M. A. Khanesar, Ph.D., MIET, SMIEEE, MASME

Programming Languages and Robotics

Programming: MATLAB, QBasic, C++, Python, OpenCV, Fortran, R
Industrial Softwares: Spatial Analyzer, Gazebo, ROS, WinCC, SIMATIC, Protel, Keil, RoboDK, CoppeliaSim (V-REP), Fusion 360, Picoscope software
HRI: Mediapipe, PSMove sensor
Database: MongoDB
Typesetting: LaTeX, Microsoft Office, Overleaf
Web Programming: HTML, JavaScript
Embedded Systems: AVR, ARM, Arduino, Raspberry PI
OS: Linux, Windows
Robotics: UR5, Baxter, and Sawyer robots, Zaber linear move stage, Prusa and 3D printer, XSens IMU, Picoscope, OnRobotics force and torque sensor
Metrology: Laser tracker, laser interferometer

As Researchers We Shape The Tomorrow.

Experience

2018-Now **The University of Nottingham, United Kingdom** Nottingham, United Kingdom
Research Fellow

2017-2018 **Technical University of Denmark** Lyngby, Denmark
Postdoctoral Researcher

2012-2017 **Semnan University** Semnan, Iran
Lecturer
I was responsible to deliver lectures and supervise master students.

Education

2007–2012 **Ph.D.** in Control Engineering(GPA: 4.94/5.00.) K. N. Toosi University of Tech., Tehran, Iran

2005–2007 **M.Sc.** in Control Engineering(GPA: 4.58/5.00.) K. N. Toosi University of Tech., Tehran, Iran

2000–2005 **B.Sc.** in Control Engineering(GPA: 4.18/5.00.) K. N. Toosi University of Tech., Tehran, Iran

Certificate

2024 **Assessing Suitability for Robotics in Manufacturing: A Case Study** ASME (The American Society of Mechanical Engineers)

2024 **Introduction to ASME Standards & Certification** ASME (The American Society of Mechanical Engineers)

2024 **Drawing Interpretation (GD&T)** ASME (The American Society of Mechanical Engineers)

2024 **Principles of coordinate metrology** University of Coventry

2024 **Introduction to Finite Element Analysis** ASME (The American Society of Mechanical Engineers)

2023 **Level 5 Diploma in Training and Development** UK Professional Development Academy

2023 **Level 4 Diploma in Education and Training** UK Professional Development Academy

2020 **Preparing to Teach in Higher Education Certificate** The University of Nottingham

Grants

Submitted **BioKnic Skin** The University of Nottingham, UK

I am the Researcher co-lead for Bioinspired Knitted Skin, submitted to OPP299: EPSRC standard research grant, November 2023: responsive mode, Lead organisation: University of the Arts London (application reference: APP24791)

2023-Now **Robodome imaging for high performance manufactured aerostructures** The University of Nottingham, UK

Worked as a research fellow in this grant. EPSRC Reference: EP/X024067/1 EPSRC link

2021-2023 **High-accuracy robotic system for precise object manipulation (HARISOM)** The University of Nottingham, UK
Worked as a research fellow in this grant. EPSRC Reference: EP/T023805/1 EPSRC link

2018-Now **New Industrial Systems: Chattyfactories** The University of Nottingham, UK
Worked as a research fellow in this grant. EPSRC Reference: EP/R021031/1 EPSRC link

2017-2018 **Fast algorithm for industrial dynamic weighing system** Technical University of Denmark, DE
In collaboration with Cabinplant company (http://www.cabinplant.com) as a part of my postdoc in Technical University of Denmark. The aim of the project was to develop a fast dynamic weighing system where we utilized stochastic differential equations as well as Kalman filtering to reduce the speed of weight estimation.

Student supervision

2021-now **PhD students** University of Nottingham
During last three years in the university of Nottingham, I have been supervising 2 PhD students.

Summer Internships

2015 **HMI maintenance** Pegah dairy company
Pegah dairy company, Tehran, Iran, maintenance of the HMI system of cream cheese process.

2005 **PCB design** Microprocessor laboratory K. N. Toosi University of Tech., Tehran, Iran
Design of evaluation board for 8051 micro-controller.

2000 **IT Services** IAU, South Tehran branch
Computer center of Islamic Azad Uiversity, South Tehran Branch.

News feed

2024 **The winners of the 2023 Collaborate To Innovate Awards were unveiled at the winners party at One Great George Street in central London on Thursday 29th February 2024.**
https://awards.theengineer.co.uk/winners-2023 (visited 20/03/24)

2024 **University of Nottingham collaboration scoops Manufacturing Technology award**
https://www.nottingham.ac.uk/news/university-of-nottingham-collaboration-scoops-manufacturing-technology-award (visited 20/03/24)

Fellowships and Grants

2023 **Conference, Travel and Training Fund (CTTF)** University of Nottingham, Nottingham, UK
300GBP to participate in IEEE International Conference On Mechatronics - Loughborough, UK, March 15-17, 2023.

2017 **Postdoctoral research fellow** Technical University of Denmark
Postdoctoral research fellow in Stochastic Control and Identification 320,000 DKK

2016 **Yearly research grant** Semnan University, Semnan, Iran
1900$ based on 20.98 research points obtained (Semnan University, Semnan, Iran.)

2015 **Yearly research grant** Semnan University, Semnan, Iran
1600$ based on 22.6 research points obtained (Semnan University, Semnan, Iran.)

2014 **Yearly research grant** Semnan University, Semnan, Iran
1550$ based on 23.4 research points obtained (granted by Semnan University, Semnan, Iran.)

2011 **Travel grant for SSCI 2011** K. N. Toosi University of Tech, Tehran, Iran
Travel grant for participation in IEEE Symposium Series on Computational Intelligence - SSCI 2011, Paris, France, April, 2011, Amount: 1000$

2010 **Travel grant for CIMSA 2010** K. N. Toosi University of Tech, Tehran, Iran
Travel grant for participation in 2010 IEEE International Conference on Computational Intelligence for Measurement Systems and Applications, September, 2010, Taranto, Italy, (granted by K. N. Toosi University of Tech, Tehran, Iran.) Amount: 1000$

2010 **Research grant in Bogazici University** Ministry of science and technology of Iran
Research grant for visiting PhD studentship in Bogazici University, Istanbul, Turkey (9 months). (granted by the ministry of science and technology of Iran.) Amount: 5600 Euros

2008 **Travel grant for ICICIC2008** K. N. Toosi University of Tech., Tehran, Iran
Travel grant for participation in 2008 3rd International Conference on Innovative Computing Information and Control, June, 2007, Dalian, China, (granted by K. N. Toosi University of Tech, Tehran, Iran.) Amount: 1000$

2007 **Travel grant for ICMA2007** K. N. Toosi University of Tech, Tehran, Iran
participation in international conference on Mechatronics and Automation, Aug. 2007, Harbin, China, (granted by K. N. Toosi University of Tech, Tehran, Iran.) Amount: 1000$

Teaching Activity in UK

2019 **Leading teaching assistant for machine learning course** The University of Nottingham
Working at computer science department, University of Nottingham, during which I delivered laboratory sessions as well as two lecture sessions on Bayesian learning and reinforcement learning(30 hours)

2020 **Teaching and Learning Development Program** The University of Nottingham
Enrolled in teaching and learning development program

Teaching

2012-2017 **Lecturer for postgraduate courses** Semnan University
I was teaching postgraduate courses such as multivariable control systems, nonlinear control systems, computer interface, system identification

2012-2017 **Lecturer for undergraduate courses** Semnan University
I was teaching undergraduate courses such as linear control systems, instrumentation, basic circuit theory.

Editorial Activity

2023 **Associate Editor of Complex and Intelligent Systems** Springer-Nature
IF being equal to 5.8

2023 **Special Issue "Robust Control of Electric Drives and Mechatronics Systems"** Energies
IF being equal to 3.252

2021 **Special Issue "Sliding Mode Control in Electromechanical Systems"** Energies
IF being equal to 3.252

2020 **Associate Editor of Energies** MDPI
IF being equal to 3.252

2018 **Editor of Complexity journal** John Wiley and Sons and Hindawi
This journal is published in collaboration between John Wiley and Sons and Hindawi with its IF being equal to 2.121

Membership to Scientific Committees

2016-Now **Institute of Electrical and Electronics Engineers (IEEE) Senior member**

2023-Now **The American Society of Mechanical Engineers (ASME) member**

2018-Now **IEEE Robotics and Automation Society member**

2018-Now **IEEE Computational intelligence Society member**

2022-Now **INSTICC, the Institute for Systems and Technologies of Information, Control and Communication**

2020-Now **Institution of Engineering and Technology (IET) member**

2020-Now **NAFIPS North American Fuzzy Information Processing Society**

2007-2015 **Institute of Electrical and Electronics Engineers (IEEE) Member**

Committee Work

Jan. 2025 **January 2025 Senior Member Application Virtual Review Panel**
We reviewed Senior member applications from all around the world and decided based on the criteria which of them are eligible for elevation to IEEE senior membership level.

Honors

2024 **2nd best paper award within research group**
I won a 25 GBP Amazon voucher for my paper which was selected as the 2nd best paper within material, mechanical, and manufacturing research group, University of Nottingham.

2024 **Annual collaborate to innovate award**
I am a recipient of annual collaborate to innovate award with the Midlands Centre for Data-Driven Metrology (MCDDM).

2012 **Top ten paper award**
Top ten paper award at 21^{st} IEEE International Symposium on Industrial Electronics, Hangzhou, China.

2008 **2^{nd} rank**
second best GPA among all university Control Engineering students (Among 32 students).

2005 **7^{th} rank**
the 7^{th} best GPA among all university Control Engineering students (Among 150 students).

2000 **Top 0.5% Nationwide entrance exam**
Top 0.5% Nationwide entrance exam of Iranian universities, very competitive with nearly 350,000 participants.

1992 **5^{th} rank**
scientific competitions of elementary schools in Isfahan province.

1990 **2^{nd} rank**
scientific competitions of elementary schools in region 4 (of total 4 regions) of Isfahan city.

Presentations

- Showcasing HARISOM project on UR5 at MCDDM open day at the university of Nottingham, 14 May 2024
- Presenting RoboDome project at MCDDM open day at the university of Nottingham, 14 May 2024
- Presenting at AI+Enginnering meeting at the University of Nottingham, 24 April 2024.
- Presenting my paper at IEEE International Conference On Mechatronics (ICM 2023) - Loughborough, UK, March 15-17, 2023.
- Presenting my paper at 19th International Conference on Informatics in Control, Automation and Robotics (ICINCO 2022), Lisbon, Portugal (online presentation) 14-16 July 2022
- Presenting my paper at 9th International Conference on Soft Computing for Problem Solving - SocProS 2019, Liverpool, United Kingdom, Sep. 02-04, 2019
- Presenting my paper at 2019 25th International Conference on Automation and Computing (ICAC), Lancaster, United Kingdom, 5-7 Sept. 2019
- Presenting my paper at 2019 IEEE International Conference on Systems, Man and Cybernetics (SMC), Bari, Italy, 6-9 Oct. 2019
- Presenting my paper at 2017 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE), Naples, Italy, 9-12 July 2017
- Presenting my paper at 2015 2015 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE), Istanbul, Turkey, 2-5 Aug. 2015
- Presenting my paper at 2014 International Conference on Mechatronics and Control (ICMC), Jinzhou, China, 03 September 2014
- Presenting my paper at 2011 IEEE Symposium on Advances in Type-2 Fuzzy Logic Systems (T2FUZZ), Paris, France, 11-15 April 2011
- Presenting my paper at 2010 IEEE International Conference on Computational Intelligence for Measurement Systems and Applications, Taranto, Italy, 6-8 Sept. 2010

- Poster presentation of my paper at 2010 IEEE International Conference on Systems, Man and Cybernetics, Istanbul, Turkey, 10-13 Oct. 2010
- Presenting my paper at 2008 3rd International Conference on Innovative Computing Information and Control, Qinhuangdao, China, 18-20 June 2008
- Presenting my paper at 2007 International Conference on Mechatronics and Automation, Harbin China, 5-8 Aug. 2007

Organization Activities

- Member of program committee of 27TH European Conference on Artificial Intelligence, 19-24 OCTOBER 2024, Santiago de Compostela
- Member of organizing committee for AI + Engineering workshop and crash course, university of Nottingham, April 2024
- Member of technical program committee, 9th International Symposyum on Security in computing and Communication (SSCC23), Bengaluru, Dec. 18-20, 2023
- Member of organizing committee for AI + Engineering workshop and crash course, university of Nottingham, April 2023
- Facilitator of connected everything SPB summer school, University of Nottingham, Online, 2020
- Member of program committee of International Conference on Internet of Things and Intelligent Applications 27-29 November, 2020, Zhenjiang, China
- Member of program committee of IEEE SMC 2020, IEEE International Conference on Systems, Man, and Cybernetics, Toronto, Canada, Oct 11-14, 2020
- Member of program committee of IEEE International Conference on Systems, Man, and Cybernetics, 2017, October 5-8, 2017, Banff Center, Banff, Canada
- Member of Technical Program Committee of International Conference on Big Data Analytics and Computational Intelligence, Chirala Engineering College, Chirala, Andhra Pradesh, India, 23-25 March 2017
- Member of Technical Program Committee of 2016 International Conference on Applied Mechanics, Mechanical and Materials Engineering, 2016, Xiamen, China
- Member of Technical Program Committee of 3rd International Conference on Systems and Informatics, 2016, Shanghai, China
- Member of Technical Program Committee of 2nd International Conference on Contemporary Computing and Informatics, 2016, Amity University, Noida, India
- Member of Track Co-Chairs of 6th International Conference on Power Engineering, Energy and Electrical Drives 10th International Conference on Compatibility and Power Electronics, 2016, Bydgoszcz, Poland
- Member of program committee of IEEE International Conference on Systems, Man, and Cybernetics, 2016, Budapest, Hungary
- Member of program committee of 2nd EAI International Conference on Industrial Networks and Intelligent Systems, 2016, Leicester, UK
- Member of technical program committee of International Conference on Applied and Theoretical Computing and Communication Technology, 2015, Davangere, Karnataka, India
- Member of technical program committee of IEEE International Conference on Fuzzy Systems, 2015, Istanbul, Turkey
- Member of program committee of 1st International Conference on Industrial Networks and Intelligent Systems, 2015, Tokyo, Japan
- Member of program committee of International Conference on Contemporary Computing and Informatics, 2014, Mysore, India
- Member of program committee of IEEE SMC conference, 2014, San Diego, CA, USA.

- Member of program committee of IEEE SMC conference, 2013, Manchester, UK.
- Co-organizer of special session on Type-2 Fuzzy Logic Systems: Theory, Design and Applications, Asian Control Conference, 2013, Istanbul, Turkey
- Publication co-chair of IEEE SMC conference, 2010, Istanbul, Turkey.

Postgraduate Courses Attended

- Making the Most of Language: Written and Verbal Communications
- Lecturing for Learning
- Intro to Teaching Recognition and Designing Learning
- Making an impact: Practical logistics for outreach and public engagement projects
- Engaging a lay audience: Presenting and Public Speaking

Publications

Publications in summary

- 2 book.
- 1 book chapter.
- 2193 total citations; h-index of 25;

Journal papers

- Zhang, X., Yang, C., Song, Z., **Khanesar, M.A.**, Branson, D.T., Dai, J.S. and Kang, R., 2024. An adaptive lumped-mass dynamic model and its control application for continuum robots. Mechanism and Machine Theory, 201, p.105736.
- Khanesar, M.A., Yan, M., Syam, W.P., Piano, S., Leach, R.K. and Branson, D.T., 2023. A Neural Network Separation Approach for the Inclusion of Static Friction in Nonlinear Static Models of Industrial Robots. IEEE/ASME Transactions on Mechatronics. Impact Factor: 5.119. Citations: 10.
- **Khanesar, M.A.**, Yan, M., Karaca, A., Isa, M., Piano, S. and Branson, D., 2024. Interval Type-2 Fuzzy Logic Control of Linear Stages in Feedback-Error-Learning Structure Using Laser Interferometer. Energies, 17(14), p.3434.
- **Khanesar, M.A.**, Yan, M., Syam, W.P., Piano, S., Leach, R.K. and Branson, D.T., 2023. A Neural Network Separation Approach for the Inclusion of Static Friction in Nonlinear Static Models of Industrial Robots. IEEE/ASME Transactions on Mechatronics.
- **Khanesar, M.A.**, Yan, M., Isa, M., Piano, S., Ayoubi, M.A. and Branson, D.T., 2023. Machines, 11(4), p.497. https://doi.org/10.3390/machines11040497
- **Khanesar, M.A.**, Yan, M., Isa, M., Piano, S., Ayoubi, M.A. and Branson, D.T., 2023. Enhancing Positional Accuracy of the XY-Linear Stage Using Laser Tracker Feedback and IT2FLS. Machines, 11(4), p.497.
- **Khanesar, M.A.**; Yan, M.; Isa, M.; Piano, S.; Branson, D.T. Precision Denavit–Hartenberg Parameter Calibration for Industrial Robots Using a Laser Tracker System and Intelligent Optimization Approaches. Sensors 2023, 23, 5368. https://doi.org/10.3390/s23125368
- Khaniki, M.A., Manthouri, M. and **Khanesar, M.A.**, 2023. Adaptive non-singular fast terminal sliding mode control and synchronization of a chaotic system via interval type-2 fuzzy inference system with proportionate controller. Iranian Journal of Fuzzy Systems.
- **M. A. Khanesar** and D. Branson, Robust Sliding Mode Fuzzy Control of Industrial Robots Using an Extended Kalman Filter Inverse Kinematic Solver. Energies 2022, 15, 1876.
- S. Hassan, **M. A. Khanesar**, N. Kalaf Hussein, S. Brahim Belhaouari, U. Amjad, and W. Khan Mashwani, "Optimization of Interval Type-2 Fuzzy Logic System Using Grasshopper Optimization Algorithm," Computers, Materials and Continua, vol. 71, no. 2, 2021.

- M. Lakoju, N. Ajienka, **M. A. Khanesar**, P. Burnap, and D. T. Branson, "Unsupervised learning for product use activity recognition: an exploratory study of a 'Chatty Device,'" Sensors, vol. 21, no. 15, p. 4991, 2021.
- **M. A. Khanesar**, J. Lu, T. Smith, and D. Branson, "Electrical load prediction using interval type-2 Atanassov intuitionist fuzzy system: gravitational search algorithm tuning approach," Energies, vol. 14, no. 12, p. 3591, 2021.
- **M. A. Khanesar** and D. T. Branson, "Prediction interval identification using interval type-2 fuzzy logic systems: Lake water level prediction using remote sensing data," IEEE Sensors Journal, vol. 21, no. 12, pp. 13815–13827, 2021.
- **M. Ahmadieh Khanesar**, R. Bansal, G. Martinez-Arellano, and D. T. Branson, "XOR Binary Gravitational Search Algorithm with Repository: Industry 4.0 Applications," Applied Sciences, vol. 10, no. 18, p. 6451, 2020.
- A. Jalalian Khakshour and **M. Ahmadieh Khanesar**, "Model reference fractional order control using type-2 fuzzy neural networks structure," Neurocomputing, vol. 193, no. C, pp. 268–279, 2016.
- B. E. F. Tafti, M. Teshnehlab, and **M. A. Khanesar**, "Recurrent interval type-2 fuzzy wavelet neural network with stable learning algorithm: application to model-based predictive control," International Journal of Fuzzy Systems, vol. 22, no. 2, pp. 351–367, 2020.
- M. Esbati, **M. Ahmadieh Khanesar**, and A. Shahzadi, "A comparison between optimization algorithms for the tuning of fuzzy based controlled communication for networked controlled systems," TABRIZ JOURNAL OF ELECTRICAL ENGINEERING, vol. 48, no. 4, pp. 1425–1436, 2019.
- M. Hallaji, **M. Ahmadieh Khanesar**, A. Dideban, and A. Vahidyan Kamyad, "Optimal control of non-smooth fractional-order systems based on extended Caputo derivative," Nonlinear Dynamics, vol. 96, no. 1, pp. 57–74, 2019.
- M. Hallaji, A. Dideban, **M. A. Khanesar**, and others, "Optimal synchronization of non-smooth fractional order chaotic systems with uncertainty based on extension of a numerical approach in fractional optimal control problems," Chaos, Solitons and Fractals, vol. 115, pp. 325–340, 2018.
- M. Danaie, E. Ranjbar, and **M. A. Khanesar**, "MOSCAP compensation of three-stage operational amplifiers: Sensitivity and robustness, modeling and analysis," Integration, vol. 62, pp. 34–49, 2018.
- E. Kayacan, A. Sarabakha, S. Coupland, R. John, and **M. A. Khanesar**, "Type-2 fuzzy elliptic membership functions for modeling uncertainty," Engineering Applications of Artificial Intelligence, vol. 70, pp. 170–183, 2018.
- E. Camci, D. R. Kripalani, L. Ma, E. Kayacan, and **M. A. Khanesar**, "An aerial robot for rice farm quality inspection with type-2 fuzzy neural networks tuned by particle swarm optimization-sliding mode control hybrid algorithm," Swarm and evolutionary computation, vol. 41, pp. 1–8, 2018.
- A. Z. Zangeneh, M. Teshnehlab, and **M. A. Khanesar**, "Proposing interval activation functions in radial Basis function neural network to predict nonlinear dynamic systems," Journal of Control, vol. 9, no. 4, 2016.
- M. Esbati, **M. A. Khanesar**, and A. Shahzadi, "Improving the quality of service in network-based control systems," Transactions of the Institute of Measurement and Control, vol. 40, no. 8, pp. 2694–2702, 2018.
- A. Sarabakha, N. Imanberdiyev, E. Kayacan, **M. A. Khanesar**, and H. Hagras, "Novel Levenberg–Marquardt based learning algorithm for unmanned aerial vehicles," Information Sciences, vol. 417, pp. 361–380, 2017.
- M. Esbati, **M. Ahmadieh Khanesar**, and A. Shahzadi, "Modeling level change in Lake Urmia using hybrid artificial intelligence approaches," Theoretical and Applied Climatology, vol. 133, no. 1, pp. 447–458, 2018.
- E. Kayacan, **M. A. Khanesar**, J. Rubio-Hervas, and M. Reyhanoglu, "Learning control of fixed-wing unmanned aerial vehicles using fuzzy neural networks," International Journal of Aerospace

Engineering, vol. 2017, 2017.

- N. Shirkhani, **M. A. Khanesar**, and M. Teshnehlab, "Indirect model reference fuzzy control of SISO fractional order nonlinear chaotic systems," Procedia Computer Science, vol. 102, pp. 309–316, 2016.
- **M. A. Khanesar**, A. J. Khakshour, O. Kaynak, and H. Gao, "Improving the speed of center of sets type reduction in interval type-2 fuzzy systems by eliminating the need for sorting," IEEE Transactions on Fuzzy Systems, vol. 25, no. 5, pp. 1193–1206, 2016.
- S. Hassan, **M. A. Khanesar**, J. Jaafar, and A. Khosravi, "Optimal parameters of an ELM-based interval type 2 fuzzy logic system: a hybrid learning algorithm," Neural Computing and Applications, vol. 29, no. 4, pp. 1001–1014, 2018.
- A. Mahmoudian, M. Niasati, and **M. A. Khanesar**, "Multi objective optimal allocation of fault current limiters in power system," International Journal of Electrical Power and Energy Systems, vol. 85, pp. 1–11, 2017.
- **M. A. Khanesar**, Y. Oniz, O. Kaynak, and H. Gao, "Direct model reference adaptive fuzzy control of networked SISO nonlinear systems," IEEE/ASME Transactions on Mechatronics, vol. 21, no. 1, pp. 205–213, 2015.
- Y. Sharafi, **M. A. Khanesar**, and M. Teshnehlab, "COOA: Competitive optimization algorithm," Swarm and Evolutionary Computation, vol. 30, pp. 39–63, 2016.
- S. Hassan, **M. A. Khanesar**, E. Kayacan, J. Jaafar, and A. Khosravi, "Optimal design of adaptive type-2 neuro-fuzzy systems: A review," Applied Soft Computing, vol. 44, pp. 134–143, 2016.
- S. Hassan, A. Khosravi, J. Jaafar, and **M. A. Khanesar**, "A systematic design of interval type-2 fuzzy logic system using extreme learning machine for electricity load demand forecasting," International Journal of Electrical Power and Energy Systems, vol. 82, pp. 1–10, 2016.
- A. J. Khakshour and **M. A. Khanesar**, "Model reference fractional order control using type-2 fuzzy neural networks structure: Implementation on a 2-DOF helicopter," Neurocomputing, vol. 193, pp. 268–279, 2016.
- **M. A. Khanesar**, O. Kaynak, S. Yin, and H. Gao, "Adaptive Indirect Fuzzy Sliding Mode Controller for Networked Control Systems Subject to Time-Varying Network-Induced Time Delay," Fuzzy Systems, IEEE Transactions on, vol. 23, no. 1, pp. 205–214.
- E. Kayacan, E. Kayacan, and **M. A. Khanesar**, "Identification of Nonlinear Dynamic Systems Using Type-2 Fuzzy Neural Networks—A Novel Learning Algorithm and a Comparative Study," Industrial Electronics, IEEE Transactions on, vol. 62, no. 3, pp. 1716–1724.
- S. Masumpoor, **M. A. Khanesar**, and others, "Adaptive sliding-mode type-2 neuro-fuzzy control of an induction motor," Expert Systems with Applications, vol. 42, no. 19, pp. 6635–6647, 2015.
- Z. Fallah, **M. A. Khanesar**, and M. Teshnehlab, "Design of a hierarchical fuzzy model predictive controller," International Journal of Engineering and Technology, vol. 4, no. 2, pp. 342–349, 2015.
- **M. A. Khanesar**, E. Kayacan, M. Reyhanoglu, and O. Kaynak, "Feedback error learning control of magnetic satellites using type-2 fuzzy neural networks with elliptic membership functions," IEEE transactions on cybernetics, vol. 45, no. 4, pp. 858–868, 2015.
- **M. A. Khanesar**, M. Teshnehlab, and O. Kaynak, "Observer-based indirect model reference fuzzy control system with application to control of chaotic systems," Journal of the Franklin Institute, vol. 350, no. 3, pp. 419–436, 2012.
- **M. A. Khanesar**, M. Teshnehlab, and O. Kaynak, "Model reference fuzzy control of nonlinear dynamical systems using an optimal observer," Acta Polytechnica Hungarica, vol. 8, no. 4, pp. 35–54, 2011.
- **M. A. Khanesar**, M. Teshnehlab, and O. Kaynak, "Control and synchronization of chaotic systems using a novel indirect model reference fuzzy controller," Soft Computing, vol. 16, no. 7, pp. 1253–1265, 2012.

- **M. A. Khanesar**, E. Kayacan, M. Teshnehlab, and O. Kaynak, "Analysis of the noise reduction property of type-2 fuzzy logic systems using a novel type-2 membership function," IEEE Transactions on Systems, Man, and Cybernetics, Part B (Cybernetics), vol. 41, no. 5, pp. 1395–1406, 2011.
- **M. A. Khanesar**, O. Kaynak, and M. Teshnehlab, "Direct model reference Takagi–Sugeno fuzzy control of SISO nonlinear systems," IEEE Transactions on Fuzzy Systems, vol. 19, no. 5, pp. 914–924, 2011.
- **M. A. Khanesar**, E. Kayacan, M. Teshnehlab, and O. Kaynak, "Extended Kalman filter based learning algorithm for type-2 fuzzy logic systems and its experimental evaluation," IEEE Transactions on Industrial Electronics, vol. 59, no. 11, pp. 4443–4455, 2011.
- M. A. Shoorehdeli, M. Teshnehlab, A. K. Sedigh, and **M. A. Khanesar**, "Identification using ANFIS with intelligent hybrid stable learning algorithm approaches and stability analysis of training methods," Applied Soft Computing, vol. 9, no. 2, pp. 833–850, 2009.

Conference Papers Indexed by SCI or SCIE (in English):

- **Khanesar, M.A.**, Todhunter, L., Pawar, V., Corcoran, H., MacDonald, L., Robson, S. and Piano, S., Enhancing single camera calibration results using artificial bee colony optimisation within a virtual environment. Dublin, Ireland, June 2024
- **Khanesar, M. A.**, Piano, S., Branson, D. Uncertainty analysis of an augmented industrial robot, Joint Special Interest Group meeting between euspen and ASPE Advancing Precision in Additive Manufacturing KU Leuven, Belgium, September 2023
- Mohammed A. Isa, **Mojtaba A. Khanesar**, Richard Leach, David Branson, and Samanta Piano "High-accuracy robotic metrology for precise industrial manipulation tasks", Proc. SPIE 12623, Automated Visual Inspection and Machine Vision V, 126230C (11 August 2023)
- **Khanesar, M.A.**, Yan, M., Kendal, P., Isa, M., Piano, S. and Branson, D., 2023. Intelligent Static Calibration of Industrial Robots using Artificial Bee Colony Algorithm, IEEE International Conference On Mechatronics - Loughborough, UK, March 15-17, 2023.
- M. Isa, **M. A. Khanesar**, R. Leach, D. Branson, and S. Piano, "Trinocular vision system for pose determination," 2022.
- M. A. Isa, **M. A. Khanesar**, R. Leach, D. Branson, and S. Piano, "Frequency scanning interferometry for accurate robot position measurement," 2022.
- **M. A. Khanesar**, S. Piano, and D. Branson, "Improving the Positional Accuracy of Industrial Robots by Forward Kinematic Calibration Using Laser Tracker System," 2022.
- **M. A. Khanesar** and D. Branson, "Support Vector Regression for multi-objective parameter estimation of interval type-2 fuzzy systems," in Soft Computing for Problem Solving 2019, Springer, 2020, pp. 97–108.
- **M. A. Khanesar**, S. Hassan, E. Cambria, and E. Kayacan, "A novel non-iterative parameter estimation method for interval type-2 fuzzy neural networks based on a dynamic cost function," in 2019 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE), 2019, pp. 1–6.
- S. Hassan, **M. A. Khanesar**, M. T. Jan, and W. K. Mashwani, "Ensemble of Deep Belief Network and Bayesian Adaptive Aggregation for Regression," in 2019 International Conference on Information Science and Communication Technology (ICISCT), 2019, pp. 1–6.
- M. Teshnehlab and M. A. S. **M. A. Khanesar**, "A novel binary particle swarm optimization," in Proceedings of the 15th Mediterranean Conference on Control and Automation, 2007, p. 6.
- B. E. F. Tafti, **M. A. Khanesar**, and M. Teshnehlab, "Nonlinear system identification using type-2 fuzzy recurrent wavelet neural network," in 2019 7th Iranian Joint Congress on Fuzzy and Intelligent Systems (CFIS), 2019, pp. 1–4.
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