Jonas L. Juul

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PROFESSIONAL PREPARATION

2019	**Cornell University, Ithaca, USA**: Visiting Scholar, Center for Applied Mathematics. Advisor: Steven Strogatz.
2015 – 2016	**Ludwig Maximilian Universität, Munich, DE**: Erasmus exchange student. Theoretical and Mathematical Physics.
2015	**Oxford University, Oxford, UK**: Academic visitor, Mathematical Institute. Advisor: Mason A. Porter
2014	**Weizmann Institute of Science, Rehovot, IL**: Summer research student. Department of Physics of Complex Systems. Advisor: Uzy Smilansky.
2011 – 2020	**Niels Bohr Institute, Copenhagen, DK**: BSc., Msc., and Ph.D. in Physics of Complex Systems. Advisors: Mogens H. Jensen and Joachim Mathiesen.

ACADEMIC EMPLOYMENT

2020 – 2022	**Cornell University, Ithaca, USA**: Postdoc in Applied Mathematics with Steven Strogatz (Mathematics), Austin Benson, and Jon Kleinberg (Computer Science)
04.2020 – 08.2020	**Technical University of Denmark, Lyngby, DK**: Postdoc in Applied Mathematics and Computer Science with Sune Lehmann
04.2020 – 08.2020	**Statens Serum Institut, Copenhagen, DK**: Member of the COVID-19 expert modeling group for the Danish CDC.

TEACHING EXPERIENCE

2020	**MATH 3230, Cornell University**: Teaching Introduction to Ordinary and Partial Differential Equations.
2016	**Assistant Lecturer, Niels Bohr Institute**: Linear Algebra and Classical Mechanics. Lectured, TA'ed, and remade every part of course with Prof. Jacob J. K. Kirkensgaard. Awarded highest mark by teaching committee.
2012 – 2019	**Teaching Assistant, Niels Bohr Institute**: 8 different courses in physics, mathematics, and mathematical methods.

ACADEMIC AWARDS

2017	**Niels Bohr Institute JMK Teaching Award**: Prestigious award in competition with all lecturers. Nominated by students for remaking course on Linear Algebra and Classical Mechanics.
2010	**Science Talent Scholarship, Svendborg Gymnasium**: Diploma and DKK $5,000$ awarded one student with "Special talent and interest in science".

GRANTS

2015 – 2020	**Travel and Research Grants**: Awarded 12 different grants of combined value of DKK $140,000$.

PUBLICATIONS IN REFEREED JOURNALS

6. **J.S. Juul**, S.H. Strogatz, "Descendant distributions for the impact of mutant contagion on networks", *Phys. Rev. Research*, Vol. 2, 033005
5. **J.S. Juul**, M.H. Jensen, S. Krishna, "Constraints on somite formation in developing embryos", *J.R.Soc. Interface*, Vol. 16., (2019)
4. **J.S. Juul**, S. Krishna, M.H. Jensen, "Entrainment of oscillations as a means of controlling somite patterning in a model of coupled presomitic mesoderm cells", *Phys. Rev. E*, Vol. 98, 062412
3. **J.S. Juul**, M. A. Porter,"Hipsters on Networks: How a Small Group of Individuals Can Lead to an Antiestablishment Majority", *Phys. Rev. E*, Vol. 99, 022313
2. **J.S. Juul**, M.A. Porter, "Synergistic effects in threshold models on networks", *Chaos*, Vol. 28, 013115 (2018)
1. **J.S. Juul**, C. H. Joyner, "Isospectral discrete and quantum graphs with the same flip counts and nodal counts", *Journal of Physics A: Mathematical and Theoretical*, Vol. 51, 245101 (2018)

SUBMITTED MANUSCRIPTS AND PREPRINTS

J.L. Juul, K. Græsbøll, L. E. Christiansen, S. Lehmann, " Fixed-time descriptive statistics underestimate extremes of epidemic curve ensembles", arXiv:2007.05035 *Status: Submitted*

J.S. Juul, L. Alessandretti J. Dammeyer, I. Zettler, S. Lehmann, J. Mathiesen, "Gender-specific behavior change following terror attacks", arXiv:2004.02957 *Status: Submitted*

I. Zettler, **J.S. Juul**, M. D. Back, J. E. Gebauer, A. C. P. Küfner, J. Dammeyer, S. Lehmann, J. Mathiesen, "Investigating homophily and network centrality among grandiose narcissists: Narcissistic admiration and rivalry in big data social networks", *Status: Pending*

INVITED TALKS

2019 **IT University of Copenhagen**. Gave a talk entitled "Descendant distributions for simple contagions on networks – How widespread will the next Spanish Flu get?" (September)

Social Data Science seminar, University of Copenhagen, Denmark. Gave a talk entitled "Descendant distributions for simple contagions on networks – How widespread will the next Spanish Flu get?" (September)

University of California Los Angeles, Network Meeting seminar entitled "Hipsters on Networks: How a Small Group of Individuals Can Lead to an Anti-Establishment Majority" (May)

2018 **Experimental Economics Meets Statistical Physics**, Workshop at the Niels Bohr Institute. Gave a talk entitled "Hipsters on Networks: How a Small Group of Individuals Can Lead to an Anti-Establishment Majority" (May)

2017 **Network Science Institute, Northeastern University**, Seminar entitled 'Hipsters on Networks: How a Small Group of Individuals Can Lead to an Anti-Establishment Majority" (November)

Symposium on Theoretical Chronobiology at Université des Sciences et Technologies de Lille, France. Gave a talk entitled "Waves, synchronisation and entrainment in populations of coupled somite precursor cells" (May).

2016 **Aspects of Gene and Cellular Regulation** Conference at The Institute of Mathematical Sciences in Chennai, India. I gave a talk on the topic entitled "The presomitic mesoderm: Minimal models and the consequences of period gradients". (August).

2014 **Analysis on Graphs and its Applications** Workshop at University College London, UK. I gave a talk on Flip counts and Nodal counts in graph theory. (December)

CONTRIBUTED TALKS AND POSTERS

2020 **SINM 2020** NetSci satellite. Abstract entitled 'Harder, better, faster, stronger cascades – or simply largers?" accepted for presentation. Work in collaboration with Johan Ugander. (September)

2019 **SIAM DS2019** Conference in Snowbird, Utah, USA. Gave a poster entitled 'Hipsters on Networks: How a Small Group of Individuals Can Lead to an Anti-Establishment Majority". (May)

2017 **Physical Concepts in Stem Cell Biology** Workshop in Tisvildeleje, Denmark. Gave a talk entitled "Phase drift between stem cell oscillators scales mouse somites". (July)

2014 **Rhythms in Complex Systems: From Theory to Experiment** Conference at the Niels Bohr Institute. Gave a poster on Arnol'd tongues in somitogenesis. (August)