Khashayar Neshat

Curriculum Vitae

Department of Mathematics and Statistics
University of Victoria
Victoria, BC, Canada
Website
khashayarn@uvic.ca
Date of Birth: March, 1993

Education

- **M.Sc.: Mathematics and Statistics, Applied Mathematics** 2021 – Present
  Institute: University of Victoria Victoria, Canada
  Supervisors: Dr. David Goluskin
  .
- **M.Sc.: Electrical Engineering, Control Systems** 2016 - 2019
  Institute: Sharif University of Technology Tehran, Iran
  Thesis: "Condition on Fractional-Order LTI Systems to be Negative Imaginary"
  Supervisors: Dr. Saleh Tavazoei
  Summary: The analytic conditions that linear time invariant fractional order system being positive real and also being negative imaginary are derived. Furthermore, the upper band for phase of Oustaloup approximation frequency response is obtained and its usage in deriving intended conditions have been explained.

- **B.Sc.: Electrical Engineering, Electronics** 2011 - 2016
  Institute: Islamic Azad University Tehran Central Branch Tehran, Iran
  Thesis: "Traffic Control Device"
  Supervisor: Dr. Behzad Jalaei
  Summary: A traffic control device has been made by means of ATmega64 Microcontroller and RFID module. The software programing and the hardware programing has been written by means of CV AVR whose language is C and by means of Visual Studio whose language is basic, respectively.

- **Pre University Diploma: Mathematics and Physics** 2007 - 2011
  Institute: Allameh Tabatabae High School Tehran, Iran

Research Interests

- Linear Matrix Inequality (LMI) Methods
- Convex Optimization and Sum-of-square Optimization
- Robust and Optimal Control
- Non-linear Systems
- Fractional-Order Systems

Publication

- Kh. Neshat, M.S. Tavazoei, "Algebraic Bound for the Phase-Frequency Response of the CRONE Approximation of Fractional Differentiators and Its Applications in Control Systems Analysis"
  Status: Published in *Journal of Vibration and Control,* Feb. 2021.

- Kh. Neshat, M.S. Tavazoei, "Algebraic Stability Analysis and Stabilization by Proportional Controllers: Critical Inflection Point in Phase"
  Status: Published in *Iranian Journal of Electrical and Computer Engineering*, vol. 4—a, No. 16, Winter 2019. (Domestic Journal)

Awards & Honors

- Ranked 29th among more than 20,000 participants in the **Electrical Engineering** Nationwide University Entrance Exam for M.Sc. degree, 2016.

Tutorial Assistant Experience

- **Introduction to Calculus** Fall 2021
  Under Supervision of Dr. Junling Ma University of Victoria

- **Linear Algebra** Fall 2019
  Under Supervision of Dr. Saleh Tavazoei Sharif University of Technology

Selected Projects

- **Multivariable Controller Design** Spring 2017
  Under Supervision of Dr. Amin Nobakhti Sharif University of Technology
  Developed a multivariable controller for an air conditioning system.
- **Sparse Controller Design** Spring 2017
  Under Supervision of Dr. Maryam Babazadeh Sharif University of Technology
  Derived an SDP to design a sparse centralized state feedback controller to minimize the $H2$ norm of an arbitrary non-linear system.
- **Adaptive Control Design** Spring 2017
  Under Supervision of Dr. Saleh Tavazoei Sharif University of Technology
  Design adaptive fault-tolerant PI tracking control with guaranteed transient and steady-state performance
- **Non-linear Controller Design** Fall 2016
  Under Supervision of Dr. Alireza Farhadi Sharif University of Technology
  Simulate sliding mode design controller for position and speed control of flight simulator servo system with large friction.

Work Experience

- **Teaching** 2019 - 2021
  Binesh Institute of Higher Education, Mahan Institute Of Higher Education
  Teaching **Linear Control** specifically for participations of **Electrical Engineering** Nationwide University Entrance Exam for M.Sc. degree.
- **Consultant** 2016 - 2017
  Binesh Institute of Higher Education
  Working as a major educational consultant to students who are preparing for **Electrical Engineering** Nationwide University Entrance Exam for M.Sc. degree, and also working as an exams corrector and as a questions designer assistant.

Computer Skills

- **Programming Languages**
  - MATLAB, CVX, YALMIP
  - C, C++
  - AVR, ARM

Languages

- **Persian:** Native
- **English:** Fluent
  IELTS Exam: *7 (Reading:6.5, Listening:8, Writing:6.5, Speaking:6)*

Extracurricular Activities & Hobbies

- High Diving
- Acro yoga
- Playing Chess
- Gymnastic and Calisthenics
- Camping

References

- Dr. Saleh Tavazoei
  Supervisor
  Associate Professor
  Sharif University of Technology
  Tell: +98 21 6616 4386
  Email: tavazoei@sharif.edu
- Dr. David Goluskin
  Supervisor
  Assistant Professor
  University of Victoria
  Tell: +1 250 721 7450
  Email: goluskin@uvic.ca
- Dr. Nasser Sadati
  Advisor Professor of Optimal Control
  Professor
  Sharif University of Technology
  Tell: +98 21 6616 4365
  Email: Sadati@sina.sharif.edu