

Amir Christopher Najmi

anajmi1@umd.edu

EXPERIENCE

Research Assistant

University of Maryland College Park

Sept 2010-Present

Supervisor: Professor Dennis Papadopoulos

- Studied high-frequency heating near the Earth's F-region upper hybrid layer.
- Developed experimental plans, analyzed data, built numerical simulations and mathematical models.
- Analyzed experimental data collected from a wide variety of instruments including: GPS, ground-based Stimulated Electromagnetic Emission, the SuperDARN radar, and remote electromagnetic receivers at the Ukrainian Antarctic Station, and integrated these measurements into analysis of experiments.
- Employed Vlasov simulations to study upper hybrid turbulence and electron heating in ionospheric plasmas.
- Collaborated with local and international colleagues from engineering, physics, and mathematics backgrounds.

Teaching Assistant

University of Maryland College Park

Sep 2008-Aug 2010

Supervisor: Dr. Douglas Hamilton

- Taught discussion sections, graded assignment and exams including finals on tight deadlines.
- Led small-group discussions in non-lecture classroom setting headed by Physics Education Research Group.

Research Intern

Army Research Laboratory – Adelphi, SEDD Division

Jun-Aug 2008

Supervisor: Dr. Nasser Nasrabadi

- Studied algorithms, implementations, and applications of compressed sensing techniques to hyper-spectral image processing. Compiled examples of techniques applied to several existing images.

Research Intern

Johns Hopkins University Applied Physics Laboratory – Civilian Space Dept.

Jun-Aug 2007

Supervisor: Dr. Anthony Lui

- Investigated and analyzed data from Cluster satellites during traversals of Earth's magnetosphere.

EDUCATION

Ph.D "Electron Heating and Wave Excitation near the Upper Hybrid Layer"

Expected Dec 2015

Professor Dennis Papadopoulos, Advisor

Plasma Physics, University of Maryland College Park

B.S. Physics and Mathematics Double Degree, University of Maryland Baltimore County

2008

Phi Beta Kappa, Magna Cum Laude, President's Scholarship

COMPUTER SKILLS

Matlab, Python, Fortran, Bash, LaTeX, GNU/Linux, Windows, Mac and experienced with Microsoft Office.

PUBLICATIONS

- A. Najmi, G. Milikh, J. Secan, et al. (2014), Generation and detection of super small striations by F region HF heating, *J. Geophys. Res. Space Physics*, 119, 6000-6010, doi:10.1002/2014JA020038.
- A. Najmi, G. Milikh, Y.M.Yampolski, et al. (Submitted 2015), Studies of the ionospheric turbulence excited by the fourth gyroharmonic at HAARP, *J. Geophys. Res. Space Physics*.
- A. Najmi, B. Eliasson, X. Shao, G. Milikh, K. Papadopoulos. (Submitted 2015). Fast stochastic electron heating near the upper hybrid layer. *Physics of Plasmas*.

PRESENTATIONS

American Geophysical Union Fall Meeting

Dec 2013

Arecibo Radio Frequency Interactions Workshop

Apr 2014

American Geophysical Union Fall Meeting

Dec 2014