ADITYA DENDUKURI

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RESEARCH INTERESTS

Computational Science, Complex Systems, Model Reduction, Machine Learning.

WORK EXPERIENCE

Research Associate   *Spetember 2020 - present*
Ralph E. Martin Department of Chemical Engineering,
University of Arkansas, Fayetteville, AR, USA.

Graduate Research Assistant   *August 2018 - July 2020*
Department of Computer Science and Computer Engineering,
University of Arkansas, Fayetteville, AR, USA.

Undergraduate Research Assistant   *January 2016 - May 2018*
Virtual Reality, Simulation, Imaging and Modeling (ViRaSIM) Lab,
Department of Computer Science,
University of Central Arkansas, Conway, AR, USA.

EDUCATION

University of Arkansas, Fayetteville AR, USA   *August 2018 - July 2020*
Master of Science (MSc.) in computer science.
Advisors : David M. Ford and Matthew J. Patitz
Thesis : Nonlinear Dimensionality Reduction for the Thermodynamics of Small Clusters of Particles.

University of Central Arkansas, Conway AR, USA   *August 2014 - May 2018*
Bachelor of Science (BSc.) in computer science.
Minor in physics,
Advisor : Tansel Halic.

HONOURS

- Masters thesis nominated by the University of Arkansas graduate school for the *Conference of Southern Graduate Schools (CSGS)* outstanding masters thesis award.

- Graduate Student Council Travel Grant ($500) for the Foundations of Process Analytics and Machine Learning Conference in Raleigh, North Carolina (Summer 2019).

- Recipient of The Advancement of Undergraduate Research in the Sciences (AURS) summer research fund (2016) (http://www.aursfund.org) Award Amount: $5000

- Recipient of International Mobility Scholarship (University of Central Arkansas)

PUBLICATIONS

- D. M. Ford, A. Dendukuri, G. Kalyoncu, *et al.*, "Machine learning to identify variables in thermodynamically small systems," *Computers & Chemical Engineering*, p. 106 989, 2020

- D. Demirel, A. Yu, S. Cooper-Baer, *et al.*, "A hierarchical task analysis of shoulder arthroscopy for a virtual arthroscopic tear diagnosis and evaluation platform (vatdep)," *The International Journal of Medical Robotics and Computer Assisted Surgery*, vol. 13, no. 3, e1799, 2017

CONFERENCE PROCEEDINGS

- A. Dendukuri, G. Kalyoncy, K. Luu, *et al.*, *Detecting subspaces for small lennard-jones clusters using spectral graph theory and machine learning*, 2021 SIAM Conference on Computational Science and Engineering, Poster. To appear, March 20-21, 2021

- D. M. Ford, A. Dendukuri, G. Kalyoncu, *et al.*, *Machine learning to identify variables in thermodynamically small systems*, Foundations of Process Analytics and Machine Learning. Poster, Aug 6-9, 2019

- A. Dendukuri, B. Keeling, A. Fereidouni, *et al.*, *Defining quantum neural networks via quantum time evolution*, Quantum Techniques in Machine Learning 2019, KAIST, Daejon, South Korea. Poster., Oct 20-24, 2019

- A. Dendukuri, T. Mustafa, T. Halic, *et al.*, *Modeling fluid and heat flow in virtual arthroscopic tear diagnosis and evaluation platform (vatdep)*, Arkansas IDeA Network of Biomedical Research Excellence poster symposium. Fayetteville, AR. Poster, Oct 25-26, 2017

- A. Dendukuri, T. Halic, S. Kockara, *et al.*, *Modeling fluid flow in virtual arthroscopic tear diagnosis and evaluation platform (vatdep)*, Sixth Annual Central Arkansas Undergraduate Summer Research Symposium. University of Arkansas for Medical Sciences, Little Rock, AR. Poster, Jul 26, 2017

REFERENCES

Dr. David Ford (daveford@uark.edu)
Professor, Department and Kevin W. and Marie L. Brown Department Chair in Chemical Engineering.
Dr. Matthew Patitz (patitz@uark.edu)
Associate Professor, Department of Computer Science and Engineering, University of Arkansas.
Dr. Tansel Haic (thalic@uca.edu)
Associate Professor, Department of Computer Science, University of Central Arkansas.