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## Personal

Born on August 7, 1978.

Egyptian Citizen.

## Education

B.Sc. Electrical Engineering, South Valley University, Aswan, Egypt, June-2000.

M.Sc. Electrical Engineering, Assiut University, Assiut, Egypt, June-2004.

Ph.D. Electrical and Computer Engineering, University of Waterloo, Waterloo, Canada, December-2010.

Certificate of University Teaching (CUT) from the University of Waterloo, Canada, December-2010.

## Scholarship/Awards

Pre-approved for industrial NSERC 2011.

Meritorious candidate for visiting fellowship award 2011.

PhD Scholarship from the Egyptian Higher Education Ministry 2007-2010.

University of Waterloo Graduate Scholarship 2009.

Research Incentive Award at University of Waterloo 2009.

## Employment

Assistant Professor, Electrical Engineering Department, Assiut University, Assiut, Egypt (June 2012 – Now).

Postdoctoral Fellow, Electrical and Computer Engineering Department, University of British Columbia, Vancouver, Canada (Jan. 2011– May 2012).

### *Teaching and Research Assistant*

University of Waterloo, Waterloo, Ontario, Canada (Jan. 2007– Dec. 2010).

Assiut University, Assiut Egypt (Apr. 2002– Dec. 2006).

South Valley University, Aswan, Egypt (Oct. 2000–Mar. 2002).

## Research

### *Conducting Research Projects in Physical Layer Communication and Signal Processing Areas and Specifically in*

Green and energy efficient communication systems (2011 – now).

Massive MIMO (2012 – now).

Machine-to-machine cooperative communication (2012 – now).

Crosstalk modeling and elimination in power line communication (2012).

Industrial field-bus networks (2011).

Adaptive OFDM techniques for cooperative systems (2007–2010).

Channel estimation in cooperative systems (2007 – 2010).

Channel equalization, SCFDE (2007 – 2008).

Quasi-orthogonal space time block coding, transmit and receive diversity (2007-2008).

Blind signal separation (2000 – 2004).

Time-frequency linear and non-linear signal analysis (2000-2004).

### *Software skills*

Professional experience in Matlab, from teaching level to research implementation level.

Basic skills in C/C++ and Fortran.

## Publications

### *Book Chapters*

**O. Amin**, S. Bavarian and L. Lampe, "Cooperative Techniques for Energy-Efficient Wireless Communications", Chapter in *Green Radio Communication Networks*, Cambridge University Press, UK, Sept. 2012.

### *Journal Articles*

**O. Amin**, "Lifetime Maximization via Energy Efficient Opportunistic Relaying Network", *Under preparation*.

R. Mesleh, S. S. Ikki and , **O. Amin** "Multi-Hop Relaying Systems in the Presence of Co-Channel Interference over Nakagami- $m$  Fading Channels", under review .

**O. Amin**, and L. Lampe, "Opportunistic Energy-Efficient Cooperative Communication", *IEEE Wireless Communications Letters*, no. 1, vol 5, Oct. 2012.

**O. Amin**, S. S. Ikki and M. Uysal, "Adaptive Bit Loading for Multi-Relay Cooperative OFDM with Imperfect Channel Estimation", *IET Communications* vol. 6, issue 12, pp. 1821-1828, Aug. 2012.

**O. Amin**, and M. Uysal, "Adaptive Power Loading for Multi-Relay OFDM Regenerative Networks with Relay Selection", *IEEE Transactions on Communications*, vol. 60, no. 3, pp. 614 - 619, March 2012.

**O. Amin**, S. S. Ikki and M. Uysal, "On the Performance Analysis of Multi-Relay Cooperative Diversity Systems with Channel Estimation Errors", *IEEE Transactions on Vehicular Technology*, vol. 60, no. 5, pp. 2050 - 2059, June 2011.

**O. Amin**, and M. Uysal, "Optimal Bit and Power Loading for Amplify-and-Forward Cooperative OFDM System", *IEEE Transactions on Wireless Communications*, vol. 10, no.3, pp. 772-781, March 2011.

**O. Amin**, B. Gedik, and M. Uysal, "Channel Estimation for Amplify-and-Forward Relaying: Cascaded against Disintegrated Estimators", *IET Communications* vol. 4, no. 10, p.1207-1216, July 2010.

B. Gedik, **O. Amin**, and M. Uysal, "Power Allocation for Cooperative Systems with Training-Aided Channel Estimation", *IEEE Transactions on Wireless Communications* vol. 8, no. 9, p. 4773-4783, September 2009.

### Proceedings

S. S. Ikki, **O. Amin**, and M. Uysal, "Performance Analysis of Adaptive L-QAM for Opportunistic Decode-and-Forward Relaying", in *Proc. VTC Spring-2010*, Taipei.

S. S. Ikki, **O. Amin**, and M. Uysal, "Performance Analysis of Cooperative Diversity Networks with Imperfect Channel Estimation", in *Proc. IEEE ICC'10*, Cape Town, South Africa, May 2010.

**O. Amin** and M. Uysal, "Adaptive Power Loading for OFDM Cooperative Networks", in *Proc. Canadian Workshop on Information Theory (CWIT 09)*, Ottawa, Canada, May 2009.

M. F. Fahmy, **O. Amin**, Y. M. Y. Hasan and G. M. El-Raheem, "Blind source separation using time-frequency concepts ", in *Proc. IEEE International Symp. On Signal Processing and Information Theory, ISSPIT 2004*, Rome, Italy.

M. F. Fahmy, **O. Amin**, and G. M. El-Raheem, "A fast wavelet-based blind signal separation" in *Proc. IEEE International Symp. On Signal Processing and Information Theory, ISSPIT 2003*, Darmstadt, Germany, December 2003.

### Professional Services

Reviewer for different Journals and conferences:

IEEE Journal on Selected Areas in Communications

IEEE Transaction on Wireless Communication

IEEE Wireless Communications Letters

IEEE Transaction on Communication

IEEE Communication Letters

IEEE Transaction on Vehicular Technology

VTC conference Spring 2011

IEEE ICC conference 2011, 2012.

IEEE GLOBECOM conference 2009, 2010

IEEE WCNC conference 2009

VTC conference Spring 2009

VTC conference Fall 2009

## Referee

1. Prof. L. Lampe,  
Electrical and Computer Engineering Department,  
Faculty of Applied Science, University of British Columbia.  
2332 Main Mall, Vancouver, British Columbia, Canada V6T 1Z4  
Tel: 604-822-8261  
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2. Prof. M. Uysal,  
Electrical and Computer Engineering Department,  
Faculty of Engineering, Özyeğin University  
Kuşbakişi Cad. No:2 Altunizade  
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3. Prof. M. Y. Dabbagh,  
Electrical and Computer Engineering Department,  
Faculty of Engineering, University of Waterloo  
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4. Prof. M. F. Fahmy  
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Faculty of Engineering, Assiut University.  
Assiut, Egypt  
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