

Amirhessam Tahmassebi

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EDUCATION

FLORIDA STATE UNIVERSITY

PHD IN COMPUTATIONAL SCIENCE

Aug 2018 | Tallahassee, FL

Cum. GPA: 3.969/4.0

Advisor: Dr. Anke Meyer-Baese

MSC IN COMPUTATIONAL SCIENCE

Dec 2017 | Tallahassee, FL

Cum. GPA: 3.969/4.0

Advisor: Dr. Anke Meyer-Baese

THE UNIVERSITY OF AKRON

MSC IN PHYSICS

Aug 2015 | Akron, OH

Cum. GPA: 3.982/4.0

Advisor: Dr. Alper Buldum

UNIVERSITY OF TEHRAN

BSc IN PHYSICS

July 2010 | Tehran, Iran

Cum. GPA: 3.1/4.0

Advisor: Dr. Hamidreza Moshfegh

COURSEWORK

FLORIDA STATE UNIVERSITY

Data Mining

Applied Machine Learning

Scientific Programming With C++

Applied Computational Science I

Applied Computational Science II

Advanced SAS Programming

Data Management & Analysis With SAS

Scientific Visualization (OpenGL-VTK)

Computational Forensics

THE UNIVERSITY OF AKRON

MATLAB Modeling & Simulation

NanoScience & Nano Technology

Electrodynamics

Quantum Mechanics

Lagrangian Mechanics

Solid State Physics

Statistical Mechanics

Mathematical Methods in Physics

Atomic Force Microscope (AFM) LAB

SKILLS

Fluent:

Python • C/C++ • SAS • SQL • Spark

Proficient:

R • Fortran • MPI • OpenMP

Experienced:

MATLAB • Hadoop • HTML

WORKING EXPERIENCE

PRECISION WELLNESS, INC. | DATA SCIENTIST

June 2017 – August 2017, May 2018 – Present | Palo Alto, CA

- Took statistical models and transformed them into robust and scalable codes.
- Performed integration of the algorithms and data sources.
- Implemented new codes at scale and to meet performance guidelines.
- Implemented Machine Learning algorithms for projects.

FLORIDA STATE UNIVERSITY | GRADUATE TEACHING ASSISTANT

August 2015 – August 2018 | Tallahassee, FL

- Working with **Programs in Interdisciplinary Computing (PIC)** at Florida State University under supervision of Mr. Ken Armstrong as an Instructor for Spreadsheets in Business (CGS 2518).
- Developed an under-graduate level course in High Performance Computing including OpenMP, MPI, CUDA, and OpenACC programming.

THE UNIVERSITY OF AKRON | GRADUATE TEACHING ASSISTANT

August 2013 – August 2015 | Akron, OH

- Worked in Physics (I, II) LABS.
- Instructor for Physics Life Science.
- Grader for Astro-Physics & Classical Physics (I, II).

RESEARCH

FLORIDA STATE UNIVERSITY

August 2015 – Present | Tallahassee, FL

Working on a Data Mining Project under supervision of **Dr. Anke Meyer-Baese** to apply Machine Learning algorithms on fMRI Brain scans. I am also working on Deep Learning algorithms to automated detection of predictive features for relapse in nicotine dependent subjects.

THE UNIVERSITY OF AKRON

August 2013 – August 2015 | Akron, OH

Worked with **Dr. Alper Buldum** for two years. My Thesis topic was Fluid Flow Through Carbon Nanotubes & Graphene Based Nanostructures. We implemented a Molecular Dynamics code written in Fortran for three different models, containing Single-Walled Carbon Nanotubes, Graphene Wall as structures, and Liquid Argon as flow of the system. The application of that would be found in the field of Drug Delivery.

CERTIFICATIONS

2016	SAS Certified Advanced Programmer for SAS 9	License: AP018225v9
2016	SAS Certified Base Programmer for SAS 9	License: BP060504v9
2016	Coursera The Data Scientist's Toolbox	License: ZW45KTLYBXX5

SOCIETIES

APS • SPIE • ACM • IEEE • Elsevier • Frontiers

EDITORIAL BOARD

International Journal of Mechatronics, Electrical & Computer Technology (IJMEC)

AWARDS

- Apr. 2018 Florida State University Research & Creativity Award, Amount = \$1000
- Mar. 2018 ONR Gulf of Mexico Summer School Grant, Amount = \$2400
- Jan. 2018 Nominated for SPIE Medical Imaging Best Student Paper Award
- Jan. 2018 Florida State University Congress of Graduate Students Travel Grant, Amount = \$200
- Jan. 2018 SPIE Travel Grant, Department of Scientific Computing, Amount = \$600
- Jul. 2017 Tutorial Volunteer MVP Award, [PEARC2017]
- Jul. 2017 Florida State University Congress of Graduate Students Travel Grant
- Jun. 2017 [PEARC2017] Travel Grant, Google, Amount = \$1400
- Apr. 2017 SPIE Travel Grant, Department of Scientific Computing, Amount = \$1200
- Apr. 2017 Florida State University Congress of Graduate Students Travel Grant, Amount = \$200
- Jan. 2017 PhD Candidacy Exam (Score : 95.1%), Department of Scientific Computing
- Jul. 2016 Florida State University Congress of Graduate Students Travel Grant, Amount = \$200
- Jul. 2016 1st Place in [XSEDE2016] Data Simulation & Modeling Contest
- Jun. 2016 [XSEDE2016] Travel Grant, Texas Advanced Computing Center (TACC), Amount = \$3000
- Oct. 2015 Dean's Scholarship, Florida State University, Amount = \$1000
- Aug. 2015 Graduate Teaching Assistantship, Florida State University
- Dec. 2014 Annual Outstanding MS Academic Achievement, The University of Akron, Amount = \$500
- Dec. 2013 Annual Outstanding MS Academic Achievement, The University of Akron, Amount = \$500
- Aug. 2013 Graduate Teaching Assistantship, The University of Akron

PROJECTS

- 2017 Deep Learning Platform Website : www.iDeepLe.com
- 2017 Raspberry Pi Based Pattern Recognition
- 2017 Neuroimaging in Python
- 2017 fMRI Smoking Cessation Classification
- 2016 **Characteristics of Nano-Structures**
- 2016 [XSEDE2016] Competition: Modeling for Zombie Apocalypse
- 2016 [XSEDE2016] Competition: Modeling for Malaria Transmission Dynamics
- 2016 [XSEDE2016] Competition: Pharmacokinetic Modeling of Drug Dosage
- 2015 **Space-Filling Curves**
- 2015 **Discrete Cosine Transformations - How JPEGs work**

PUBLISHED PUBLICATIONS

- 2018 Optimized Naive-Bayes and Decision Tree Approaches for fMRI Smoking Cessation Classification, **Tahmassebi, A.**, Gandomi, A. H., McCann, I., Schulte, M. H., Goudriaan, A. E., Foo, S., & Meyer-Baese, A. Journal of Complexity, Hindawi.
- 2018 Stock Risk Assessment via Multi-Objective Genetic Programming, **Tahmassebi, A.**, Gandomi, A. H., & Meyer-Baese, A. Journal of Postdoctoral Research.
- 2018 Radiomics with MRI for early prediction of the response to neo-adjuvant chemotherapy in breast cancer patients, **Tahmassebi, A.**, Meyer-Baese, A., Wengert G.J., Helbich T. H., & Pinker-Domenig, K. Insights to Imaging, ECR 2018 - BOOK OF ABSTRACTS, Springer.
- 2018 Determining leader nodes in dementia networks, Yazicioglu Y., Pinker K., **Tahmassebi, A.**, & Meyer-Baese A. Insights to Imaging, ECR 2018 - BOOK OF ABSTRACTS, Springer.
- 2018 Determining disease evolution driver nodes in dementia networks, **Tahmassebi, A.**, Moradi Amani, A., Pinker-Domenig, K., & Meyer-Baese, A. SPIE Medical Imaging.
- 2018 Determining the importance of parameters in neo-adjuvant chemotherapy in breast cancer, **Tahmassebi, A.**, Pinker-Domenig, K., & Meyer-Baese, A. SPIE Medical Imaging.

- 2018 iDeepLe: Deep Learning in a Flash,
Tahmassebi, A.
SPIE Defense + Security.
- 2018 Genetic Programming Based on Error Decomposition: A Big Data Approach,
Tahmassebi, A., & Gandomi, A. H.
In Book: Genetic Programming Theory and Practice XIV, Springer.
- 2018 Multi-level analysis of spatio-temporal features in non-mass enhancing breast tumors,
Tahmassebi, A., Pinker-Domenig, K., & Meyer-Baese, A.
SPIE Commercial + Scientific Sensing and Imaging.
- 2018 Building Energy Consumption Forecast using Multi-Objective Genetic Programming,
Tahmassebi, A., & Gandomi, A. H.
Journal of Measurements, Elsevier.
- 2018 NewsAnalyticalToolkit: an online natural language processing platform to analyze news,
McCann, I., **Tahmassebi, A.**, Meyer-Baese, A., & Erlebacher, G.
SPIE Defense + Security.
- 2018 Deep Learning in Medical Imaging,
Tahmassebi, A., Gandomi, A. H., Pinker-Domenig, K., & Meyer-Baese, A.
Proceedings of the Practice and Experience in Advanced Research Computing, ACM.
- 2018 A Pareto Front Based Evolutionary Model for Airfoil Self-Noise Prediction,
Tahmassebi, A., Gandomi, A. H. & Meyer-Baese, A.
IEEE Congress on Evolutionary Computation.
- 2018 An Evolutionary Online Framework for MOOC Performance using EEG Data,
Tahmassebi, A., Gandomi, A. H. & Meyer-Baese, A.
IEEE Congress on Evolutionary Computation.
- 2018 Wearable biosignal acquisition system for decision aid,
Morales, D., Castillo, E., Toral-Lopez, V., Garcia, A., Parrilla, L., U. Ruiz, V., Meyer-Baese, A., & **Tahmassebi, A.**
SPIE Commercial + Scientific Sensing and Imaging.
- 2018 Reconfigurable instrument for measuring variations of capacitors dielectric: an application to olive oil quality monitoring,
Juarez, S., Romero-Maldonado, F., Ortiz-Gomez, I., Morales, D., Salinas-Castillo, A., **Tahmassebi, A.**, & Meyer-Baese, A.
SPIE Commercial + Scientific Sensing and Imaging.
- 2018 A Scalable Communication Abstraction Framework for Internet of Things Applications using Raspberry Pi,
Mohebbali, B., **Tahmassebi, A.**, Gandomi, A. H., & Meyer-Baese, A.
SPIE Commercial + Scientific Sensing and Imaging.
- 2018 Machine Learning for Challenging Tumor Detection Classification in Breast Cancer,
Illan, I., **Tahmassebi, A.**, & Meyer-Baese, A.
SPIE Commercial + Scientific Sensing and Imaging.
- 2017 The Driving Regulators of the Connectivity Protein Network of Brain Malignancies,
Tahmassebi, A., Pinker-Domenig, K., Wengert, G., Lobbes, M., Stadlbauer, A., Wildburger, N. C., Botella, G., & Meyer-Baese, A.
SPIE Commercial+ Scientific Sensing and Imaging, Vol. 10216.
- 2017 An Evolutionary Approach for fMRI Big Data Classification,
Tahmassebi, A., Gandomi, A. H., McCann, I., Schulte, M. H., Schmaal, L., Goudriaan, A. E., & Meyer-Baese, A.
IEEE Congress on Evolutionary Computation.
- 2017 High Performance GP-Based Approach for fMRI Big Data Classification,
Tahmassebi, A., Gandomi, A. H., & Meyer-Baese, A.
Proceedings of the Practice and Experience in Advanced Research Computing, ACM.
- 2017 fMRI Smoking Cessation Classification Using Genetic Programming,
Tahmassebi, A., Gandomi, A. H., McCann, I., Schulte, M. H., Schmaal, L., Goudriaan, A. E., & Meyer-Baese, A.
Workshop on Data Science meets Optimization, IEEE
- 2017 Dynamical Graph Theory Networks Techniques for the Analysis of Sparse Connectivity Networks in Dementia,
Tahmassebi, A., Pinker-Domenig, K., Wengert, G., Lobbes, M., Stadlbauer, A., Romero, F. J., & Meyer-Bäse, A.
SPIE Commercial+ Scientific Sensing and Imaging, Vol. 10216.
- 2017 Reconfigurable wearable to monitor physiological variables and movement,
Romero, F. J., Morales, D. P., Castillo, E., García, A., **Tahmassebi, A.**, & Meyer-Baese, A.
SPIE Commercial+ Scientific Sensing and Imaging, Vol. 10216.
- 2015 Fluid Flow Through Carbon Nanotubes & Graphene Based Nanostructures,
Tahmassebi, A.
Diss. University of Akron.
- 2015 Fluid Flow Calculations of Graphene Composites,
Tahmassebi, A., & Buldum, A.
APS March Meeting Abstracts. Vol. 1.

SUBMITTED PUBLICATIONS

- 2018 A Novel Evolutionary Ensemble Method,
Tahmassebi, A., Gandomi, A. H., Foo, S. Y., & Meyer-Baese, A.
Scientific Reports, Nature.
- 2018 Multi-stage optimization of deep model: A case study on ground motion modeling,
Tahmassebi, A., Gandomi, A. H., Fong, S., Meyer-Baese, A., & Foo, S. Y.
Journal of PLOSONE.
- 2018 Naturally Inspired Algorithms: GP & ANN,
Tahmassebi, A., & Gandomi, A. H.
A proposal to The National Aeronautics and Space Administration (NASA).
- 2018 Neo-Adjuvant Chemotherapy in Breast Cancer,
Tahmassebi, A., Pinker-Domenig, K., & Meyer-Baese, A.
Clinical Cancer Research.
- 2018 Fluid flow through graphene based nanostructures,
Tahmassebi, A., & Buldum, A.
Journal of Applied Physics.
- 2018 Improved ant colony optimization for multi-resource job shop scheduling: A special case of transportation,
Gandomi, A. H., & **Tahmassebi, A.**
European Journal of Operational Research, Elsevier.

CONFERENCES

- Jul. 2016 The Extreme Science and Engineering Discovery Environment [XSEDE16], Miami, Florida.
- Apr. 2017 SPIE Defense + Commercial Sensing, Anaheim, California.
- Jul. 2017 The Practice & Experience in Advanced Research Computing [PEARC17], New Orleans, Louisiana.
- Feb. 2018 SPIE Medical Imaging, Houston, Texas.
- Apr. 2018 SPIE Defense + Commercial Sensing, Orlando, Florida.
- Apr. 2018 Deep Learning ANN and Applications Workshop, Lafayette, Louisiana.
- Jul. 2018 The Practice & Experience in Advanced Research Computing [PEARC18], Pittsburgh, Pennsylvania.