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## PROFESSIONAL EXPERIENCE

- 10/2021– **Postdoc Fellow**, *Ragon Institute of MGH, MIT and Harvard*.  
present Advisor: Galit Alter
- 11/2021– **Visiting Scientist**, *MIT*.  
present Advisor: Douglas A. Lauffenburger
- 08/2020– **Visiting Graduate Research Student**, *Beth Israel Deaconess Medical Center (BIDMC)*.  
06/2021 Advisor: Christos S. Mantzoros
- 05/2018– **Summer Graduate Research Intern**, *Pacific Northwest National Laboratory*.  
08/2018 Advisor: Xiu Yang

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## EDUCATION

- 09/2016– **Ph.D. in School of Engineering**, *Brown University*.  
09/2021 Advisor: George Em Karniadakis
- 09/2017– **M.S. in Division of Applied Mathematics**, *Brown University*.  
05/2019
- 09/2015– **M.S. in School of Engineering**, *Brown University*.  
05/2017
- 09/2011– **B.Eng. in Department of Engineering Mechanics**, *Shanghai Jiao Tong University*.  
06/2015 Thesis Advisor: Jiasong Wang

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## PUBLICATIONS

### \*Equal contribution.

- 2022 Q. Zhang, K. Sampani, M. Xu, S. Cai, **Y. Deng**, H. Li, J. Sun, G. Karniadakis, AOSLO-net: A deep learning-based method for automatic segmentation of retinal microaneurysms from adaptive optics scanning laser ophthalmoscope images. *Under review*.
- 2022 **Y. Deng**, H. Chang, H. Li, Recent Advances in Computational Modeling of Biomechanics and Biorheology of Red Blood Cells in Diabetes. *Biomimetics* (**Cover Article**).
- 2022 H. Li\*, **Y. Deng\***, Z. Li, C. Mantzoros, G. Frydman, A. Gallastegi, G. Karniadakis, Multi-physics and multiscale modeling of microthrombosis in COVID-19. *PLOS Computational Biology*.
- 2022 H. Li, **Y. Deng**, K. Sampani, S. Cai, Z. Li, J. Sun, G. Karniadakis, Computational investigation of blood cell transport in retinal microaneurysms. *PLOS Computational Biology* (**Cover Article**).
- 2021 **Y. Deng\***, L. Lu\*, L. Aponte, A. Angelidi, V. Novak, G. Karniadakis, C. Mantzoros, Deep transfer learning and data augmentation improve early prediction of abnormal glucose levels in patients with type 2 diabetes. *npj Digital Medicine*.
- 2021 E. Javadi, **Y. Deng**, G. Karniadakis, S. Jamali, *In silico* biophysics and hemorheology of blood hyperviscosity syndrome. *Biophysical Journal*.

- 2021 A. Yazdani\*, **Y. Deng\***, H. Li\*, E. Javadi, Z. Li, S. Jamali, J. Humphrey, C. Mantzoros, and G. Karniadakis, Integration of blood cell mechanics and platelet adhesive dynamics with coagulation cascade: application to normal and diabetic blood. *Journal of Royal Society Interface*.
- 2020 **Y. Deng**, G. Lin, X. Yang, Multifidelity data fusion via gradient-Enhanced gaussian process regression. *Communications in Computational Physics*.
- 2020 **Y. Deng\***, D. Papageorgiou\*, X. Li, N. Perakakis, C. S. Mantzoros, M. Dao, G. Karniadakis, Quantifying fibrinogen-Dependent aggregation of red blood cells in type 2 diabetes mellitus. *Biophysical Journal*.
- 2019 **Y. Deng\***, D. Papageorgiou\*, H. Chang, S. Abidi, X. Li, M. Dao, G. Karniadakis, Quantifying shear-induced deformation and detachment of individual adherent sickle red blood cells. *Biophysical Journal*.
- 2018 L. Lu\*, **Y. Deng\***, X. Li, H. Li, G. Karniadakis, Understanding the twisted structure of amyloid fibrils via molecular simulations. *The Journal of Physical Chemistry B*.
- 2018 H. Li, D. Papageorgiou, H. Chang, L. Lu, J. Yang, **Y. Deng**, Synergistic integration of laboratory and numerical approaches in studies of the biomechanics of diseased red blood cells. *Biosensors*.

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## HONOR AND AWARDS

- 2021 **Traveling Award**, The Rising Stars in Mechanical Engineering Workshop.
- 2019-2020 **Corinna Borden Keen Research Fellowship**, Brown University.
- 2019 **Traveling Award**, The US National Congress on Computational Mechanics (USNCCM15).
- 2019 **Traveling Award**, The Applied Mathematics: The Next 50 Years, the Data Science and Optimization Workshop.
- 2019 **Traveling Award**, Workshop on Recent Developments on Mathematical/Statistical approaches in DATA Science (MSDAS).
- 2018-2019 **George Irving Hopkins Fellowship**, Brown University.
- 2018 **Recipient of (7th Cohort) Open Graduate Education Program**, Brown University Graduate School.
- 2015 **Outstanding Graduate**, Shanghai Jiao Tong University.
- 2014 **The Third Prize Scholarship**, Shanghai Jiao Tong University.

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## CONFERENCES AND WORKSHOPS

- 2021 **The Rising Stars in Mechanical Engineering Workshop**, MIT.
- 2021 **Women in Data Science (WiDS) Worldwide**, Stanford University (virtual).
- 2020 **Red Cell Club Meeting**, Virtual.
- 2020 **VPH2020**, Inria, Paris, France (virtual).
- 2020 **SIAM MDS20: Machine Learning for Physical Systems**, SIAM (virtual).
- 2019 **Red Cell Club Meeting**, University of Rochester, Rochester.
- 2019 **The Applied Mathematics: The Next 50 Years, the Data Science and Optimization Workshop**, University of Washington, Seattle.
- 2019 **The US National Congress on Computational Mechanics (USNCCM15)**, University of Texas, Austin.

- 2019 **Workshop on Recent Developments on Mathematical/Statistical approaches in Data Science (MSDAS)**, University of Texas, Dallas.
- 2018 **Algorithms for Modern Power Systems (AMPS) Annual Workshop**, American University, Washington, DC.

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#### SERVICES AND CERTIFICATES

- 2022-present **Member**, Ragon WISE (Women in STEM Empowerment).
- 2020-present **Member-at-large**, U.S. Association for Computational Mechanics-Female Research Group (USACM-FRG).
- 2018 **Sheridan Teaching Seminar Program (Certificate I)**, The Sheridan Center for Teaching and Learning, Brown University.
- 09/2017– **Leading Teaching Assistant**, School of Engineering, Brown University.
- 05/2018
  - ENGN0030: Introduction to Engineering
  - ENGN0040: Dynamics and Vibrations