

Spencer H. Bryngelson

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1 Basic information

- Title: Senior Postdoctoral Scholar
- Institution: California Institute of Technology
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2 Education

- University of Illinois at Urbana–Champaign
 - (2017) Doctor of Philosophy, Theoretical & Applied Mechanics
 - (2015) Master of Science, Theoretical & Applied Mechanics
 - (2015) Graduate Certificate, Computational Science & Engineering
- University of Michigan–Dearborn
 - (2013) Bachelor of Science, Mechanical Engineering
 - (2013) Bachelor of Science, Engineering Mathematics

3 Research positions

- (2018–Present) Senior Postdoctoral Scholar, California Institute of Technology, with Tim Colonius
- (2019) Visiting Researcher, Massachusetts Institute of Technology, with Themis Sapsis
- (2017–8) Postdoctor Researcher, XPACC, with Carlos Pantano, Dan Bodony, Jon Freund
- (2013–7) Graduate Research Fellow, University of Illinois at Urbana–Champaign, with Jon Freund
- (2012–3) Undergraduate Research Assistant, University of Michigan–Dearborn, with Eric Ratts

4 Teaching

- (2015) Fundamentals of Fluid Dynamics, University of Illinois at Urbana–Champaign
- (2013) Design and Analysis of Machine Elements, University of Michigan–Dearborn
- (2012) Probability, Statistics, and Reliability in Design, University of Michigan–Dearborn
- (2012) Statics and Mechanics of Materials, University of Michigan–Dearborn

5 Students

5.1 Current

- Jean-Sebastien Spratt, California Institute of Technology
- Ben Stevens, California Institute of Technology
- Qifan Wang, California Institute of Technology
- Alexis Charalampopoulos, Massachusetts Institute of Technology
- Esteban Cisneros, University of Illinois at Urbana–Champaign

5.2 Past

- David Mittelstein, California Institute of Technology, Ph.D. (2020)
- Theresa Trummler, TU Munich, Ph.D. (2020)
- Franz O’Meally, Johns Hopkins University, B.S. (2020)

6 Awards

- (2017) Stanley Weiss Outstanding Dissertation Award, University of Illinois at Urbana–Champaign
- (2016) Hassan Aref Award (research in fluid mechanics), University of Illinois at Urbana–Champaign
- (2015) Alumni Teaching Fellowship, University of Illinois at Urbana–Champaign
- (2010–2013) Dean’s List, University of Michigan–Dearborn
- (2011) Pi Tau Sigma (honor society, member), University of Michigan–Dearborn

7 Grants

7.1 Funded grants

- (2019-20) co-PI: XSEDE CTS120005, \$1.35M dollar valuation, 9M CPU Hours

7.2 Grants supported

- (2019-21) NIH 2P01-DK04881, with T. Colonius
- (2018-21) ONR MURI N0014-17-1-2676, with T. Colonius
- (2018-21) ONR BRC N0014-17-1-2625, with T. Colonius
- (2017-18) DOE PSAAP DE-NA0002374, with J. B. Freund and W. Gropp
- (2013-17) NSF CBET 13-36972, with J. B. Freund

8 Professional activity

8.1 Referee

- AIAA Journal
- Fluids
- International Journal of Multiphase Flow
- Journal of Fluid Mechanics
- Journal of Computational Physics
- Theoretical and Computational Fluid Dynamics

8.2 Affiliations

- American Physical Society
- Society of Industrial and Applied Mathematics

8.3 Service

- (2021) Organizer, Mini-symposium, “Machine learning for multiphase flows”, IACM Conference on Mechanistic Machine Learning and Digital Twins for Computational Science, Engineering & Technology
- (2015-16) Judge, Illinois State-wide Math Competition
- (2014) Organizer, Science Night, Illinois Middle Schools

9 Publications

10 Talks