

## Dr. Sulaymon Eshkabilov, Ph.D.

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North Dakota State University

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### Degrees

Ph.D. in Mechanical/Control Engineering, Research Institute, Academy of Sciences of Uzbekistan

MSc. in Mechanical Engineering, Rochester Institute of Technology, USA

ME. in Mechanical Engineering, Tashkent Automobile and Road Institute

### Responsibilities

- Research 20%
- Teaching 80%

### Research Interests

- Machine Learning Applications in Data Analysis and Prediction Model Development (Additive Manufacturing Process Parameter Control)
- MEMS Design and development for data acquisition system (design data loggers)
- Machine Vision and Image Processing Applications (nutrient content and concentration in plants, meat products, and algae)
- Adaptive Control Applications of Dynamic Systems (variable rate spreader, digital hydraulic cylinder actuator) and Mechanical Vibrations

### Professional Experiences

**Assistant Professor**, Ag & Biosystems Engineering Department North Dakota State University, Fargo, USA (2021 – now): Teaching 80%; Research 20%. Machine Learning Applications in data processing, Image processing applications, Adaptive Control Applications, Applications of Digital Hydraulic Cylinders, Development of MEMS data loggers

**Assistant Professor**, Department of Engineering, University of Jamestown, USA (Aug. 2020 – Dec. 2021): Teaching 100%.

**Visiting Scientist/Visiting Professor**, ABEN North Dakota State University, USA (Aug. 2018 – Aug. 2020): Research 80%; Teaching 20%. Adaptive control applications for agricultural machines, image processing applications for meat products and plants.

**Faculty** (part-time) in Mechatronics Program, Tashkent-Turin Polytechnic University (2015 - 2018): Teaching 60%; Advising 40%.

**Associate Professor and Head of Unit**, Dynamics & Control Lab, Tashkent Automobile and Road Institute - TARI (2006-2018): Research 80%; Teaching 20%

**Assoc. Professor** in Ground Vehicle Engineering Department, TARI (2006): Research 40%; Teaching 60%

**Senior Lecturer** in IT and Computer Modeling Department, TARI (2001/2005): Teaching 100%.

**JESH Scholar**, Austrian Academy of Sciences Johannes Kepler University, Linz, Austria (Feb 2017– Aug 2017): Research 100%.

**Visiting Professor**, Mechanical Engineering Department, Ohio University, Athens, USA (2010-2011): Research 80%; Teaching 20%.

### **Project Expertise**

- **External Academic Expert** in the European Commission – Brussels, Belgium to evaluate project proposals (2008 – 2022).
- **External Academic Expert** to assess on-going and completed EU funded projects of Erasmus Mundus Program in universities of Europe and Asia (2011-2017).
- **Coordinator/PI** of five EU funded institutional projects implemented in Uzbekistan (2003 – 2017).

### **Journal Reviewer**

- **Reviewer** of *MDPI Journals: Applied Sciences, Machines, Life, Aerospace, Energies* (2020 – now)
- **Reviewer** of *Journal of Computers and Electronics in Agriculture* by *ELSEVIER* (2017 – now)
- **Reviewer** of *Communications – Scientifics Letters* of the University of Zilina (2021 – now)

### **Peer Review Groups**

- DSMIE -Annual International Conference on Design, Simulation, Manufacturing: The Innovation Exchange, Sumy State University, Ukraine, (2018 – 2021).

### **Professional Service for Organizations**

- Fulbright Foundation: Academic Panel member of Council for International Exchange of Scholars at the US Embassy in Tashkent (2013-2015).
- European Commission – EACEA: External Academic Expert of academic projects funded by the European Commission, Brussels, Belgium (2014-present).
- External Academic Expert of academic projects funded by the European Commission, Brussels, Belgium (2009-2012).
- MathWorks: MathWorks Community Contributor with MATLAB/Simulink scripts and models (2011-present).

### **Professional Training/Participation:**

- ASEE Workshop: “HyFlex and Efficient Teaching Methods” hosted by prof. Barb Oakley, USA (2021)
- Advanced Spectral Processing online workshop by Eigenvector Research Inc. USA (2020)
- International Symposium - Fuzzy Logic & Applications, Johannes Kepler University, Linz, Austria (2014)

### **Professional Membership:**

American Society of Mechanical Engineers (ASME) member (2021-Now)

American Society for Engineering Education (ASEE) member (2020-Now)

### **Awards and Recognition:**

- Best Academic Expert in assessing academic project proposals of the EACEA –European Commission, Brussels, Belgium (2018/19)
- Joint Excellence in Science and Humanities Scholarship winner from Austrian Academy of Sciences, Austria (2016)
- Best project coordination of EU funded projects on the departmental level amongst universities of 35 countries, Brussels, Belgium (2011).

### **Courses Taught and Developed**

#### **Graduate Courses**

- Machinery Design and Analysis in NDSU, 2022
- Instrumentation and Measurement in NDSU, 2022
- Advanced MATLAB/Simulink Modelling in NDSU, 2019
- Numerical Analysis and Mathematical Modeling II in TARI, 2009-2017
- System Identification and Control Technologies (Part 2) in TTPU, 2015-2016
- Feedback Control (Part 2): Theory and Application in TTPU, 2015 – 2016
- MATLAB applications for Engineering Problem Solving in Ohio University, 2011
- Engineering Vibrations in TARI, 2008-2010
- Automotive Control Applications in TARI 2008 – 2010
- Advanced Computer Modeling Techniques in TARI, 2008-2017
- Experimentation and Testing in TARI, 2013-2015
- Analog and Digital Measurement Devices, 2015-2018
- Design for Manufacturing and Assembly in TARI, 2008-2010.

#### **Undergraduate Courses:**

- Numerical Methods in UJ, 2020-2021
- Statistics and Linear Methods in UJ, 2020 – 2021
- Introduction to Finite Element Modelling in UJ, 2020 - 2021
- Dynamics in UJ, 2021 – 2021
- Instrumentation and Measurement in UJ, 2021 – 2021
- Introduction to Engineering Computing in UJ, 2021 – 2021
- Ordinary Differential Equations in UJ, 2021 - 2021
- Modeling of Engineering Systems in Mechanical Engineering, in NDSU, 2018-2019
- Mechatronics Essentials in TARI – 2016-2017
- System Identification and Control Technologies (Part 1) in TTPU, 2015-2016
- Feedback Control (Part 1): Theory and Applications in TTPU, 2015 – 2016
- Machine Design, in TARI, 2005-2010
- CAD/CAE and Finite Element Modelling Essentials in TARI, 2003 – 2010
- Numerical Analysis and Mathematical Modeling I in TARI, 2002-2006.