

# Morteza Banagar

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PERSONAL INFORMATION	470 Durham Hall Department of Electrical and Computer Engineering Virginia Tech, Blacksburg, VA, USA Marital Status: Married	E-mail: mbanagar@vt.edu Mobile: +1 (540) 257-2357 Zoom ID: 355 814 2857 Web: <a href="https://mbanagar.github.io">https://mbanagar.github.io</a>
RESEARCH INTERESTS	UAV Communications, Channel Modeling, Stochastic Geometry, Wireless Communications, Heterogeneous Networks, D2D Communications	
EDUCATION	<b>Virginia Tech</b> , Blacksburg, VA, USA <i>Doctor of Philosophy in Electrical Engineering</i> Jan. 2018 – Present <ul style="list-style-type: none"><li>Advisor: Dr. Harpreet S. Dhillon</li></ul> <b>University of Tehran</b> , Tehran, Iran <i>Master of Science in Electrical Engineering – Communication Systems</i> Sep. 2012 – Sep. 2014 <ul style="list-style-type: none"><li>Thesis: A Stochastic Geometric Approach for the Analysis and Design of Cognitive Device-to-Device Networks</li><li>Advisor: Dr. Behrouz Maham</li></ul> <i>Bachelor of Science in Electrical Engineering – Telecommunications</i> Sep. 2008 – Sep. 2012 <ul style="list-style-type: none"><li>Thesis: Carrier and Symbol Synchronization Techniques</li><li>Advisor: Dr. Ali Olfat</li></ul>	
WORK EXPERIENCE	<b>Qualcomm Technologies, Inc.</b> Role: <i>System Engineering Intern</i> Manager: Dr. Christos Kominakis	Summer 2020
BOOK CHAPTERS	[BC1] <b>M. Banagar</b> , V. V. Chetlur, and H. S. Dhillon, “Stochastic geometry-based performance analysis of drone cellular networks,” in <i>UAV Communications for 5G and Beyond</i> , Y. Zeng, I. Guvenc, R. Zhang, G. Geraci, and D. W. Matolak, Eds. New York: Wiley, 2020, ch. 9, pp. 231-254.	
JOURNAL PUBLICATIONS	[J4] <b>M. Banagar</b> , H. S. Dhillon, and A. F. Molisch, “Impact of UAV wobbling on the air-to-ground wireless channel,” <i>IEEE Trans. Veh. Technol.</i> , vol. 69, no. 11, pp. 14025-14030, Nov. 2020. [J3] <b>M. Banagar</b> and H. S. Dhillon, “Performance characterization of canonical mobility models in drone cellular networks,” <i>IEEE Trans. Wireless Commun.</i> , vol. 19, no. 7, pp. 4994-5009, July 2020. [J2] <b>M. Banagar</b> , V. V. Chetlur, and H. S. Dhillon, “Handover probability in drone cellular networks,” <i>IEEE Wireless Commun. Lett.</i> , vol. 9, no. 7, pp. 933-937, July 2020. [J1] <b>M. Banagar</b> , B. Maham, P. Popovski, and F. Pantisano, “Power distribution of device-to-device communications in underlaid cellular networks,” <i>IEEE Wireless Commun. Lett.</i> , vol. 5, no. 2, pp. 204-207, Apr. 2016.	
CONFERENCE PUBLICATIONS	[C5] <b>M. Banagar</b> and H. S. Dhillon, “Fundamentals of drone cellular network analysis under random waypoint mobility model,” in <i>IEEE Global Commun. Conf. (GlobeCom)</i> , Dec. 2019, pp. 1-6. [C4] <b>M. Banagar</b> and H. S. Dhillon, “3GPP-inspired stochastic geometry-based mobility model for a drone cellular network,” in <i>IEEE Global Commun. Conf. (GlobeCom)</i> , Dec. 2019, pp. 1-6. [C3] <b>M. Banagar</b> , B. Maham, and V. Shah-Mansouri, “Bounds on the coverage probability of heterogeneous cellular networks,” in <i>IEEE Int. Conf. Commun. (ICC) Workshops</i> , May 2016, pp. 755-759. [C2] A. Eshraghi, B. Maham, Z. Han, and <b>M. Banagar</b> , “Efficiency and coverage improvement of active RFID two-hop relay systems,” in <i>IEEE Wireless Commun. Netw. Conf. (WCNC)</i> , Apr. 2014, pp. 2002-2007.	

[C1] N. Zarmehi, **M. Banagar**, and M. A. Akhaee, “Optimum decoder for an additive video watermarking with Laplacian noise in H.264,” in *IEEE Int. Conf. Inform. Security Cryptology*, Aug. 2013, pp. 1-5.

TEACHING  
EXPERIENCE

**Stochastic Signals and Systems**

Role: *Teaching Assistant*

Instructor: Dr. Harpreet S. Dhillon

Fall 2018

**Signals and Systems**

Role: *Teaching Assistant*

Instructor: Dr. Ting-Chung Poon

Spring 2018

Instructor: Dr. Mohammad Ali Akhaee

Spring & Fall 2012, Spring 2013

**Communication Systems I**

Role: *Teaching Assistant*

Instructor: Dr. Ali Olfat

Spring 2013

Instructor: Dr. Vahid Shah-Mansouri

Fall 2013

**Engineering Probability and Statistics**

Role: *Teaching Assistant*

Instructor: Dr. Amir Masoud Rabiei

Fall 2011

LANGUAGE  
SKILLS

Persian: Native

English: Fluent

Arabic: Familiar

SOFTWARE

Programming: MATLAB, Python, C, C#

Simulation: Simulink, Multisim

Applications: L<sup>A</sup>T<sub>E</sub>X, Microsoft Word/PowerPoint/Excel/Visio

REFERENCES

Dr. Harpreet S. Dhillon

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Dr. Vahid Shah-Mansouri

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