

Nicholas J. Meyer

CONTACT INFORMATION

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EDUCATION

North Carolina State University, Raleigh, NC
Department of Statistics
Ph.D. Candidate

August, 2012 - Present

- Cumulative GPA: 4.0/4.0
- Research interests include: reinforcement learning, automation, robotics
- Thesis advisor: Dr. Eric Laber
- Computing Liaison in Statistics Department Graduate Student Association

University of Michigan, Ann Arbor, MI
Bachelor of Science
Statistics and Mathematics

September, 2008 - April, 2012

- Cumulative GPA: 3.6/4.0
- Member of Michigan Undergraduates in Statistics Club
- Vice President of Wolverine Skydiving

Computing

- Programming languages: C++, Python, Julia, R
- Secondary programming languages: JavaScript, Bash, SAS
- Software tools and APIs: CUDA, Mosek
- Development environment: Debian 8, GNU Emacs 24, Git (proficient in Mac OSX and Windows)

EXPERIENCE

Multi-agent hunting strategies for adversarial prey
Research Assistant, North Carolina State University

August, 2015 - Present

- Collaborative research effort with the Pacific Northwest National Laboratory
- Estimating hunting strategies that utilize predefined capabilities to overcome logistical constraints
- Motivated by the problem of locating a rogue nuclear weapon
- Emphasizing practical mobility constraints with Raspberry Pi powered toy cars

Life cycle of nuclear warheads in storage
Intern, Pacific Northwest National Laboratory

May, 2015 - August, 2015

- Programmed logic for a discrete event simulation of nuclear warheads in storage
- Enabled the ability to analyze inspection procedures and techniques as they relate to accuracy of the observed stockpile and legitimacy of the declared inventory
- Developed a modular and extendable framework to facilitate future simulation development

**Large scale model assisted reinforcement learning
for spatio-temporal decision problems on a network**
Research Assistant, North Carolina State University

March, 2013 - Present

- Utilizing concepts from network theory and reinforcement learning to effectively control replicating agents on a network, e.g., an epidemic or a computer virus
- Developing methodology to handle high-dimensional decision space due to spatial dependency

Computation for Undergraduates in Statistics Program
Graduate Student Mentor, North Carolina State University

May, 2014 - July, 2014

- Taught lectures covering the basics of Linux, Bash, and Awk one-liners
- Directly mentored two students on a computationally intensive decision making project about treatment allocations for white-nose syndrome

Interactive games for education of reinforcement learning **August, 2014 - Present**
Research Assistant, North Carolina State University

- Constructing web-based educational games for introducing reinforcement learning (RL) topics
- Overlaying canonical RL problems with creative themes to broaden the targeted audience

PUBLICATIONS

On-line estimation of an optimal treatment allocation strategy for the control of white-nose syndrome in bats

- Laber, B., **N. Meyer**, B. Reich, K. Pacifici, J. Collazo, J. Drake
- Status: under review

Collaborative multi-agent search strategies for locating rogue nuclear weapons

- **Meyer, N.**, E. Laber, R. Brigantic
- Status: in preparation

Estimation of an optimal spatio-temporal allocation strategy without a system dynamics model

- **Meyer, N.**, E. Laber, B. Reich, K. Pacifici
- Status: in preparation

**INVITED
PRESENTATIONS**

Adaptive management strategies for white-nose syndrome

December, 2014

- **Meyer, N.**, E. Laber, K. Pacifici, B. Reich, and J. Drake
- Neural Information Processing Systems; Montréal, Canada

An adaptive treatment strategy for the management of white-nose syndrome

August, 2014

- **Meyer, N.**, E. Laber, K. Pacifici, B. Reich, and J. Drake
- Joint Statistical Meeting; Boston, Massachusetts

An adaptive control strategy for the treatment of white-nose syndrome

July, 2014

- **Meyer, N.**, E. Laber, K. Pacifici, B. Reich, and J. Drake
- Institute of Mathematical Statistics, Asia Pacific Rim Meeting; Taipei, Taiwan

AWARDS

National Heart Blood and Lung Institute Traineeship

August, 2012 - May, 2015

- Supervised by Dr. Marie Davidian

Eagle Scout Award (member of BSA, 11 years)

May, 2006

ADDITIONAL

Homemade wireless remote using ATmega328P microcontrollers

- Programming microcontrollers to manage, transmit, and interpret button inputs
- Utilizing nRF24L01+ 2.4Ghz transceivers as the transport layer
- Carefully minimizing power consumption to enable battery support

Memberships

- American Statistical Association
- International Biometric Society, ENAR

About Me

- Enjoy tinkering with embedded systems, e.g., Raspberry Pi, Odroid C1, Arduino, Pogoplug
- Licensed Skydiver (jump-count: 68); working towards getting my coach rating
- Avid Skier/Snowboarder
- Competitive Sailor; enjoy racing, but also enjoy cruising, especially long distance trips
- Dual Citizenship: United States and Switzerland