

Matthew C. Hancock

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Education

<i>Fall 2012-present</i>	Ph.D. Candidate in Applied and Computational Mathematics Florida State University (Tallahassee, FL) Focus: Machine learning and image-processing methods for lung image processing and analysis Relevant coursework: Numerical Methods (interpolation, integration, ODEs/PDEs, linear algebra, and optimization), Machine Learning, Probability theory and Statistical Inference
<i>Spring 2012</i>	B.S. in Applied Mathematics with Computer Science focus Ferris State University (Big Rapids, MI)

Work Experience

<i>Fall 2012-present</i>	Teaching Assistant at Florida State University (Tallahassee, FL) Responsibilities / Accomplishments: <ul style="list-style-type: none">• Instructor, Multi-variable Calculus (Summer 2017)• Distinguished Teaching Assistant Award (2017)• Assistant, Foundations of Computational Math (graduate level course) (Fall 2016, Spring 2017).• Instructor, C++ computing seminar (Fall 2016).• Instructor, Single-variable Calculus (Spring 2016, Summer 2016).• Instructor, Precalculus (Fall 2014, Spring 2015).• Recitation instructor, Discrete Mathematics (Fall 2015).• Assistant, various math courses (College algebra, Liberal Arts math, Trigonometry, Business calculus).
<i>Fall 2011-Fall 2012</i>	Web developer at Occupational Research and Assessment (Big Rapids, MI) Responsibilities / Accomplishments: <ul style="list-style-type: none">• Acquired basic web development skills.• Created and designed web systems for a number of third-party organizations using Ruby.
<i>Fall 2009-Fall 2011</i>	Programming Tutor at Ferris State University (Big Rapids, MI) Responsibilities / Accomplishments: <ul style="list-style-type: none">• Tutor for undergraduate introductory programming course taught with Python programming language.

Responsibilities / Accomplishments:

- Tutor for undergraduate calculus courses (mostly single-variable calculus material).

Computer skills

- Python (NumPy, SciPy, Scikit Learn, Scikit Image, Theano, Cython)
- C++
- Fortran
- L^AT_EX
- Web (HTML, CSS, JavaScript; lesser: Ruby, PHP)
- SQLite, MySQL

Journal Publications

- Matthew C. Hancock, Jerry F. Magnan. **Lung nodule malignancy classification using only radiologist quantified image features as inputs to statistical learning algorithms: probing the Lung Image Database Consortium dataset with two statistical learning methods.** *SPIE Journal of Medical Imaging*. Dec. 2016. <http://dx.doi.org/10.1117/1.JMI.3.4.044504>

Conference Proceedings

- Matthew C. Hancock, Jerry F. Magnan. **Predictive capabilities of statistical learning methods for lung nodule malignancy classification using diagnostic image features: an investigation using the Lung Image Database Consortium dataset.** *SPIE Medical Imaging Symposium, Computer-Aided Diagnosis Conference (Orlando, FL)*. Feb. 2017. <http://dx.doi.org/10.1117/12.2254446>

Talks Given

- Matthew C. Hancock, Jerry F. Magnan. **Predictive capabilities of statistical learning methods for lung nodule malignancy classification using diagnostic image features: an investigation using the Lung Image Database Consortium dataset.** *SPIE Medical Imaging Symposium, Computer-Aided Diagnosis Conference (Orlando, FL)*. Feb. 2017. (talk associated with corresponding conference proceeding).
- Matthew C. Hancock. **10 FREE Python Libraries that will TOTALLY SHOCK you.** *FSU Math Department Graduate Student Seminar*. Spring 2017. (Presentation of various Python library for scientific computing. The title is a spoof on clickbait journalism.). <http://notmatthancock.github.io/research/talks/gss-python/>
- Matthew C. Hancock. **A survey a of PDE-based methods for image segmentation .** *FSU Math Department Graduate Student Seminar*. Spring 2016. <http://notmatthancock.github.io/research/talks/gss-pdes/>

Posters Presented

- Matthew C. Hancock, Jerry F. Magnan. **Lung nodule malignancy classification using diagnostic image features.** *SIAM SEAS Conference (Tallahassee, FL)*. Spring 2017. <http://notmatthancock.github.io/research/pdf/siam-seas-2017.pdf>