Saber Yaghoobi

Contact Information

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Educations

PhD Candidate, Electrical Engineering
Concentration: Control Engineering
University of Nevada, Reno, Started January 2020
Advisor: Dr. Sami M. Fadali

MSc, Electrical Engineering
Concentration: Digital Electronics
University of Guilan, March 2017
Relevant Course Works: Modern Control (20.0/20.0), Image Processing (17.25/20.0), Artificial Neural Networks (16.0/20.0), Seminar (19.75/20.0).
Thesis title: "Chaos Control and Synchronization of Colpitts Oscillators using Neural Networks." (19.0/20.0)
Advisor: Dr. Hamed Mojallali
GPA: 3.63/4.

BS, Electrical Engineering
Concentration: Electronics
University of Guilan, Iran, June 2014
Thesis title: "Tuning of a PID controller using improved chaotic krill herd algorithm." (20.0/20.0)
Advisor: Dr. Hamed Mojallali

High School Diploma, Mathematics and Physics
Shahed High School, Rasht, Iran, June 2007

Research Interests

- Artificial Intelligence
- Machine Learning
- Evolutionary Computation
- Deep Learning
- Fuzzy Logic Control
- Signal/Image processing
- Pattern Recognition
- Artificial neural networks and data mining

Honors

2009	• **Ranked top 2%** among more than 500,000 participants, Iranian National University Entrance Exam (Konkour) for undergraduate programs.
2009-2014	• **Half Scholarship:** Iranian Ministry of Science, Research and Technology
2012	• Qualified for Soccer 2D Simulation **World Cup Robotics Competitions** (RoboCup), 2012 Mexico City, Mexico. (Didn't participate due to sponsorship issues)
2014	• **Ranked top 2%** among more than 60,000 participants, Iranian National University Entrance Exam (Konkour) for graduate programs.
2014-2017	• **Full Scholarship:** Iranian Ministry of Science, Research and Technology
2018	• **Ranked 1st** in achieving the highest thesis score among all digital electronics engineering graduate students, Class of 2014. (19.0/20.0)

Publications

Journal papers:

- **Saber Yaghoobi**, and Hamed Mojallali. "*Tuning of a PID controller using improved chaotic krill herd algorithm.*" Optik-International Journal for Light and Electron Optics, Elsevier, 127.11 (2016): 4803-4807. (Cited by 14)

- **Saber Yaghoobi**, and Hamed Mojallali. "*Modified Black Hole Algorithm with Genetic Operators.*" International Journal of Computational Intelligence Systems 9.4 (2016): 652-665. (Cited by 3)

Conference Papers:

- **Saber Yaghoobi**, Saeed Hemayat, and Hamed Mojallali. "*Image gray-level enhancement using Black Hole algorithm.*" Pattern Recognition and Image Analysis (IPRIA), 2015 2nd International Conference on. IEEE, (2015). *(selected for oral presentation)* (Cited by 12)

- Baharlou Sina, Hemayat Saeed, Saberkari Alireza, & **Yaghoobi Saber.** *"Fast and adaptive license plate recognition algorithm for Persian plates.*" Pattern Recognition and Image Analysis (IPRIA), 2015 2nd International Conference on. IEEE, (2015). *(selected for oral presentation)* (Cited by 5)

- **Saber Yaghoobi**, and Hamed Mojallali. "*Synchronization of Two Chaotic Colpitts Oscillators Using Neural PID Controller via Chaotic Modified Black Hole Algorithm.*" 4th National and 2nd International Conference on Applied Research in Electrical, Mechanical, and Mechatronics Engineering, (2017), Tehran. *(selected for oral presentation)*

- Saljoughi Pourya, Reza Ma'anijou, Ehsan Fouladi, Narges Majidi, **Saber Yaghoobi**, Houman Fallah, and Saeideh Zahedi. "*LegenDary 2012 Soccer 2D Simulation Team Description Paper.*"

  ➢ **Total Citations:** 34 (last updated January 2020)
  ➢ **h-index:** 3 (last updated January 2020)

Selected Projects

Summer 2019	• Optimization of neural networks to implement in automotive diagnostic devices. (In progress with Dr. Ali Jannesari from Iowa State University)
Fall 2018	• Novel fractional-order Modified Black Hole algorithm.
Summer – Fall 2018	• Developing a novel programming language called SFL (Special Function Language) to be used in car diagnostic systems, at Carman IT Co.
Summer 2017	• Detecting the optimal authentication method in multimodal biometric systems.
Winter 2017	• Chaos Control in Colpitts Oscillator using PSO Based Optimal PID controller.
Fall 2016 - Summer2017	• Motion anomaly detection in crowd scene videos.
Fall 2016	• MRI brain tumor segmentation using active contour model
Winter 2015	• Brain Tumor detection using meta-heuristic optimization algorithms.
Fall 2014	• Designing of an optimal PID controller for DC to DC converter using KH algorithm.
2011-2013	• Soccer 2D simulation and design. (Designed, implemented and debugger Soccer 2D robotic programs.)

Teaching Experience

Lecturer:

Fall 2016	• Computer Aided Design 1 (Matlab), Dept. of Electrical Engineering, University of Guilan.
2014-2016	• Computer Aided Design 2 (Simulink), Dept. of Electrical Engineering, University of Guilan, Fall 2014, Fall 2015, Spring 2016, Fall 2016.

Teacher Assistant:

2020 - Present	• Control I Lab. , Electrical & Biomedical Engineering Dept., University of Nevada, Reno: Spring 2020.
2013-2014	• Computer Aided Design 1 (Matlab), Dept. of Electrical Engineering, University of Guilan: Spring 2013, Fall 2013, Spring 2014.

Graduate university entrance exam:

Spring 2014	• Differential equations, Sib Electronics Institute, Rash, Iran.

Tutor:

2013-	• Private Tutor in "MATLAB Programming", "Electronic I & II", and "Electrical Circuits I", Rasht, Iran.

Academic Positions

January 2019 -	• Current Bioinformatics Journal: Reviewer
December 2018 -	• Trends in Genetics and Evolution, EnPress Publisher LLC.: Editorial Board Member
April 2019	• 2019 International Conference on Soft Computing and Machine Learning (Wuhan, China) : Reviewer and invited speaker

Industry Experience

Summer 2012	• Pars Khazar (Bosch's Iran branch), Apprentice, June-September 2012.

April 2018 -	• Carman IT Co (South Korean based manufacturer), Application team – R&D section.

Technical Skills

Hardware	• Oscilloscope, Signal Generator
Programming Language	• C, C++, C#, Verilog, Java, Python, VB, Julia
Matlab Programmer	• Image/Video Processing, Object Detection and Recognition, Metaheuristcs and Swarm Intelligence-based Optimization Algorithms, Fuzzy and ANFIS-based Systems, Artificial Neural Networks, Deep Learning, Object Tracking, Simulink.

Standard Tests Score

GRE
- Quantitative Reasoning: 159
- Verbal Reasoning: 141
- Analytical Writing: 3.0

Test Date: June 24th 2019

IELTS
(Academic)
- Listening: 8.0
- Reading: 7.5
- Speaking: 7.0
- Writing: 6.5
- Overall band: 7.5

Test Date: August 1st 2019

References

- **Dr. Hamed Mojallali (Ph.D.)**
  Associate Professor
  Faculty of Engineering, Department of Electrical Engineering, University of Guilan, Rasht, Iran. P.O. Box: 41635-3756. Tel: +98(13) 33690274-8.
  mojallali@guilan.ac.ir

- **Dr. Manoochehr Nahvi (Ph.D.)**
  Assistant Professor
  Faculty of Engineering, Department of Electrical Engineering, University of Guilan, Rasht, Iran. P.O. Box: 41635-3756.
  nahvi@guilan.ac.ir

- **Dr. Habib Ghorbaninejad (Ph.D.)**
  Assistant Professor
  Faculty of Engineering, Department of Electrical Engineering, University of Guilan, Rasht, Iran. P.O. Box: 41635-3756. Tel: +98(13) 33690270.
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- **Mr. Daniel Yeom**
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