



Alireza Khastan

Associate Professor

IASBS, Department of Mathematics

Publications

Journals

- Khastan, Alireza and Nieto, Juan J and Rodr{\'{i}}guez-L{\'{o}}pez, Rosana, "Existence of solutions to uncertain differential equations of nonlocal type via an extended Krasnosel'skii fixed point theorem", The European Physical Journal Plus, Vol. 137, NO. 12, 2022
- Khastan, A and Rodriguez-Lopez, R, "(2105-6671) Some aspects on computation of scalar valued and fuzzy valued integrals over fuzzy domains", Iranian Journal of Fuzzy Systems, Vol. 618, NO. 3, 2022
- Beigmohamadi, R and Khastan, A and Nieto, JJ and Rodr{\'{i}}guez-L{\'{o}}pez, R, "Discrete fractional calculus for fuzzy-number-valued functions and some results on initial value problems for fuzzy fractional difference equations", Information Sciences, Vol. 618, NO. 3, 2022
- Zarei, H and Khastan, A and Rodr{\'{i}}guez-L{\'{o}}pez, R, "Suboptimal control of linear fuzzy systems", Fuzzy Sets and Systems, Vol. 2009, NO. 3, 2022
- Khastan, Alireza and Rodr{\'{i}}guez-L{\'{o}}pez, Rosana and Shahidi, Mina, "New metric-based derivatives for fuzzy functions and some of their properties", Fuzzy Sets and Systems, Vol. 436, NO. 3, 2022



- Sadeghi Bigham, B and Dolatikalan, S and Khastan, A, "Minimum landmarks for robot localization in orthogonal environments", *Evolutionary Intelligence*, Vol. 15, NO. 3, 2022
- Beigmohamadi, R and Khastan, A, "Interval discrete fractional calculus and its application to interval fractional difference equations", *Iranian Journal of Fuzzy Systems*, Vol. 579, NO. 3, 2021
- Wang, Hongzhou and Rodriguez-Lopez, Rosana and Khastan, Alireza, "On the stopping time problem of interval-valued differential equations under generalized Hukuhara differentiability", *Information Sciences*, Vol. 579, NO. 3, 2021
- Khastan, Alireza and Rodriguez-Lopez, Rosana and Shahidi, Mina, "New differentiability concepts for set-valued functions and applications to set differential equations", *Information Sciences*, Vol. 575, NO. 3, 2021
- Angulo-Castillo, V and Chalco-Cano, Y and Khastan, A and Villamizar-Roa, EJ, "Applications of generalized fixed points theorems to the existence of uncertain differential equations with finite delay", *Iranian Journal of Fuzzy Systems*, Vol. 39, NO. 3, 2020
- Khastan, Alireza and Rodriguez-Lopez, Rosana, "On linear fuzzy differential equations by differential inclusions' approach", *Fuzzy Sets and Systems*, Vol. 387, NO. 6, 2020
- Son, Nguyen Thi Kim and Dong, Nguyen Phuong and Long, Hoang Viet and Khastan, Alireza and others, "Linear quadratic regulator problem governed by granular neutrosophic fractional differential equations", *ISA transactions*, Vol. 97, NO. 7, 2020
- Zarei, H and Khastan, A and Zafari, A, "Optimal control of linear fuzzy time-variant controlled systems", *Iranian Journal of Fuzzy Systems*, Vol. 17, NO. 5, 2020
- Dong, Nguyen Phuong and Long, Hoang Viet and Khastan,



- Alireza, "Optimal control of a fractional order model for granular SEIR epidemic with uncertainty", *Communications in nonlinear science and numerical simulation*, Vol. 88, NO. 5, 2020
- Shahidi, Mina and Khastan, Alireza, "Linear fuzzy Volterra integral equations on time scales", *Computational and Applied Mathematics*, Vol. 39, NO. 3, 2020
 - Son, Nguyen Thi Kim and Dong, Nguyen Phuong and Khastan, Alireza and Long, Hoang Viet and others, "Complete controllability for a class of fractional evolution equations with uncertainty", *Evolution Equations & Control Theory*, Vol. 39, NO. 3, 2020
 - Khastan, Alireza, "Linear dynamical equations with uncertainty on time Scales", *Rocky Mountain Journal of Mathematics*, Vol. 49, NO. 4, 2019
 - Khastan, A and Azadi, H, "Existence and uniqueness of solution for a nonhomogeneous discrete fractional initial value problem", *Rocky Mountain Journal of Mathematics*, Vol. 49, NO. 4, 2019
 - Tomasiello, Stefania and Macias-Diaz, Jorge E and Khastan, Alireza and Alijani, Zahra, "New sinusoidal basis functions and a neural network approach to solve nonlinear Volterra--Fredholm integral equations", *Neural Computing and Applications*, Vol. 2018, NO. 1, 2019
 - Khastan, A and Hooshyar, L, "A computational method to analyze the similarity of biological sequences under uncertainty", *Iranian Journal of Fuzzy Systems*, Vol. 16, NO. 6, 2019
 - Abdollahi, Rahman and Farshbaf Moghimi, Mohammad Bagher and Khastan, Alireza and Hooshmandasl, Mohammad Reza, "Linear fractional fuzzy differential equations with Caputo derivative", *Computational Methods for Differential Equations*, Vol. 7, NO. 2, 2019



- Khastan, Alireza and Hejab, S, "First order linear fuzzy dynamic equations on time scales", Iranian Journal of Fuzzy Systems, Vol. 16, NO. 2, 2019
- Khastan, Alireza and Rodriguez-Lopez, Rosana, "An existence and uniqueness result for fuzzy Goursat partial differential equation", Fuzzy Sets and Systems, Vol. 375, NO. 1, 2019
- Khastan, Alireza and Alijani, Zahra, "On the new solutions to the fuzzy difference equation $x_{n+1} = A + Bx_n$ ", Fuzzy Sets and Systems, Vol. 358, NO. 13, 2019
- Abdollahi, R and Khastan, A and Nieto, JJ and Rodriguez-Lopez, Rosana, "On the linear fuzzy model associated with Caputo--Fabrizio operator", Boundary Value Problems, Vol. 2018, NO. 1, 2018
- Khastan, A, "Fuzzy logistic difference equation", Iranian Journal of Fuzzy Systems, Vol. 15, NO. 7, 2018
- Bahrami, Fariba and Alikhani, Robab and Khastan, Alireza, "Transport equation with fuzzy data", Iranian Journal of Fuzzy Systems, Vol. 15, NO. 7, 2018
- Khastan, Alireza, "Some new results for fuzzy differential equations", ON MATHEMATICAL MODELLING IN APPLIED SCIENCES, Vol. 21, NO. 13, 2017
- Khastan, Alireza, "A new representation for inverse fuzzy transform and its application", Soft Computing, Vol. 21, NO. 13, 2017
- Khastan, Alireza, "New solutions for first order linear fuzzy difference equations", Journal of Computational and Applied Mathematics, Vol. 312, NO. 17, 2017
- Khastan, Alireza and Alijani, Zahra and Perfilieva, Irina, "Fuzzy



transform to approximate solution of two-point boundary value problems", *Mathematical Methods in the Applied Sciences*, Vol. 40, NO. 17, 2017

- Khastan, Alireza and Moradi, Zahra, "Width invariant approximation of fuzzy numbers", *Mathematical Methods in the Applied Sciences*, Vol. 40, NO. 17, 2016
- Khastan, Alireza and Perfilieva, Irina and Alijani, Zahra, "A new fuzzy approximation method to Cauchy problems by fuzzy transform", *Fuzzy Sets and Systems*, Vol. 288, NO. 1, 2016
- Ban, Adrian I and Coroianu, Lucian and Khastan, Alireza, "Conditioned weighted L--R approximations of fuzzy numbers", *Fuzzy Sets and Systems*, Vol. 283, NO. 1, 2016
- Khastan, Alireza and Rodr{"i}guez-L{"o}pez, Rosana, "On the solutions to first order linear fuzzy differential equations", *Fuzzy Sets and Systems*, Vol. 295, NO. 1, 2016
- Amrahov, {c{S}}ahin Emrah and Khastan, Alireza and Gasilov, Nizami and Fatullayev, Afet Golayoglu, "Relationship between Bede--Gal differentiable set-valued functions and their associated support functions", *Fuzzy Sets and Systems*, Vol. 295, NO. 1, 2016
- Ghelmez, Mihaela A and Rosu, Alexandru Mihai and Khastan, Alireza, "MODELING BEHAVIOR OF BIOLOGICAL MEMBRANE COMPONENTS", *Fuzzy Sets and Systems*, Vol. 295, NO. 1, 2015
- Khastan, Alireza and Rodr{"i}guez-L{"o}pez, Rosana, "On periodic solutions to first order linear fuzzy differential equations under differential inclusions' approach", *Information Sciences*, Vol. 322, NO. 1, 2015
- Gasilov, NA and Fatullayev, Afet Golayoglu and Amrahov, {c{S}}E and Khastan, Alireza, "A new approach to fuzzy initial value problem", *Soft Computing*, Vol. 18, NO. 2, 2014



- Khastan, Alireza and Nieto, Juan J and Rodr{\'{i}}guez-L{\'{o}}pez, Rosana, "Fuzzy delay differential equations under generalized differentiability", Information Sciences, Vol. 275, NO. 1, 2014
- Khastan, A and Nieto, Juan J and Rodr{\'{i}}guez-L{\'{o}}pez, R, "Schauder fixed-point theorem in semilinear spaces and its application to fractional differential equations with uncertainty", Fixed Point Theory and Applications, Vol. 2014, NO. 1, 2014
- ALIJANI, Z and KHASTAN, A, "SOME RESULTS ON HIGHER ORDER FUZZY γ -TRANSFORM", 2018 6th Iranian Joint Congress on Fuzzy and Intelligent Systems (CFIS), Vol. 2018, NO. 1, 2013
- Khastan, Alireza and Nieto, Juan J and Rodriguez-Lopez, Rosana, "Periodic boundary value problems for first-order linear differential equations with uncertainty under generalized differentiability", Information Sciences, Vol. 222, 2013
- Alijani, Z and Khastan, A, "Some results on higher order fuzzy-Transform", 2018 6th Iranian Joint Congress on Fuzzy and Intelligent Systems (CFIS), Vol. 2018, NO. 1, 2013
- Khastan, A and Sief, Y, "A Numerical Method for Solving Fuzzy Differential Equations", International Journal of Mathematics & Computation, Vol. 11, 2011
- Khastan, Alireza and Nieto, Juan J and Rodriguez-Lopez, Rosana, "Variation of constant formula for first order fuzzy differential equations", Fuzzy Sets and Systems, Vol. 177, NO. 1, 2011
- Khastan, A and Nieto, Juan J, "A boundary value problem for second order fuzzy differential equations", Nonlinear Analysis: Theory, Methods & Applications, Vol. 72, NO. 9, 2010
- Khastan, A and Bahrami, F and Ivaz, K, "New results on multiple solutions for th-order fuzzy differential equations under generalized differentiability", Boundary value problems, Vol. 2009, 2009



- Khastan, A and Bahrami, F and Ivaz, K, "New results on multiple solutions for", *Boundary Value Problems* [electronic only], Vol. 2009, NO. 3, 2009
- Khastan, A and Bahrami, F and Ivaz, K, "Research Article New Results on Multiple Solutions for Nth-Order Fuzzy Differential Equations under Generalized Differentiability", *Boundary Value Problems* [electronic only], Vol. 2009, NO. 3, 2009
- Khastan, A and Ivaz, K, "Numerical solution of fuzzy differential equations by Nystr^om method", *Chaos, Solitons & Fractals*, Vol. 41, NO. 2, 2009
- Nieto, JJ and Khastan, A and Ivaz, K, "Numerical solution of fuzzy differential equations under generalized differentiability", *Nonlinear Analysis: Hybrid Systems*, Vol. 3, NO. 4, 2009

Conferences

- Eskandari, Elham and Khastan, Alireza and Tomasiello, Stefania, "Improved determination of the weights in a clustering approach based on a weighted dissimilarity measure between fuzzy data", 2022 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE), 2022
- Chalco-Cano, Yurilev and Khastan, Alireza and Rufi^an-Lizana, Antonio, "On the Sum of Generalized Hukuhara Differentiable Fuzzy Functions", *International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems*, 2020
- Shahidi, M and Khastan, A, "Solving fuzzy fractional differential equations by power series expansion method", 2018 6th Iranian Joint Congress on Fuzzy and Intelligent Systems (CFIS), 2018
- Alijani, Zahra and Khastan, Alireza and Khattri, Sanjay K and Tomasiello, Stefania, "Fuzzy transform to approximate solution



of boundary value problems via optimal coefficients", 2017 International Conference on High Performance Computing & Simulation (HPCS), 2017

- Khastan, Alireza, "Solution of First Order Linear Difference Equations with Uncertainty", THE INTERNATIONAL CONFERENCE, 2015
- Chalco-Cano, Y and Khastan, A and Rodr{\'i}guez-L{\'o}pez, Rosana, "Normalized expression for solutions to linear fuzzy differential equations under combination of differences", Proceedings of the 2015 Conference of the International Fuzzy Systems Association and the European Society for Fuzzy Logic and Technology, 2015
- Ivaz, K and Khastan, A and Nieto, Juan J, "A numerical method for fuzzy differential equations and hybrid fuzzy differential equations", Abstract and Applied Analysis, 2013