

**Gianluca Guadagni**  
Assistant Professor  
Department of Engineering and Society  
School of Engineering and Applied Sciences, University of Virginia  
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## A. Professional Experiences

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**Assistant Professor** Aug 2018 - present  
Department of Engineering and Society, Applied Mathematics Program, School of Engineering, University of Virginia.

**Lecturer** Aug 2010 - July 2018  
Department of Engineering and Society, Applied Mathematics Program, School of Engineering, University of Virginia.

- **Professore a contratto (Visiting Professor)** Summers 2006 to 2013  
School of Engineering, Università di Roma II “Tor Vergata”, Italy.

**Lecturer** Aug 2006 - May 2010  
Department of Mathematics, University of Virginia.

- **Lecturer** Spring 2010  
Department of Statistics, University of Virginia.

**Professore a contratto (Visiting Professor)** Sept 2005 - June 2006  
School of Engineering, Università di Roma II “Tor Vergata”, Italy.

**Visiting Assistant Professor** Jan - Aug 2005  
Department of Mathematics, The College of William and Mary, Williamsburg, Virginia, USA.

**Instructor** Jan - May 2003  
Department of Mathematics, University of Virginia.

## B. Education and Training

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**Research Fellowship** Jun - Dec 2004  
“*Applications of Renormalization Group in Euclidean field theory*”, Prof. G. Benfatto  
Department of Mathematics, Università di Roma II “Tor Vergata”, Italy,

**Ph.D. in Mathematics** May 2004  
Department of Mathematics, University of Virginia, Charlottesville, Virginia, USA.  
Thesis: *Finite range decompositions and Cluster expansions*.  
PhD Adviser: David Brydges. Committee: David Brydges, Lawrence Thomas, John Imbrie, Paul Fendley

- **Research Fellowship** Jun - Dec 2002  
“*Renormalization Group applied to lattice field theory*”, Prof. P.Negrini  
Department of Mathematics, Università di Roma “La Sapienza”, Italy.

- **Graduate Teaching Assistant** Aug 2001 - May 2002  
Department of Mathematics, University of British Columbia (UBC), Vancouver, Canada.

- **Academic Guest** Sept 2000 - Jan 2001  
Department of Mathematics, Swiss Federal Institute of Technology - ETH - Zuerich, Switzerland.

**Laurea in Fisica** 110/110 magna cum laude July 1995  
Department of Physics, Università di Roma I “La Sapienza”, Roma, Italy.  
Thesis: *Glauber dynamics for the 2D Ising model*.  
Advisers: Fabio Martinelli, Marzio Cassandro

## Honors and Awards

UVA Student Council Teaching Award, 2022.

The Richard D. Donchian Faculty Fellowship in Ethics, 2018.

Research Travel Grant, National Science Foundation (NSF), Apr 2008,

Dissertation Fellowship, Department of Mathematics, University of Virginia, Spring 2002.

Fellowship, Department of Mathematics, ETH, Zuerich, Switzerland, Fall 2000.

Phd Scholarship - Consiglio Nazionale delle Ricerche (CNR), Comitato nazionale per le Scienze Matematiche, Italy. Grant 203.01.65. Duration: Aug 1997 - May 1999

## D. Publications

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### D.1 Journal articles, peer reviewed

- **G. Guadagni**, L. Thomas: *Perturbation theory for a non-equilibrium stationary state of a one-dimensional stochastic wave equation* Accepted for publication in May 2022 as chapter of a Book Summer 2022. <https://arxiv.org/abs/2204.07564>
- C. Lancia, **G. Guadagni**, S. Ndreca, B. Scoppola: *Asymptotics for the late arrivals problem*. *Mathematical Methods of Operations Research* 88, 475–493, 2018. Impact factor: 1.163 <https://doi.org/10.1007/s00186-018-0643-3>
- **G. Guadagni**, S. Ndreca, B. Scoppola: *Queueing system with pre-scheduled random arrivals*. *Mathematical Methods of Operations Research* 73, 1–18, 2011. Impact factor: 1.163 <https://doi.org/10.1007/s00186-010-0330-5>
- D. Brydges, **G. Guadagni**, P. Mitter: *Finite range Decomposition of Gaussian Processes*, *Journal of Statistical Physics*, 115 (1-2): 415-449, April 2004. Impact factor: 1.402 <https://arxiv.org/abs/math-ph/0303013>
- F. Cesi, **G. Guadagni**, F. Martinelli, R.H.Schonmann: *On the 2D stochastic Ising model in the phase coexistence region near the critical point*, *Journal of Statistical Physics*, 85 (1-2), 55-102, 1996. Impact factor: 1.402. [http://www.ma.utexas.edu/mp\\_arc/e/95-471.ps](http://www.ma.utexas.edu/mp_arc/e/95-471.ps)

### D.2 Conference proceedings, peer reviewed

Note: Presenters are starred.

- **G. Guadagni\***, D. Maiti, F. Shafiei: *Impact of COVID-19 on Applied Mathematics Courses for Engineering Students*. 2022 ASEE Annual Conference & Exposition, Minneapolis, Minnesota. Acceptance rate: N/A
- **G. Guadagni\***, H. Ma: *A sustainable model to structurally improve outcomes in math courses for engineering students*. 2022 ASEE Annual Conference & Exposition, Minneapolis, Minnesota. Acceptance rate: N/A
- H. Ma, **G. Guadagni\***, Lindsay Wheeler: *Teaching Methods Course for Engineering TAs*. 12<sup>th</sup> Annual Conference on Higher Education Pedagogy, Virginia Tech. February 6-7, 2020.
- **A. Aly\***, **G. Guadagni**, J. Dugan: **Derivative-Free Optimization of Neural Networks using Local Search**, IEEE UEMCON 2019. Acceptance rate: N/A
- **A. Aly\***, **G. Guadagni**, J. Dugan: **Examining Hyperparameters of Deep Neural Networks trained with Local Search**, Ninth IEEE International Conference on Intelligent Computing and Information Systems, ICICIS 2019. Acceptance rate: N/A
- **G. Guadagni**, H.Ma, L. Wheeler: **How Undergraduate Teaching Assistants can change mathematics education**. Reference: 1135-VK-3092, AMS-MAA Joint Mathematics Meetings, San Diego, California, MAA General Contributed Paper Session on Teaching and Learning Advanced Mathematics, Jan 2018. Acceptance rate: N/A
- **G. Guadagni**, B. Fulgham, S. Pisano\*, H. Ma, D. Morris, M. Abramenko, J. Spencer: **New tracks for a Calculus Curriculum in Engineering**. Reference; 1135-VJ-3171, AMS-MAA Joint Mathematics Meetings, San Diego, California, MAA General Contributed Paper Session on Teaching and Learning Calculus, Jan 2018. Acceptance rate: N/A
- S. Pisano\*, H. Ma, B. Fulgham, **G. Guadagni**, D. Morris, M. Abramenko: *Redesigning the Calculus Curriculum for Engineering Students*, 2018 ASEE Annual Conference & Exposition, Salt Lake City, Utah. Acceptance rate: N/A. <https://peer.asee.org/30922>
- **G. Guadagni\***, H. Ma, L. Wheeler, *The Benefit of Training Undergraduate Teaching Assistants* 2018 ASEE Annual Conference & Exposition , Salt Lake City, Utah. Acceptance rate: N/A. <https://peer.asee.org/31079>

- **G. Guadagni\***, B. Fulgham: *The Impact of a Flipped Math Course on Peer Learners*, 2017 ASEE Annual Conference & Exposition, Columbus, Ohio. Acceptance rate: N/A <https://peer.asee.org/28973>
- H. Ma\*, **G. Guadagni**, S. Pisano, B. Fulgham, M. Abramenko, D. Morris: *Redesign of Calculus Curriculum in Engineering*, 2017 ASEE Annual Conference & Exposition, Columbus, Ohio. Acceptance rate: N/A <https://peer.asee.org/28783>
- J. Baker\*, A. Pomykalski\*, K. Hanrahan\*, **G. Guadagni**: *Application of Machine Learning Methodologies to Multiyear Forecasts of Video Subscribers*. Systems and Information Engineering Design Symposium (SIEDS), 2017, Acceptance rate: N/A. <https://ieeexplore.ieee.org/document/7937697>

S. Chen\*, L. Liu\*, F. Wang\*, **G. Guadagni**: *Effective models to predict customers' responses to interactive audio advertisements*. Systems and Information Engineering Design Symposium (SIEDS), 2015, Acceptance rate: N/A. <https://ieeexplore.ieee.org/abstract/document/7116991>

P. D'Odorico\*, **G. Guadagni**, G. Orkin: *Precursors of regime shifts in ecosystems: The case of arid grasslands*. Presented at 94<sup>th</sup> ESA (Ecological Society of America) Annual Meeting, Albuquerque, Aug 2009. Acceptance rate: N/A. <https://eco.confex.com/eco/2009/techprogram/P15008.HTM>

### D.3 Published research

A. Abdesselam, A. Chandra, **G. Guadagni**: *A massless quantum field theory over the p-adics: I: anomalous dimensions*. Feb 2013. Preprint. 34 citations. Available <http://arxiv.org/abs/1302.5971>

### D.4 Research Publicity

Lockhart, L. (2020) "Jefferson Trust Grant may help UVA students track potential spread of COVID-19". Available at <https://www.nbc29.com/2020/05/05/jefferson-trust-grant-may-help-uva-students-track-potential-spread-covid/>

McManamay, J. (2018) "UVA Engineering Students Take First Place in International Math Competition". Available at <https://engineering.virginia.edu/news/2018/09/uva-engineering-students-take-first-place-international-math-competition>.

### D.5 Posters

**Gianluca Guadagni**. Poster: *Renormalization group on the lattice*. Workshop on *Combinatorial Identities and their Applications in Statistical Mechanics*, Isaac Newton Institute for Mathematical Sciences, Cambridge, UK. September 2008.

## E. H-Index and citation count

H-Index: 5 (as of June 2022 according to Google Scholar)

Citation count: 200 (as of June 2022 according to Google Scholar)

Google Scholar: [Gianluca Guadagni Profile Page](#)

Orcid ID: <https://orcid.org/0000-0003-4568-0487>

## F. Graduate Students

### F.1 Committee Member

Lee, Kamwoo, System and Information Engineering, Dissertation Committee member, Title: *Extending Global Development Capability with Unstructured Data Using Machine Learning and Simulation*, Advisor: William Scherer, Fall 2020.

Aly, Ahmed, Electrical and Computer Engineering, Dissertation Committee member, Title: *Experimental Studies In Pursuit Of Experiential Robot Learning*, Advisor: Joanne Dugan, Fall 2019.

Maiti, Deepyaman, Electrical and Computer Engineering, Dissertation Committee member, Title: *Signal, Nonlinearity and Noise in Optical Fiber Communications*, Advisor: Maité Brandt-Pearce. Spring 2017.

Pathirana, Walive Pathiranage Manula Randhika, Electrical and Computer Engineering, Master Committee Member, Thesis: *Energy Harvesting System Modeling*, Advisor: Ben Calhuon. Spring 2016.

Williamson, Hayley, Engineering Physics (MS), Qualifying Exam, Advisor Petra Reinke. Fall 2015.

## F.2 Educational Activities

Applied Mathematics does not have a Graduate Program, students listed here were part of Graduate Programs in other departments.

Lee, Kamwoo, System and Information Engineering, *Engineering Graduate Teaching Internship (GTI)*, course co-taught: APMA3150 (From Data to Knowledge), Fall 2019.

Zeyghami, Samane, Mechanical Engineering, *Teaching Internship Program*, course co-taught: APMA2130 (ODE), Spring 2016.

Liang, Bo, Civil and Environmental Engineering, *Teaching Technology Support Partner Grant*, Advisor: Andres Clarens, Fall 2015- Spring 2018.

Anantachaisilp, Parinya, Mechanical Engineering, *Teaching Technology Support Partner Grant*, Advisor: Houston Wood, Fall 2011 - Spring 2014.

## G Undergraduate Students

2020-2021 projects on Covid modeling.

1. Declan Brady, Clara Kim, Marina Awad, Sion Kim: "[Agent-Based Modeling of Restriction Implementation and its Effect on COVID-19 Transmission](#)" (\*).
2. Max Dawkins, Justin Guo "[Discovering the Relationship between Income and Infection Rates of COVID-19](#)" (\*).
3. Emily Parnell, Maria Parnell "[Optimization of Pool Testing](#)" (\*).
4. Emily Beyer, Pyung Lee "[COVID-19 Immunity Duration Quantitative Modeling and Analysis](#)" (\*).
5. Akbar Ali, Zhijun Cao, Seong eun Chung, Jack Liu "[Branching Model for Contact Tracing of COVID-19 Within Universities](#)" (\*).
6. Nikita Sivakumar, Jakub Lipowski. "Agent-Based Model for the Spread of SARS-CoV-2 at the University of Virginia". Recipient of *The Global Infectious Diseases Institute Excellence in Undergraduate Research Award*: \$250.
7. Nadir Siddiqui, Muhammad Abdullah: "SIRS model and its variants".
8. Roman Ramirez, Esha Tulsian: "Stock Market and Covid-19".

Starred ones (\*) are available at [2021 UVA - Undergraduate Research Symposium](#), search by "GUADAGNI".

Mathematical Competitive Game 2019 by Société de Calcul Mathématique & Fédération Française des Jeux Mathématiques (SCM-FFJM): *Traffic Jams in Houston, Texas*.

Students participating: Lydia Erbaugh, Susan Furlough, Grace Huang, Melissa Lim, Jacob Rodal, Rebecca Woodhouse.

Mathematical Competitive Game 2018 by Société de Calcul Mathématique & Fédération Française des Jeux Mathématiques (SCM-FFJM): *Distribution of goods*.

Students participating: Taylor Arnold, Alex Baker, Alden Duquette, Nirali Jantrania, David Josephs, Charlie Mayer. **Winners in the category "Groups", prize: 500Eu.**

Stephen Davis, (Math Major), Spring 2018, undergraduate teaching assistant for APMA4501, supported by ULA@UVA, the Undergraduate Learning Assistant Program at UVA.

Sajala Shukla, undergraduate student in Statistics. Research project on *WebWork data analysis*, supported by Department of Statistics, UVA. Submitted to TomTom Festival April 2017.

Arun Kannan, *Student-Taught Class* supported by "Engineering Student Council": APMA1501 "Mathematical Techniques for Engineers", Spring 2016.

Google Glass project on *Smart Class*, with Innovation Labs at Alderman Library, 2015.  
Students participating: Lee, Jinhyun Zhu, Wen Ting Yang, Alexander Shao, Peter Nguyen, Minh Luu, Alex. Project terminated due to privacy issues (face recognition).

COMAP competition (2014 Mathematical Contest in Modeling)

Team 1: Andy Keller, Luke Yesbeck, Clayton Geipel;

Team 2: Eric Chirtel, Ruijie Zhu, Xin Song.

Mathematical Competitive Game 2014 by Société de Calcul Mathématique & Fédération Française des Jeux Mathématiques (SCM-FFJM).

Students participating: Andy Keller, Eric Chirtel, Clayton Geipel.

## H. Visitors and Postdoctoral fellows supervised

### H.1 Postdoctoral fellows supervised

Jeremy Sloane, PhD. Funded by Jefferson Trust Annual Grant, SEAS Dean's Office, and Center for Teaching Excellence (UVA).

Current position: Instructor of Biology, Skidmore.

Co-supervised with Hui Ma (APMA) and Lindsay Wheeler (CTE). Fall 2018 - Summer 2020.

Hannah Sturtevant, PhD. Funded by Jefferson Trust Annual Grant, SEAS Dean's Office, and Center for Teaching Excellence (UVA).

Current position: Visiting Assistant Professor of Chemistry, Ohio Northern University.

Co-supervised with Hui Ma (APMA) and Lindsay Wheeler (CTE). Spring 2018 - Fall 2018.

## I. Grants

### I.1 External Grants, funded

Jefferson Trust. Flash grant. March 2020 - Feb 2021. *Modeling Covid-19*. PI: **Gianluca Guadagni**. Amount: \$10,000.

Jefferson Trust. Annual Grant. Fall 2017-Spring 2019. PI: Hui Ma (APMA), Co-PIs: **Gianluca Guadagni**, Lindsay Wheeler. *Teaching Methods Course for Engineering TAs*. Amount: \$ 89,088. PIs worked in collaboration to the realization of the project, most of the funding was allocated to support two Postdoc. The initial project included only one postdoc, SEAS Dean's Office contributed with \$ 50,000 towards support of a second Postdoc.

### I.2 External Grants, not selected

NSF - Transforming Undergraduate Education in Science, Technology, Engineering and Mathematics – 10-544. PI: **Gianluca Guadagni**. Title: "Webwork and Applied Mathematics". Spring 2012. Proposal amount: \$ 66,000.

### I.3 Internal Grants, funded

Education Innovation Award 2019-2020 (extended to 2021): *Inquiry Oriented Differential Equations*.

PI: Julie Spencer (APMA), Co-PIs: **Gianluca Guadagni**, Megan Ryals. Amount: \$ 41,897, including course releases: 1.5 (Spencer), .5 (**Guadagni**), .5 (Ryals), and faculty wages to cover Spencer's section. Remaining funds (\$ 10,000) were used by PI and Co-PIs in collaboration to the realization of the project.

Graduate Teaching Internship 2019: Kamwoo Lee, *Co-teaching of APMA3150*.

Amount: \$ 9,500, tuition, fees, and health insurance.

The Richard D. Donchian Faculty Fellowship in Ethics 2018: *Creation of a new course on Ethics and Data Science*. Co-Pis: **Gianluca Guadagni**, Caitlin Wylie (STS). Amount: \$ 7,000, converted to 0.5 course release for each of Co-Pis.

Education innovation Award 2018-2019 (extended to 2020): *Redesign of Statistics for Engineers and Scientists, APMA6430*. PI: **Gianluca Guadagni**. Proposal amount: \$ 10,000, and 1 month summer salary.

Education Innovation Award 2017-2018: *Engineering Math Project - Phase 2*. PI: B.Fulgham, Co-PI: M.Abramenko, **Gianluca Guadagni**, H. Ma, D. Morris, S. Pisano, J. Spencer. Amount: 2.4 months salary (B.Fulgham) + \$ 10,000 as travel and conference expenses.  
Co-Pis provided support to B.Fulgham in setting up a pilot course *Engineering Math - Core*.

**ULAs@UVA**: The Undergraduate Learning Assistant Program at UVA. Spring 2018. Amount: Full time undergraduate teaching assistant for one semester.

Education Innovation Award 2016-2017: *Engineering Math Project*. PI: H. Ma, Co-PI: B.Fulgham, **Gianluca Guadagni**, S. Pisano. Amount: \$86,766. Funds applied towards one Course release (H.Ma) and summer salaries (H.Ma, B.Fulgham, G.Guadagni, S.Pisano).  
Co-PIs provided support to H. Ma in setting up a pilot course *Engineering Math - Honors*.

Teaching in Pairs Award, 2016: Samane Zeyghami, *Co-teaching of APMA2130*. Amount: GTA's one semester fellowship, tuition, fees, and health insurance.

Education Innovation Award 2015-2016: *New course on Stochastic Methods*. Pi:**Gianluca Guadagni**. Amount: \$ 29,000.

Teaching + Technology Support Partners (TTSP) program. 2015-2018. Project: *Support APMA faculty in using WeBWorK (Prob-Stats)*. Amount: 50% support of a SEAS graduate student for 3 years. Source:Provost Office.

Nucleus Grant, 2014-2015. Title: *Calculus Redesign*. PI: **Gianluca Guadagni** Co-PIs M.Abramenko, B.Fulgham, D.Morris, H.Ma, S.Pisano. Amount: \$ 70,000. Pi and Co-Pis shared funds as course buyout and summer salary. Source: Center for Teaching Excellence (then as Teaching Resource Center).

Hybrid Challenge Grant. 2013-2014. Title: *Flipping APMA2130*. PI: **Gianluca Guadagni**, Co-Pi: Bernard Fulgham (APMA). Amount: \$ 12,000. Source: Center for Teaching Excellence (then as Teaching Resource Center).

SEAS Lab Grant, 2012. *APMA WeBWorK Project*. PI: **Gianluca Guadagni**. Amount: \$ 10,000.

SEAS Lab Grant, 2012. *APMA Learning Lab*. PI: **Gianluca Guadagni**. Amount: \$ 6,000.

Teaching + Technology Support Partners (TTSP) program. 2011-2014. Project: *Support APMA faculty in using WeBWorK (Calculus-ODE)*. PI:**Gianluca Guadagni**. Amount: 50% support of a SEAS graduate student for 3 years. Source:Provost Office.

#### **I.4 Internal Grants, not selected**

President and Provost Fund for Institutionally Related Research 2021: *A path to master applied mathematics for UVA-Eng students*. Proposal Amount \$ 100,000 – 150,000.  
The proposal did not make the cut at School level.

Education innovation Award 2020-2021: *Numerical Methods for Engineers and Applied Mathematicians*. PI: Gustavo Rohde (BME), Co-PI: **Gianluca Guadagni**. Proposal amount: \$ 20,844, 2 calendar months (Rohde), and 2 academic months (**Guadagni**).

Education Innovation Award 2019-2020: *Teaching Practice for Graduate Students*. PI: **Gianluca Guadagni**. Proposal amount: .5 month salary.

Education Innovation Award 2019-2020: *Master of Engineering in Applied Mathematics*. PI: **Gianluca Guadagni**. Proposal amount: .75 month salary.

Global Infectious Diseases Institute, *iGrant* Program 2019: *Stochastic Epidemic Models*. PI: **Gianluca Guadagni**. Proposal amount: \$ 5,000.

Thrive Grants 2018-2019: *Research on the teaching of APMA2130*. PI: **Gianluca Guadagni**. Proposal amount: \$ 5,000.

Education Innovation Award 2018-2019: *Mathematical Modeling as a Human Enterprise: Case Studies in Model Creation, Critique, and Communication*. PI: Kathryn Neely (STS), Co-PIs: **Gianluca Guadagni**, Elizabeth Pyle. Proposal Amount: \$ 6,000, 1 month salary effort each of PI and Co-PIs.

Education Innovation Award 2018-2019: *New APMA Graduate Course*. PI: **Gianluca Guadagni**. Proposal amount: \$ 4,000, 1.5 course release, and a full time GTA.

Education Innovation Award 2018-2019: *Mathematical Modeling with Matlab*. PI: **Gianluca Guadagni**. Proposal amount: \$ 10,000, 1 course release, and a half time GTA.

Education Innovation Award 2017-2018: *Smart Class*. PI: **Gianluca Guadagni**. Co-PIs: Andrea Vaccari (ECE), Tolu Odumosu (STS), Karen Inkelas (School of Education). Proposal amount: \$ 8,500, and 6 months faculty salary.

Education Innovation Award 2017-2018: *Introduction to Numerical Methods*. PI: **Gianluca Guadagni**. Co-PIs: Eduardo Socolovsky (APMA), Rita Schnipke (MAE), Todd Delong (ECE), Luther Tychonievich (CS). Proposal amount: 3.5 months faculty salary, and a course release.

## J. Presentations

### J.1 Conference presentations

Note: The following are in addition to **D.3**. Presenters are starred.

**Gianluca Guadagni\***, *Undergraduate teaching assistants in Applied Math courses*. ASEE Global Colloquium, Azores, Portugal, September 2017. As the leader of the group: *Math in Engineering*, I have submitted a report to ASEE about Mathematics in Engineering.

**Gianluca Guadagni\***, Bernard Fulgham\*, Katherine Fetscher\*: *Flipping the Math Classroom*. Innovation in Pedagogy Summit May 2015, University of Virginia.

A.Abdesselam\*, A.Chandra, **G.Guadagni** *A massless quantum field theory over the p-adics: research announcement*. Workshop on "The Renormalization Group", March 13th - March 19th, 2011. Oberwolfach - Germany. Preprint at <http://arxiv.org/abs/1104.2937v2>

**G. Guadagni\***, K. Ndreza, B. Scoppola, *Queueing systems with pre scheduled random arrivals*. October 2009, INFORMS Annual meeting, San Diego, CA.

**G. Guadagni\***, K. Ndreza, B. Scoppola, *Discrete time queueing systems with variable number of servers*. September 2006, XXXVII Annual Conference of the Italian Operations Research Society, Cesena, Italy.

**Gianluca Guadagni\***, *Functional integrals and renormalization group*. Jun 2008 - Meeting on *Mathematics and Field theory*, Department of Mathematics, Università di Roma 2 "Tor Vergata", Italy.

### J.2 Invited Presentation

Spring 2014 - Department of Mathematics, UVA. Sequence of two talks *Pre-scheduled Random Arrivals with exponentially distributed delays*.

Nov 2013 - Department of Economics, Università di Modena. *Extreme Value Theory for correlated systems*.

Feb 2013 - Department of Mathematics, Virginia Commonwealth University. *Cluster Expansion for Almost Gaussian Models*.

Fall 2012 - Math-Physics Seminar, Department of Mathematics, UVA. Sequence of four talks *Cluster Expansion*.

Spring 2012 - Probability Seminar, Department of Mathematics, UVA. *Extreme Value Theory*.

Spring 2011 - Department of Mathematics, UVA. Sequence of four talks *Renormalization Group*.

Apr 2009 - Department of Mathematics, Western Carolina University. *Functional integrals and Renormalization*.

Mar 2009 - Institute of System Research, School of Engineering, University of Maryland. *Queueing systems with pre scheduled random arrivals*.

Feb 2009 - Math Club UVA. *Cutoff phenomenon in Markov chains*.

Dec 2007 - Colloquium, Department of Mathematics - University of Virginia. *Exact Renormalization Group on the lattice*.

Aug 2005 - Department of Mathematics, Eurandom, Eindhoven, The Netherlands. " *Renormalization Group and Probability*.

Oct 2004 - Department of Mathematics, Università di Modena, Italy. *Decomposition of Gaussian processes and functional integrals*.

May 2004 - Statistical Mechanics Meeting, Rutgers University. *Finite range decompositions*.

## L. Service and Leadership

### L.1 Department Service and Leadership

2022 APMA Faculty Annual Evaluation Committee

2019 Engineering and Society Ministry of Operations, Staff, and IT.

Attended a Leadership Council Meeting on behalf of my Chair.

Mentoring new faculty - Farzad Safedi [This is not a Department assignment/service, I did it on my own initiative].

2015 First year program committee - Member

Hiring committee for a faculty position at APMA - Member

2014 Submission of John Maybee's application to All-University Teaching Award 2014. John Maybee received the award.

### L.2 School Service and Leadership

Spring 2022 Engineering Space Advisory Committee - Member

Center for Innovation in Computing Education and Outreach, Computer Science. Steering Committee - Member

2021 Engineering Space Advisory Committee - Member

Center for Innovation in Computing Education and Outreach, Computer Science. Steering Committee - Member

2020 Ramp-Up Committee - Member

Building Zone Committee - Member

Engineering Space Advisory Committee (Fall 2020) - Member

Center for Innovation in Computing Education and Outreach, Computer Science. Steering Committee - Member

Graduate Studies Committee - GSC (Spring 2020) - Member

2019 Graduate Studies Committee - GSC (Fall 2019) - Member

Committee of Academic Standards - CAS (Spring 2019) - Member

Undergraduate Curriculum Committee - UCC (Spring 2019) - Member

Center for Innovation in Computing Education and Outreach, Computer Science. Steering Committee - Member

2018 Undergraduate Curriculum Committee - UCC - Member

Committee of Academic Standards - CAS - Member

Hiring Committee for Assistant Dean of Undergraduate Studies - Member

Center for Innovation in Computing Education and Outreach, Computer Science. Steering Committee - Member



2017 Undergraduate Curriculum Committee - UCC - Member  
Committee of Academic Standards - CAS - Member

2016 Undergraduate Curriculum Committee - UCC - Member  
Committee of Academic Standards - Member

- With Malathi Veraravaghan (ECE), we submitted, for approval, to UCC APMA3150 "Data to Knowledge: Statistics with R". The course has been approved.
- With Eduardo Sokolovsky (APMA), we invited Prof. Steve Gordon from XSEDE. Our goal was to get XSEDE educational support to extend numerical and computational undergraduate practice in APMA courses.
- Report on APMA innovation activities for ABET, requested by Joanne Dugan (ECE).

2015 Undergraduate Curriculum Committee - UCC - Member

### L.3 University Service and Leadership

2020 SEAS Dean's search committee - Member

## M. Professional Service

### M.1 Peer Reviewer

IEEE Transactions on Artificial Intelligence - 2021-2022.

Journal of Forecasting - 2019.

ASEE Annual Conference 2015 - 2018.

Undergraduate Research and Design Symposium (URDS) 2015.

### M.2 Public Funding Agencies

#### Independent expert

2014-2017 **Evaluator** for the European Union **Horizon2020**, research proposals for

- *Marie Skłodowska-Curie Actions*, and
- *FET-Open schemes: Novel ideas for radically new technologies*

and **reviewer** for on going FP7 - Marie Curie Actions.

2012-2014 **Evaluator** for the European Union, research proposals for the *7<sup>th</sup> Framework Programme* (FP7 - Marie Curie) for research, technological development and demonstration activities.

2012-2021 **Evaluator** of research proposals for the United Arab Emirates (UAE) National Research Foundation (NRF).