



# DAVID O NAHMIA

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## EDUCATION

### University of Maryland-College Park

College Park, MD

PH.D. CANDIDATE IN ELECTRICAL AND COMPUTER ENGINEERING

Expected: May 2020

M.S. ELECTRICAL AND COMPUTER ENGINEERING

Conferred: Dec. 2018

- Coursework: Statistical Pattern Recognition; Neural Modeling; Advanced Numerical Optimization; Image Understanding; Harmonic Analysis; Selected Topics in Analysis: Wavelets, Time-Frequency Analysis, and Frames; Advanced Digital Signal Processing; Random Processes in Communication and Control; Information Theory; Optimal Control; Embedded Systems; Intellectual Property; Microelectronics.  
Audited: Neural Basis of Human Movement; Estimation and Detection Theory; Unsupervised Learning; Mathematical Methods in Machine Learning; Computational Linguistics I.
- Research: Machine learning for bio-signal processing with applications in upper limb prosthetics.
- Recipient of an ORISE Fellowship for research at FDA beginning fall 2016.
- Recipient of a Joshua Lippincott Fellowship in 2015.

### Swarthmore College

Swarthmore, PA

B.S. ENGINEERING (EMPHASES: ELECTRICAL ENGINEERING AND ROBOTICS)

Conferred: June 2014

B.A. MATHEMATICS (EMPHASIS: STATISTICS)

Conferred: June 2014

- Recipient of The Albert Vollmecke Engineering Award for 2014.
  - Engineering Design Thesis: Electromyography Analysis and Recognition for Human Device Interface. Research presented to the entire college at the 2014 Swarthmore Agora Talks.
  - Mathematics Thesis: Development and Applications of Wavelets in Signal Processing.
  - Nominated and elected as an associate member of Sigma Xi, Scientific Research Honors Society.
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## WORK & RESEARCH EXPERIENCE

### FDA (U.S. Food and Drug Administration)

White Oak, MD

ORISE (OAK RIDGE INSTITUTE FOR SCIENCE AND EDUCATION) FELLOW

09/'16 – Present

- In the Human-Device Interaction (HDI) lab in the Division of Biomedical Physics (DBP) under the Office of Science and Engineering Laboratories (OSEL) in the Center for Devices and Radiological Health (CDRH).
- Conduct research and analyses on clinical trials data from electroencephalography, electromyography and motion capture along with other biosensors for evaluation and design of upper limb prosthetics.

### University of Maryland-College Park: School of Public Health

College Park, MD

G.A. (GRADUATE ASSISTANT)

09/'15 – 08/'16

- Manage and support the School of Public Health's technology infrastructure.
- Support and troubleshoot computer hardware, software, servers, networking, virtualization, mobile/tablet computing, cloud resources, database, and enterprise systems.

### Epic Systems Corporation

Madison, WI

SERVER SYSTEMS ENGINEER

08/'14 – 08/'15

- Manage Epic's database system, via InterSystem's Caché database on UNIX, both through development and implementation of database server systems for new Epic customers and support of existing implementations of Epic software at various health organizations.
- Implemented and managed infrastructure of a new deployment of Epic at regional hospitals while advising on purchases and interfaces from server to application, network and other peripheral systems.

### NIST (National Institute of Standards and Technology)

Gaithersburg, MD

SURF (SUMMER UNDERGRADUATE RESEARCH FELLOWSHIP) RECIPIENT

05/'13 – 08/'13

- Done in the Intelligent Systems Division of the Engineering Lab (E.L.) at NIST. Managed a full independent project on AGV (Autonomously Guided Vehicle) obstacle detection and avoidance.
- Designed and constructed mechanical system to move obstacles with programable displacement and velocity. Furthered AGV's sensing ability and testing procedures for industry standards.

### Swarthmore College: Engineering Department

Swarthmore, PA

T.A. (TEACHING ASSISTANT)

01/'12 – 06/'14

- Classes: Circuit Analysis, Linear Systems Analysis, Experimentation Design & Control Theory.
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## SKILLS AND INTERESTS

- **Certificates:** Ham Radio License, Call Sign: KB3JHA; Dentsply Complete Denture certificate; NYSCA certified for Volleyball; Linux Prof. Inst. 101; Caché System Manager certified by Epic.
- **Computer Skills:** C, Python, MUMPS, OpenCV, HTML/CSS, MATLAB, EEGLab, LabVIEW, Mathematica, R, CCS/RTOS, Caché, L<sup>A</sup>T<sub>E</sub>X, Microsoft Office Suite, Adobe (Photoshop, Illustrator), EXBuilder, EyeLink II, ARM processors, GPUs via CUDA, Windows OS, OS X & Unix (RHEL, AIX, HP-UX).
- **Languages:** Fluent: English, French & Moroccan Arabic; Proficient: Modern Standard Arabic & Hebrew.
- **Interests:** Volleyball, captain of collegiate and club teams; President of ECE-Graduate Student Association at UMD; President of Swarthmore Society of Engineers; Music development via software & DJ-ing events; Wood-working & carving.