

Nicholas A O'Donoghue

1625 Beechwood Blvd
Pittsburgh, PA 15217

nodonoug@andrew.cmu.edu
<http://professional.odonoghue.org/>

(m) 412.256.8262
(w) 412.268.7103

DoD 'Secret' Security Clearance

EDUCATION

Carnegie Mellon University, Pittsburgh, Pennsylvania

Dec 2011 (expected)

PhD Candidate, Electrical Engineering (ABD)
Statistical Time Reversal for Radar Detection

M.S. Electrical Engineering, *magna cum laude*
Advisor: Prof José M.F. Moura <moura@ece.cmu.edu>
GPA: 3.81/4.00

May 2008

Villanova University, Villanova, Pennsylvania

B.S. Computer Engineering, *summa cum laude*
Minor in Mathematics, Concentration in Honors
GPA: 3.92/4.00

May 2006

EXPERIENCE

Summer Research Intern, **Lincoln Laboratory**, Lexington, MA

June-August 2010

Investigated Compressive Sensing approach to Multi-Input Multi-Output MIMO Radar in Ground Moving Target Indicator (GMTI) mode.

Signal Processing Engineer, **The MITRE Corp.**, Bedford, MA

June-August 2007

Developed imaging algorithm for HRR Radar Profile Data to support Feature-Aided tracking for airborne GMTI radar systems.

NDSEG Fellow, **Carnegie Mellon University**

Sep 2006-present

Investigated the extension of Time Reversal SAR (Synthetic Aperture Radar), TR-MIMO (Multi-Input Multi-Output) RADAR, and TR for communications systems. Developed TR detection and imaging algorithms for fault detection in buried pipelines.

Senior Design Project – An Intelligent Patient Monitoring System for Hospital ICUs, **Villanova University** *Jan 2005-May 2006*

Developed infrastructure and software to model real-time retrieval and crisis monitoring of patient data with deployment on Palm PDA platform.

CREST Trainee, **U.S. Army CERDEC**, Ft. Monmouth, NJ

May 2006-Aug 2006

Performed technical evaluation of SBIR proposals, developed custom integrated systems for reliable transmission across low data-rate wireless sensor networks, prototyped mobile applications to access sensor network telemetry.

AWARDS AND HONORS

National Defense Science and Engineering Graduate Fellowship

(2007-2010)

Best Student Paper, Structural Acoustics and Vibrations, 157th Meeting of the Acoustical Society of America

(2009)

Single-Antenna Time Reversal of Guided Waves in Pipes

Best Student Paper, 2008 Asilomar Conference on Signals, Systems and Computers

(2008)

Signal-Domain Registration for Change Detection in Time Reversal SAR

Carnegie Institute of Technology, Dean's Tuition Fellowship

(2006-2007)

VU Engineering Alumni Society, Dean Robert Lynch Award

(2006)

Villanova University Awards:

Computer Engineering Outstanding Student Medallion (2006), College of Engineering Dean's Award for Outstanding Scholarship (2006), College of Engineering Dean's Award for Meritorious Service (2006), Brian McCarthy Senior Design Project Award (2006), Falvey Library Scholar (2006), College of Engineering Dean's List (8 semesters, 2002-2006), College of Engineering Banmiller Scholarship (2002-2004)

PROFESSIONAL AND HONOR SOCIETIES

Institute of Electrical and Electronics Engineers (IEEE), S'02

Tau Beta Pi, Engineering Honor Society, PA Theta Chapter

Eta Kappa Nu, Electrical and Computer Engineering Honor Society, Delta-Mu Chapter