Brian de Silva

CONTACT INFORMATION

University of Washington
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RESEARCH INTERESTS

Reduced order modeling, scientific computing, numerical analysis, and data science

EDUCATION

University of Washington

Ph.D. Candidate, Applied Mathematics (expected June 2019)

- Advisor: Ulrich Hetmaniuk
- GPA: 3.92
- Advanced Data Science Option

M.S. in Applied Mathematics, December 2015

University of California at Los Angeles

B.S. in Applied Mathematics, December 2013

- Specialization in computing

PUBLICATIONS

- B. de Silva, R. Compton *Prediction of Foreign Box Office Revenues Based on Wikipedia Page Activity,* arXiv preprint - arXiv:1405.5924

  Curated a dataset of meta data associated with films' Wikipedia pages and attempted to predict box office revenues using linear models such as linear regrerssion, ridge regression, and LASSO. We found that such models performed reasonably well for the domestic box office, but not foreign ones.

- Maria-Grazia Ascenzi, Xia Du, James I. Harding, Emily N. Beylerian, Brian M. de Silva, Ben J. Gross, Hannah K. Kastein, Weiguang Wang, Karen M. Lyons, Hayden Schaeffer, *Automated Cell Detection and Morphometry on Growth Plate Images of Mouse Bone,* Applied Mathematics, Special issue on Mathematical modeling and experimentation, Vol.5, No.18, 2014.

TEACHING EXPERIENCE

Summer	2017	Instructor, Introduction to Differential Equations and Applications
Spring	2017	TA, Graduate Numerical Anaylsis of Time Dependent Problems
Winter	2017	Instructor, Numerical Linear Algebra and Numerical Analysis
Fall	2016	TA, Graduate Vector Calculus and Complex Variables
Summer	2016	Instructor, Numerical Linear Algebra and Numerical Analysis
Spring	2016	TA, Calculus III
Winter	2016	TA, Calculus II
Fall	2015	TA, Beginning Scientific Computing
Spring	2015	TA, Beginning Scientific Computing
Winter	2015	TA, Calculus I
Fall	2014	TA, Calculus I

Graduate Coursework

- ❑ Approximation Theory & Spectral Methods
- ❑ Dynamical Systems
- ❑ Machine Learning
- ❑ Numerical Analysis
- ❑ Differential Equations
- ❑ Numerical Solution of Differential Equations
- ❑ Data Analysis
- ❑ Statistics
- ❑ Numerical Linear Algebra
- ❑ Numerical Optimization
- ❑ Functional Analysis
- ❑ Finite Volume Methods

Honors and Awards

2017 Boeing Award for Excellence in Teaching

2015 Joseph Hammack Endowment Award for Outstanding Work in Applied Mathematics

Scientific Research Experience

2013–2014 Information and Systems Sciences Internship.
Social and Information Networks,
Social modeling, Data collection
HRL Laboratories, Malibu, California

Summer 2013 Applied Mathematics REU.
Social Networks and Large Data Sets,
Topic Modeling, Nonnegative Matrix Factorization
UCLA, Los Angeles, California

Summer 2012 Applied Mathematics REU.
Bone Growth Plate Modeling,
Image Processing, Spectral Clustering,
UCLA, Los Angeles, California

Coding

C++	Four years, used for numerical methods and scientific computing
MATLAB	Five years, used for numerical methods and scientific computing
Python	Two years, used for machine learning and numerical methods
Mathematica	Two years, used for symbolic calculations and visualization

Extra–curriculars

2016–2017	Graduate Student Representative of Applied Math Department
2015–2016	Principal organizer for the Numerical Analysis Research Club
2015–2016	Vice President of the UW SIAM student chapter