Dr. Mehmet Bilgi (Permanent Resident, Contact: mehmetbilgi@gmail.com 775 229 2593)

EDUCATION
- Ph.D. in Computer Science and Engineering at University of Nevada, Reno, Dec 2010, Dissertation: Multi-Transceiver Free-Space-Optical Structures for Mobile Ad-Hoc Networks, Advisor: Dr. Murat Yuksel
- M.S. in Computer Science at University of Nevada, Reno, May 2008
- B.S. in Computer Engineering at Fatih University, Istanbul, Turkey, June 2005

PROFESSIONAL EXPERIENCE

Research and Development Scientist   Jan 2011 – July 2013
UtopiaCompression Corporation, Los Angeles, CA

- Projects: Routing and topology control for airborne networks, flow control and QoS with DiffServ, IntServ, and MPLS, IP-based satellite networking
- Responded to DoD SBIR/STTR proposal rounds and RIF white papers solicitations.
- Tools: Quagga, NS3, Qualnet, Hadoop, OpenFlow, OpenVSwitch, NetLink

Research and Teaching Assistant   Aug 2006 – Dec 2010
Department of Computer Science and Engineering, UNR

- Throughput analysis of and 3D localization in FSO-MANETs
- Prototyping optical antennas and embedded programming for the FSO controller
- Job submission/monitoring tool for compute cluster
- NS2 extensions for simulating FSO-MANETs (available at: http://cnl.cse.unr.edu/userfiles/file/unr-fso-extensions.zip).

Research Intern   June 2010 – Sep 2010
UtopiaCompression Corporation, Los Angeles, CA, US

- Designed and implemented Qualnet simulations for self-healing MANET project.

Research Intern   June 2008 – Aug 2008
Omega Advanced Solutions, Troy, NY, US

- Implemented 3D localization simulations for FSO-MANETs.

Software Developer   June 2005 – July 2006
Zaman Newspaper, Istanbul, Turkey

- Developed a service and view framework in Java to automatically generate web pages for common create/update/delete use cases using Java reflection and Hibernate.
- Implemented a data migration framework, used for 20+M record database.
- Developed custom JSP tags, used Hibernate, Spring, Java reflection, JBPM, and GWT.

Software Engineer   June 2004 – April 2005
Nexum Bogazici, Istanbul, Turkey

- Developed Java portlets using IBM WSAD platform that interface with AS400 and DB2.

INTERESTS
Especially interested in positions involving systems programming, software defined networking, data center automation, and using advanced techniques (optimization, machine learning, game theory, etc.) to achieve those tasks.

PROGRAMMING Java, C/C++, NS2, NS3, QualNet, Wireshark, LLVM, Git, SQL, LaTeX, R

GRANTS

1. U.S. Air Force, AF11-BT12, Phase II STTR, R&D Scientist, Amount: $750K, Proposal Title: Joint Transport and Routing Optimization for Adaptive Satellite Networks, November 2012.
2. U.S. Navy, N121-098 Phase I SBIR, PI, Amount: $80K, Proposal Title: Integrative Weight Aggregation Framework for Network Flow Priority Quantification, 2012.
3. U.S. Air Force, AF11-BT12, Phase I STTR, Co-PI, Amount: $100K, Proposal Title: Joint Transport and Routing Optimization for Adaptive Satellite Networks, April 2012.
4. Office of Secretary of Defense, OSD10-AN4, Phase I SBIR, Co-PI, Amount: $70K, Proposal Title: Mobility-Aware Disruption-Tolerant Opportunistic Routing (MADOR) Suite and Platform Deployment Planning Toolbox for Small Unmanned Aerial Systems (SUAS) Network, April 2011.

PUBLICATIONS **Journal Articles**

1. A. Sevincer, A. Bhattarai, **M. Bilgi**, M. Yuksel, and N Pala,"LIGHTNET: Smart LIGHTing and Mobile Optical Wireless NETworks – A Survey", IEEE Communications Surveys and Tutorials, April 2013.

2. **M. Bilgi**, M. Yuksel "Capacity Scaling in Free-Space-Optical Mobile Ad Hoc Networks", Elsevier Ad Hoc Networks, 2012.

3. **M. Bilgi**, A. Sevincer, M. Yuksel, and N. Pala, "Optical Wireless Localization", Springer Wireless Networks, 2012.

4. A. Sevincer, **M. Bilgi**, and M. Yuksel, "Automatic Realignment with Electronic Steering of Free-Space-Optical Transceivers in MANETs: A Proof-of-Concept Prototype", Elsevier Ad Hoc Networks, 2011.

5. B. Niasari, **M. Bilgi**, M. Yuksel and M. Hella, "Multi-Transceiver Optical Wireless Structures for MANETs", IEEE Journal on Selected Areas in Communications, Volume 27, Issue 9, December 2009.

Conference Proceedings

1. **M. Bilgi**, M. Yuksel, and N. Pala, "3-D Optical Wireless Localization", IEEE GLOBECOM 2010 Workshop on Optical Wireless Communications, Miami, Florida, December 2010.

2. **M. Bilgi** and M. Yuksel, "Throughput Characteristics of Free-Space-Optical Mobile Ad Hoc Networks", ACM International Conference on Modeling, Analysis, and Simulation of Wireless and Mobile Systems (MSWiM), Bodrum, Turkey, October 2010.

3. **M. Bilgi** and M. Yuksel, "Packet-Based Simulation for Optical Wireless Communication", IEEE Workshop on Local and Metropolitan Area Networks (LANMAN), Long Branch, New Jersey, May 2010.

4. A. Sevincer, **M. Bilgi**, and M. Yuksel, "Prototyping Multi-Transceiver Free-Space-Optical Communication Structures", IEEE International Conference on Communications (ICC), Cape Town, South Africa, May 2010.

5. **M. Bilgi** and M. Yuksel, "Multi-transceiver simulation modules for free-space optical mobile ad hoc networks", Proceedings of SPIE Defense, Security and Sensing, Orlando, Florida, USA, April 2010.

6. **M. Bilgi** and M. Yuksel, "Multi-Element Free-Space-Optical Spherical Structures with Intermittent Connectivity Patterns", IEEE INFOCOM Student Workshop, Phoenix, Arizona, April 2008.

7. **M. Bilgi** and H. Gumuskaya, "Design Issues for Supportable Enterprise Web Architecture using Frameworks", Turkish Software Architecture Design Workshop (TSAD), Ankara, Turkey, 2005.

OTHER
- Refereed for networking journals and conferences: INFOCOM, GLOBECOM, ICNP, ICC, LCN, WCNC, IPCCC, PIMRC, COMSNETS
- Served as session chair, SPIE Defense, Security and Sensing 2010
- Served as College of Engineering representative in Graduate Student Association Council, UNR
- Received outstanding student award during junior year in college and scholarship next year, Fatih University, 2004
- Received full scholarship throughout middle and high school education in a private school, Aydin, Turkey
- Member of Sigma Xi, ACM, IEEE, SPIE

LEGAL STATUS U.S. green card holder (permanent resident).