

Marie Skłodowska Curie Action – Postdoctoral Fellowship 2023
Expression of interest – Hosting offer
(MSCA-PF-2023)

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| Contact Person/Scientist in charge <i>(data of the principal investigator of the research group/lab or scientific supervisor)</i> | Name | Tufan | |
| | Surname | Kumbasar | |
| | Email | kumbasart@itu.edu.tr | |
| Laboratory /Department /Institute /Centre / <i>(data of the centre/department where the fellow would be located)</i> | Name | Artificial Intelligence and Intelligent Systems (AI ² S) Laboratory/ Control and Automation Engineering/Faculty of Electrical and Electronics Engineering | |
| | Address | Artificial Intelligence and Intelligent Systems (AI ² S) Laboratory Control and Automation Engineering Faculty of Electrical and Electronics Engineering Istanbul Technical University, Ayazaga Campus Maslak-34469 Istanbul/TURKEY | |
| Research Area <i>(Please select the research area: corresponding to the eight MSCA evaluation panels. You can select between one and up to three scientific areas per EOI)</i> | | Information Science and Engineering (ENG) | Mathematics (MAT) Physics (PHY) |
| Brief description of the Centre/Research Group <i>(max. 1,600 characters including spaces: information about the research centre or research group, scientific staff. Please include URL if possible)</i> | <p>The main goal of the Artificial Intelligence and Intelligent Systems research group is to develop theoretical artificial and computational intelligence methods and/or deploy them in real-time applications. The main activities involve the following research areas:</p> <ol style="list-style-type: none"> 1. Fuzzy Logic from Type-1 to Type-n 2. Neural Networks from Shallow to Deep 3. Machine Learning from Supervised to Unsupervised and Reinforcement 4. Control Systems from Conventional to Intelligent 5. Optimization from Local to Global 6. Autonomous Systems from UAVs to AGVs <p>The AI²S provides the necessary facilities and materials for graduate and undergraduate students who are willing to do their graduation projects or postgraduate level research studies to support their BSc project and MSc / Ph.D. thesis. The complete list of publications conducted under the supervision of the Assoc. Prof. Dr. Tufan Kumbasar is available online at</p> <ul style="list-style-type: none"> • https://scholar.google.com.tr/citations?user=i2hguUsAAAAJ&hl=en • https://www.researchgate.net/lab/Artificial-Intelligence-and-Intelligent-Systems-Laboratory-Tufan-Kumbasar. <p>The conducted research activities are regularly shared via the YouTube channel</p> <ul style="list-style-type: none"> • https://www.youtube.com/c/TufanKumbasar | | |

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| <p>Project description <i>(max. 1,800 characters including spaces: short description of the research project / research line where the fellow would be hosted and develop his /her project)</i></p> | <p>The AI²S research team welcomes well defined real-world/ theoretical research projects.</p> <ol style="list-style-type: none"> 1. Artificial and Computational Intelligence in Real-World (Control) Engineering Problems <ol style="list-style-type: none"> a. Fuzzy Logic Theory <ol style="list-style-type: none"> i. Type-2 Fuzzy Logic Theory ii. Fuzzy System Identification & Modelling iii. Fuzzy Control Systems Design iv. Neuro-Fuzzy Systems b. Evolutionary Optimization Algorithms c. Neural Networks <ol style="list-style-type: none"> i. From Shallow to Deep d. Deep Learning 2. Machine Learning in Real-World (Control) Engineering Problems <ol style="list-style-type: none"> a. Supervised Learning b. Unsupervised Learning c. Reinforcement Learning d. Uncertainty Quantification 3. Autonomous Systems <ol style="list-style-type: none"> a. UAVs b. AGVs 4. Intelligent Systems for Control and Decision 5. Human-Machine Interactions |
| <p>Applications: documents to be submitted and deadlines <i>(Please indicate the documents that the candidate fellow should submit to establish contact: CV, letter of motivation, letter of references, etc., please indicate deadline. Recommended deadline: April 2023)</i></p> | <p>Interested research scholars are asked to send their CVs and Research Plans (on how they can contribute to the topics) to Assoc. Prof. Tufan Kumbasar (kumbasart@itu.edu.tr) and ask for an appointment. Deadline: April 2023.</p> |