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) Batchelor of Science, Mechanical Engineering
  - (2013) Batchelor 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

9.1 Journal papers

[J7] Ricca, F., Russo, A., Greco, S., Leone, N., Artikis, A., Friedrich, G., Fodor, P., Kimmig, A., Lisi, F., Maratea, M., Mileo, A., Riguzzi, F., (2021). "Proceedings 36th International Conference on Logic Programming (Technical Communications)". *Electronic Proceedings in Theoretical Computer Science* **325** (). ISSN: 2075-2180. URL: http://arxiv.org/abs/2009.09158 (visited on 04/04/2021).

[J7] Spooner, J., Russo, A., Broda, D. K., Specia, L., (n.d.). "WG Using Answer Set Grammars to Learn Explanations for Winograd Schemas" (), 145.

[J7] Koschate-Reis, M., Naserianhanzaei, E., Dickens, L., Stuart, A., Russo, A., Levine, M., (Feb. 11, 2021). "ASIA: Automated Social Identity Assessment Using Linguistic Style". ISSN: 1554-351X. URL: https://ore.exeter.ac.uk/repository/handle/10871/124775 (visited on 04/04/2021).

[J7] Abu Jabal, A., Bertino, E., Lobo, J., Law, M., Russo, A., Calo, S., Verma, D., (2020). "TEST - A Framework for Learning Attribute-Based Access Control Policies". Lecture Notes in Computer Science. Ed. by Liqun Chen, Ninghui Li, Kaitai Liang, and Steve Schneider, 523–544.

[J7] Casale, G., Artač, M., Heuvel, W.-J., Hoorn, A., Jakovits, P., Leymann, F., Long, M., Papanikolaou, V., Presenza, D., Russo, A., Srirama, S. N., Tamburri, D. A., Wurster, M., Zhu, L., (Aug. 1, 2020). "RADON: Rational Decomposition and Orchestration for Serverless Computing". *SICS Software-Intensive Cyber-Physical Systems* **35** 1, 77–87. ISSN: 2524-8529. URL: https://doi.org/10.1007/s00450-019-00413-w (visited on 04/04/2021).

[J7] Gomoluch, P., Alrajeh, D., Russo, A., Bucchiarone, A., (June 1, 2020). "Learning Neural Search Policies for Classical Planning". *Proceedings of the International Conference on Automated Planning and Scheduling* **30**, 522–530. ISSN: 2334-0843. URL: https://ojs.aaai.org/index.php/ICAPS/article/view/6748 (visited on 04/04/2021).

9.2 Refereed proceedings

[C2] Verma, D. C., Bertino, E., Russo, A., Calo, S., Singla, A., (Apr. 21, 2020). "Policy-Based Ensembles for Multi Domain Operations". *Artificial Intelligence and Machine Learning for Multi-Domain Operations Applications II*. Artificial Intelligence and Machine Learning for Multi-Domain Operations Applications II. Vol. 11413. International Society for Optics and Photonics, 114130A. URL: https://www.spiedigitallibrary.org/conference-proceedings-of-spie/11413/114130A/Policy-based-ensembles-for-multi-domain-operations/10.1117/12.2558727.short (visited on 04/04/2021).

10 Talks

10.1 Conference talks

[T1] Abu Jabal, A., Bertino, E., Lobo, J., Law, M., Russo, A., Calo, S., Verma, D., (2020). "Polisma - A Framework for Learning Attribute-Based Access Control Policies". *Computer Security – ESORICS 2020*. Ed. by Liqun Chen, Ninghui Li, Kaitai Liang, and Steve Schneider. Lecture Notes in Computer Science. Cham: Springer International Publishing, 523–544. ISBN: 978-3-030-58951-6.