Trac Ngoc Nguyen, PhD
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RESEARCH INTERESTS

Algorithm Design	Algorithm Complexity
Approximation Algorithms	Wireless Sensor and Adhoc Networks

TEACHING INTEREST

College Algebra	System Programming
Introduction to Algorithm	Discrete Math
Theory of Computation	Approximate Algorithm
Programming Languages	Data Structures
Assembly Language and Computer Organization	Software Engineering

EDUCATION

PhD   University of Texas, Dallas, Computer Science (2009)
            Dissertation: *Clustering in Wireless Sensor Networks.*

MS   Texas State University, San Marcos, Computer Science (2000)

BS   University of Oklahoma, Norman, Electrical Engineering - Computer Option (1997)

PRINCIPAL   PUBLICATIONS

The Complexity of Minimizing Receiver-Based and SINR Edge Interference
    Publishing by SECON 2011 - http://www.ieee-secon.org/

Dual Power Assignment Optimization For k-Edge Connectivity in WSNs
    Publishing by ICCCN 2011 - http://icccn.org/icccn11/

Minimum Edge Interference in Wireless Sensor Networks,
    Proceeding of 5th International Conference on Wireless Algorithms, Systems, and Applications,
    Lecture Notes in Computer Science 6221, 2010

Minimum Total Node Interference in Wireless Sensor Networks,
    Proceeding of 2nd International ICST Conference on Ad Hoc Networks, Victoria, Canada, 2010

Energy-Efficient Connected D-Hop Dominating Sets in Wireless Sensor Networks,
    Proceeding of 5th IEEE International Workshop on Sensor Networks and Systems for
    Pervasive Computing, 2009

Minimum Power Minimum D-Hop Dominating Sets in Wireless Sensor Networks,
    Proceeding of 3rd International Conference on Wireless Algorithms, Systems, and Applications,
    Lecture Notes in Computer Science 5258, 2008

Extending Wireless Sensor Network Lifetime Using Disjoint Connected Dominating Sets,
    Proceeding of 4th SIGACT-SIGOPS International Workshop on Foundation of Mobile
    Computing, 2007.

Connected D-Hop Dominating Sets in Mobile Ad Hoc Networks,
    Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks, 4th International
    Symposium on 03-06 April 2006.

RAYTHEON AWARDS

15-7448 **Disclosure Award:** *UAV Delivers Packages Following Preset Paths Within a City Limit*, Raytheon, 2015.

14-5659 **Disclosure Award:** *Real Time Concurrent Geo Characteristic Map Tile Building and Querying*, Raytheon, 2014.

12-3778 **Invention Award:** *SINR And Spanning Tree In Wireless Sensor Networks*, Raytheon, 2012.

11-1999 **Disclosure Award:** *The Complexity of Minimizing Receiver-Based and SINR Edge Interference*, Raytheon, 2011.

11-1998 **Invention Award:** *Dual Power Assignment Optimization For k-Edge Connectivity in WSNs*, Raytheon, 2011.

WORK EXPERIENCE

• Senior System Engineer	Raytheon, Dallas, TX	Since 2014
• Senior Software Engineer	Raytheon, Dallas, TX	2005 - 14
• Research Assistant	University of Texas at Dallas, Richardson, TX	2004-05
• Senior System Analyst	ExxonMobil	2001-03
• Embedded Software Engineer	Qlogic Corporation, Austin, TX	1999-00
• Electrial Engineer	BrookTree Corporation, Austin, TX	1997-98

PRESENTATION EXPERIENCE

- *Presented technical papers at IEEE external conferences and Raytheon internal symposiums*
- *Graduated the Dale Carnegie Public Speaking and Effective Presentation training program with Raytheon*
- *Presented research and algorithm design results to the work group every week*