Curriculum Vitae

Seyedali Ahmadian hosseini ("Ali Ahmadian")

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Email: syed_ali@upm.edu.my; ahmadian.hosseini@gmail.com
Date of Birth: August 1982

Education

December 2009- January 2014
Universiti Putra Malaysia, Malaysia- www.**upm**.edu.my
Doctor of Philosophy (PhD)- Applied Mathematics (Numerical Analysis)
Department of Mathematics, C.G.P.A: 4.00/4.00
Thesis title:

- Numerical methods for solving fuzzy differential equations of integer and fractional orders (Mark: *Minor Correction*)
- Supervisor: Prof. Dr. Mohamed Suleiman

Main courses:
Solutions of ordinary differential equations- Numerical methods for differential equations- Recent advances in mathematical research- Research methods in mathematics

September 2005- June 2008
University of Sistan and Baluchestan, Iran- www.usb.ac.ir
Master of Science (M.Sc.)- Applied Mathematics (Numerical Analysis)
Faculty of Mathematical Sciences, C.G.P.A: 16.56/20.00
Thesis title:

- Moving finite element method for solving time-dependent partial differential equations with moving boundaries (Mark: *19.75 of 20.00*)
- Supervisor: Prof. Dr. Alireza Soheili

Main courses:
Real analysis- Advanced numerical analysis- Advanced operation research- Numerical solutions of partial differential equations- Numerical methods in linear algebra- Numerical solutions of integral equations

September 2000- February 2005
Ferdowsi University of Mashhad, Iran- www.um.ac.ir
Bachelor of Science (B.Sc.)- Applied Mathematics
Faculty of Mathematical Sciences, C.G.P.A: 15.39/20.00

Employment- Research and Teaching

December 2017-date
Institute for Mathematical Research, Universiti Putra Malaysia
http://www.inspem.upm.edu.my
Fellow Researcher ~ Assistant Professor

- Researched on numerical methods for solving fractional differential equations in the sense of fuzzy and non-fuzzy notions.

- Prepare research proposals for international and national funds
- Supervision of Post Graduates and Honours students with their dissertation research projects
- Organizing workshops and seminars
- Mentor for a number of junior lecturers at UPM to publish their research works

February 2017-January 2018
Islamic Azad University- Science and Research Branch- Tehran, IRAN- www.srbiau.ac.ir/en
Visiting Postdoctoral Research Fellow
Supervisor: Prof. Dr. Saeid Abbasbandy

- Researched on developing fractional differential equations with new types of fractional derivative such as non-singular kernel derivatives and etc. under interval arithmetic and fuzzy sets. *This project was founded by Iran's National Elites Foundation*- http://en.bmn.ir

August 2014- December 2017
Department of Mathematics, Faculty of Science, Universiti Putra Malaysia
Postdoctoral Research Fellow
Supervisor: Prof. Dr. Fudziah Ismail

- Researched on numerical methods for solving dynamical systems under uncertainty with applications to chemical reactions in Palm oil, drug delivery and etc.
- Contributed to prepare research proposals for national funds from Ministry of Higher Education, Malaysia. (Total obtained: RM 610,000.00)
- Support of Post Graduates and Honours students with their dissertation research projects

October 2014- June 2016
Centre of Image and Signal Processing, Faculty of Computer Science and Information Technology, University of Malaya- www.um.edu.my
Associate Researcher
Advisor: Dr. Chee Seng Chan

- Contributed to and led multiple research programs on Human-robot interaction (HRI) algorithm in robot-based intervention of elderly with Alzheimer's and fuzzy mathematical modeling under HIR grant http://hir.um.edu.my

July 2014-July 2015
Department of Mathematics, Universiti Putra Malaysia
Teaching Assistant

- Tutor for mathematical courses specially solution of ordinary differential equations

September 2012-January 2014
Department of Mathematics, Universiti Putra Malaysia
Teaching Assistant

- Tutor for mathematical courses, specially Introduction to Calculus- Calculus II

July 2012-September 2012
Lecturer
University of Applied Science and Technology, Iran- www.uastch.org

- Teaching Operational Research and Introduction to Statistic courses

October 2006-October 2007
Department of Mathematics, University of Sistan and Baluchestan, Iran
Teaching Assistant

- Tutor of Calculus III for Undergraduate Mathematics Students

Supervisory Experiment:

Member of Supervisory Committee:

- Lee Khai Chien (**PhD Candidate**, [Research Title: *Numerical Methods for solving oscillatory differential equations of integer and non-integer order*]
  Matric Number: GS50579, 2018-date)

Industrial Training Student:

- Wong Kian Yung (From UKM, Malaysia. Date: 11 June-17 August 2018)

Honor and Achievements

- **Publons Peer Review Award** for placing in the top 1% of reviewers in Mathematics and Computer Science during 2017-2018

- **Silver Medal** at 4th International Innovation, Design and Articulation (IDeA 2018) Malaysia (Research Title: *"Uncertain Viscoelastic models with fractional order: Study the numerical simulations of the solution"*) http://crown.i-idea.org

- **Join as a Member** to Iran's National Elite Foundation- http://en.bmn.ir

- **Gold Medal** at The International Invention, Innovation & Design Competition (IIID Johor 2017), Malaysia (Research Title: *Fuzzy fractional kinetics models: Numerical Simulation and Applications to Oil Palm frond and Basset Problem)- http://iidjohor.uitm.edu.my/2017*

- **Silver Medal** at UPM Invention & Research Exhibition (PRPI) 2016, (Research Title: *Fuzzy fractional kinetics models: Numerical Simulation and Applications to Oil Palm frond and Basset Problem)- http://www.u-events.upm.edu.my*

- **Best conference paper**- International Conference on Soft Computing in Data Science 2015- fskm.uitm.edu.my/scds**2015**
  Title: A fractional multistep method for solving a class of linear fractional differential equations under uncertainty

- **Best Postgraduate Student Award 2014**- Faculty of Science, Universiti Putra Malaysia

- **Special graduate research assistant scholarship (SGRA)**
  September 2012- January 2014- Department of Mathematics, Universiti Putra Malaysia- www.sgs.upm.edu.my/?LANG=en&uri=/SGRAbm

Professional Affiliations

- **Institute of Research Engineers and Doctors (IRED),** November 2018-date/Associate Member
- **The SCIence and Engineering Institute (SCIEI),** October 2018-date/Member
- **Iran's National Elites Foundation,** February 2017-date/Member
- **Institute of Electrical and Electronics Engineers (IEEE),** January 2016-December 2016/Member
- **European Society for Fuzzy Logic and Technology (EUSFLAT),** January 2015-January 2016/Member
- **International Association of Computer Science and Information Technology (IACSIT),** November 2014-date/Senior member
- **International Association of Engineers (IAENG),** December 2014-date/Member
- **Scientific and Technical Committee & Editorial Review Board of WASET**, June 2015-date/ Member

Publications (Total Impact Factor: 70.056; Total Number of Publications: 53)

I. Indexed Journals

- Chakraborty, S.P. Mondal, S. Alam, **A. Ahmadian**, N. Senu, D. De, S. Salahshour, The Pentagonal Fuzzy Number: Its Different Representations, Properties, Ranking, Defuzzification and Application in Game Problems, *Symmetry*, Accepted, **IF: 1.256.**

- S. Salahshour, **A. Ahmadian**, M. Ali-Akbari, N. Senu, D. Baleanu, Uncertain fractional operator with application arising in the steady heat flow, *Thermal Science*, Accepted, **IF: 1.431**.

- M. Senol, S. Atpinar, Z. Zararsiz, S. Salahshour, **A. Ahmadian**, Approximate Solution of Time-Fractional Fuzzy Partial Differential Equations, *Computational and Applied Mathematics, Springer,* Accepted, **IF: 0.863.**

- S. Salahshour, **A. Ahmadian**, S. Abbasbandy, D. Baleanu, *M*-fractional derivative under interval uncertainty: Theory, properties and applications, *Chaos, Solitons and Fractals, Elsevier,* 116 (2018) 121-125, **IF: 2.213.**

- B. Sarkar, S. P. Mondal, S. Hur, **A. Ahmadian**, S. Salahshour, R. Guchhait, M.W. Iqbal, An optimization technique for national income determination model with stability analysis of differential equation in discrete and continuous process under the uncertain environment, *RAIRO-Operations Research*, Accepted, **IF: 0.478**.

- A. Chakraborty, S. Mondal, **A. Ahmadian**, N. Senu, S. Alam, S. Salahshour, Different form of Triangular Neutrosophic Numbers and De Neutrosophication Techniques with Application in Route Selection Problem, *Symmetry,* 10 (2018) 327, **IF: 1.256.**

- N.D. Phu, P.V. Tri, **A. Ahmadian**, S. Salahshour, D. Baleanu, Some Kinds of the Controllable Problems for Fuzzy Control Dynamic Systems, *Journal of Dynamic Systems, Measurement, and Control, 140 (9) (2018) 091008***, IF: 1.388**

- Mahata, S.P. Mondal, **A. Ahmadian**, F. Ismail, S. Alam, S. Salahshour, Different solution strategy for solving epidemic model in imprecise environment, *Complexity*, *Wiley-Hindawi*, Vol. 2018, (2018) Article ID 4902142, 18 pages, **IF: 4.621.**

- **A. Ahmadian**, S. Salahshour, C.S. Chan, D. Baleanu, Numerical solutions of fuzzy differential equations by an efficient Runge-Kutta method with generalized differentiability, *Fuzzy Sets and Systems*, 331 (2018) 47-67*, Elsevier*, **IF: 2.098**.

- S. Salahshour, **A. Ahmadian**, D. Baleanu, Variation of constant formula for the solution of Interval differential equations of non-integer order, *European Physical Journal-Special Topics*, 226 (2017) 3501-3512, **IF: 1.947.**

- M. Bishehniasar, S. Salahshour, **A. Ahmadian**, F. Ismail, D. Baleanu, An accurate approximate-analytical technique for solving time-fractional partial differential equations, *Complexity, Wiley-Hindawi*, Vol. 2017 (2017), Article ID 8718209, 12 pages, **IF: 4.621**.

- **A. Ahmadian**, S. Salahshour, M. Ali-Akbari, F. Ismail, D. Baleanu, A novel approach to approximate fractional derivative with uncertain conditions, *Chaos, Solitons and Fractals, Elsevier*, 104 (2017) 68-76, **IF: 1.455**.

- **A. Ahmadian**, S. Salahshour, C.S. Chang, D. Baleanu, An efficient numerical simulation for solving dynamical systems with uncertainty, *Journal of Computational and Nonlinear Dynamics*, 12, no. 5 (2017) p. 051008*, ASME*, **IF: 1.223**.

- **A. Ahmadian**, F. Ismail, S. Salahshour, D. Baleanu, F. Ghaemi, Uncertain viscoelastic models with fractional order: A new spectral tau method to study the numerical simulations of the solution, *Communications in Nonlinear Science and Numerical Simulation*, 53 (2017) 44-64*, Elsevier*, **IF: 2.834**.

- S. Salahhsour**, A. Ahmadian**, F. Ismail, D. Baleanu, A fractional derivative with non-singular kernel for interval-valued functions under uncertainty, *Optik - International Journal for Light and Electron Optics,* 130 (2017) 273–286*, Elsevier*, **IF: 0.742**.

- M. Pakdaman**, A. Ahmadian**, S. Effati, S. Salahshour, D. Baleanu, Solving differential equations of fractional order using an optimization technique based on training artificial neural network, *Applied Mathematics and Computation,* 293 (2017) 81-95*, Elsevier*, **IF: 1.345**.

- **A. Ahmadian**, C.S. Chang, S. Salahshour, Fuzzy Approximate Solutions to Fractional Differential Equations under Uncertainty: Operational Matrices Approach, *IEEE Transaction on Fuzzy Systems,* 25 (2017) 218-236, **IF: 6.701**.

- S. Salahshour, **A. Ahmadian**, F. Ismail, D. Baleanu, A novel weak fuzzy solution for fuzzy linear system, *Entropy,* 2016, Vol. 18(3), p.68, **IF: 1.564.**

- F. Ghaemi, **A. Ahmadian**, R. Yunus, F. Ismail, S. Rahmanian, Effects of Thickness and Amount of Carbon Nanofiber Coated Carbon Fiber on Improving the Mechanical Properties of Nanocomposites, *Nanomaterials*, 6. 1 (2016): 6, **IF: 2.076**.

- S. Salahshour, **A. Ahmadian**, F. Ismail, D. Baleanu, N. Senu, A New fractional derivative for differential equation of fractional order under interval uncertainty, *Advances in Mechanical Engineering* 7.12 (2015), 1687814015619138, **IF:0. 575**.

- F. Ghaemi, R.Yunus, **A. Ahmadian**, F. Ismail, M. A. Mohd Salleh, S. A. Rashid, Few- and Multi-Layer Graphene on Carbon Fiber: Synthesis and Application, *RSC Advances*, 5 (2015) 81266-81274, **IF: 3.8.**

- **A. Ahmadian**, S. Salahshour, H. Amirkhani, D. Baleanu, R. Yunus, An Efficient Tau method for Numerical Solution of a Fuzzy Fractional Kinetic Model and Its Application to Oil Palm Frond as a Promising Source of Xylose, *Journal of Computational Physics*, Elsevier, 264 (2015) 562-564, **IF: 2.485.**

- F. Ghaemi, R.Yunus, M. A. Mohd Salleh, S. A. Rashid, **A. Ahmadian**, H.N. Lim, Effects of the surface modification of carbon fiber by growing different types of carbon nanomaterials on the mechanical and thermal properties of polypropylene, *RSC Advances*, 36 (2015): 28822-28831, **IF: 3.8.**

- S. Salahshour, **A. Ahmadian**, N. Senu, D. Baleanu, P. Agarwal, On Analytical Solutions of Fractional Differential Equation with Uncertainty: Application to Basset Problem, *Entropy*, 17 (2015) 885-902, **IF: 1.564**.

- S. Salahshour, **A. Ahmadian**, C.S. Chan, Successive approximation method for Caputo q-fractional IVPs, *Communications in Nonlinear Science and Numerical Simulation*, 24 (2015) 153-158, Elsevier, **IF: 2.569.**

- F. Ghaemi, **A. Ahmadian**, R.Yunus, M. A. Mohd Salleh, N. Senu, Effect of growing grapheme flakes on branched carbon nano fibers based on carbon fiber on mechanical and thermal properties of polypropylene, *RSC Advances*, 13 (2015) 9925-9932. **IF: 3.8.**

- **A. Ahmadian**, C.S. Chang, S. Salahshour, A Runge-Kutta method with the reduced number of function evaluations for solving hybrid fuzzy differential equations, *Soft Computing*, 19.4 (2015) 1051-1062, Springer, **IF: 1.304.**

- M. B. Suleiman, H. M. Ijam, A.F.N. Rasedee, N. Senu, **A. Ahmadian**, S. Salahshour, Solving Nonstiff Higher-Order Ordinary Differential Equations Using 2-Point Block Method Directly, *Abstract and Applied Analysis*, Vol. 2014 (2014), Article ID 867095, 13 pages. **IF: 1.274.**

- E. Faghihnia, S. Salahshour, **A. Ahmadian**, N. Senu, Developing a local neurofuzzy model for short-term wind power forecasting, *Advances in Mathematical Physics*, Vol. 2014, Article ID 637017, 11 pages, **IF: 0.532**.

- **A. Ahmadian**, M. B. Suleiman, S. Salahshour, An operational matrix based on Legendre polynomials for solving fuzzy fractional-order differential equations, *Abstract and Applied Analysis*, Volume 2013, Article ID 505903, 29 pages, **IF: 1.274.**

- **A. Ahmadian**, M. B. Suleiman, S. Salahshour, D. Baleanu, A Jacobi operational matrix for solving a fuzzy linear fractional differential equation, *Advances in Difference Equations*, 2013, 2013:104, **IF: 0.63.**

- F. Rabiei, F. Ismail, **A. Ahmadian**, S. Salahshour. 2013. Numerical Solution of Second-Order Fuzzy Differential Equation Using Improved Runge-Kutta Nystrom Method, *Mathematical Problems in Engineering*, Volume 2013, Article ID 803462, 10 pages, **IF: 1.08.**

- F. Ghaemi, R. Yunus, **A. Ahmadian**, S. Salahshour, M.B. Suleiman, Application of fuzzy fractional kinetic equations to modeling of the acid hydrolysis reaction, *Abstract and Applied Analysis*, Volume 2013, Article ID 610314, 19 pages, **IF: 1.274.**

- **A. Ahmadian**, N. Senu, F. Larki, S. Salahshour, M.B. Suleiman, M.d. Shabiul Islam, Numerical solution of fuzzy fractional pharmacokinetics model arising from drug assimilation into the blood stream, *Abstract and Applied Analysis*, Volume 2013, Article ID 304739, 17 pages. **IF: 1.274.**

- M. J. Ebadi, M. B. Suleiman, F. Ismail, **A. Ahmadian**, M. R. Balooch Shahryari, S. Salahshour, A New Distance Measure for Trapezoidal Fuzzy Numbers, *Mathematical Problems in Engineering,* Volume 2013 (2013), Article ID 424186, 4 pages, **IF: 1.082.**

- M. R. Balooch Shahriyar, F. Ismail, S. Aghabeigi, **A. Ahmadian**, S.Salahshour, An Eigenvalue-Eigenvector Method for Solving a System of Fractional Differential Equations with Uncertainty, *Mathematical Problems in Engineering*, Volume 2013 (2013), Article ID 579761, **IF: 1.082.**

- A.R. Soheili, J. Naghipour, **A. Ahmadian**, A Gradient Weighted Moving Finite Element Method with Polynomial Approximation of Any Degree, *Mathematical Problems in Engineering*, Volume 2009 (2009), Article ID 602712, 17 pages. **IF: 0.545.**

- F. Ghaemi, R. Yunus, L. Jassim, **A. Ahmadian**, F Ismail, Synthesis of Carbon Nanotube-Carbon Nanosphere on the CF Surface by CVD, *Advanced Materials Research,* Vol. 1134, 209-212, Trans Tech Publications, 2016. **(EBSCO Indexed).**

- **A. Ahmadian**, F. Ismail, N. Senu, S. Salahshour, F. Ghaemi, An Efficient Numerical Simulation for a Fuzzy Kinetic Model Arising in Palm Oil, *Advanced Material Research,* Vol. 1134, 191-197, Trans Tech Publications, 2016. **(EBSCO Indexed).**

- **A. Ahmadian**, N. Senu, S. Salahshour, M. Suleiman, Nearest interval valued approximation of interval-valued fuzzy numbers, *Malaysian Journal of Mathematical Sciences* 10(S) (2016) 325–336. **(Scopus Indexed).**

- **A. Ahmadian**, R. Afsharinafar, An approximation method for solving

nonconvex quadratic programming problems, *J. of Applied Sciences*, 2011, Vol. 11, pp. 3807-3810. **(Scopus Indexed).**

- **A. Ahmadian**, M. Suleiman, F. Ismail, Simulation of tumor development stages using artificial neural network, *Trends in Applied sciences*, 2012, Vol. 7, pp. 132-141. (**Scopus Indexed**).

- A. R. Soheili, **A. Ahmadian**, J. Naghipour, An Improved Regula False Method for Finding simple Zeros of Non linear Equations, *Applied Mathematical Sciences*, Vol. 2, 2008, no. 8, pp. 381-386, **(Scopus Indexed).**

II. Non-Indexed Journals

- S. Salahshour, **A. Ahmadian,** F. Ismail, A Note On 'A New Method For Solving An Arbitrary Fully Fuzzy Linear System', *International Journal of Industrial Mathematics*, Vol. 10, No. 3, (2018) Article ID IJIM-00992.

- S. Salahshour, **A. Ahmadian**, A. Mahata, S.P. Mondal, S. Alam, The behavior of Logistic equation with Alley effect in fuzzy environment: Fuzzy differential equation approach, *International Journal of Applied and Computational Mathematics,* 4 (2018) 62, Springer.

- Karimi Dizicheh, S. Salahshour, F. Ismail, **A. Ahmadian**, On new solutions of linear system of first-order fuzzy differential equations with fuzzy coefficient, *Journal of Fuzzy Set Valued Analysis,* 2016 SI.1 (2016) 110-117.

- F. N. b. Rasedee, M. b. Suleiman, **A. Ahmadian**, Z. Ibrahim, K. Iskandar Othman, A. Rakhimov, The solution of Riccati type differential equation by means of variable order variable stepsize backward difference method, *Journal of Soft Computing and Applications*, 2016, No.1 (2016) 35-42.

- **A. Ahmadian**, S. Z. Zainal, M. Suleiman, S. Salahshour, A new interval valued approximation of interval valued fuzzy numbers, *Journal of Soft Computing and Applications*, 2015, No.1 (2015) 1-8.

- A.R. Soheili, **A. Ahmadian**, J. Naghipour, A Family of Predictor – Corrector Methods Based on Weight Combination of Quadratures for solving Nonlinear Equations, *International Journal of Nonlinear Science*, Vol. (2007), pp.1-6.

III. Chapter in Books

- **Ahmadian**, S. Salahshour, N. Senu, F. Ismail, Some New Results on the Stability of Fractional Integro-Differential Equations Under Uncertainty, *Recent Advances on Soft Computing and Data Mining*, Vol. 700 (2018) 53-63, Springer.
- **A. Ahmadian**, F. Ismail, N. Senu, S. Salahshour, M. Suleiman, S Seddighi Chaharborj, An Iterative Method for Solving Fuzzy Fractional Differential Equations, M.W. Berry et al. (Eds): SCDS 2015, *Communications in Computer and Information Science*, Vol. 545, (2015) 88–96.

- **A. Ahmadian**, N. Senu, F. Larki, S. Salahshour, M. Suleiman, Md. Shabiul Islam, A Legendre Approximation for Solving a Fuzzy Fractional Drug Transduction Model into the Bloodstream, *Recent Advances on Soft Computing and Data Mining*, Vol. 287 (2014) 25-34, Springer.

- **A. Ahmadian**, M. Suleiman, F. Ismail, S. Salahshour, F Ghaemi, A Runge-Kutta method with lower function evaluations for solving hybrid fuzzy differential equations, *Intelligent Information and Database Systems*, (2013) 265-274, Springer.

IV. Conference Proceedings (Total: 36)

- A novel numerical method for solving variable-order fractional interval differential equations**,** *3rd International Conference on Mathematical Sciences and Statistics (ICMSS2018)*, Putrajaya, Malaysia, February 2018, **(Oral Presentation).**

- An approximate method for solving fractional partial differential equation by using embedding process**,** *3rd International Conference on Mathematical Sciences and Statistics (ICMSS2018)*, Putrajaya, Malaysia, February 2018, Journal of Physics: Conference Series (JPCS) book**.**

- A numerical algorithm for solving non-homogenous fuzzy differential equations of fractional order, *Symposium Kebangsaan Sains Mathematik KE-25 (SKSM25)*, Kuantan, Malaysia, August 2017, AIP Proceeding, **(Oral Presentation).**

- A promising method to approximate fractional derivatives under uncertainty, *International Conference on Computing, Mathematics and Statistics (ICMS 2017)*, Langkawi, Malaysia, November 2017, Springer Proceeding **(Oral Presentation).**

- An efficient numerical simulation for solving time-fractional Bloch equations under uncertainty, *4th International Workshop on Nonlinear and Modern Mathematical Physics (NMMP-17,)* Putrajaya, Malaysia**,** May 2017, **(Oral Presentation).**

- A promising method for the solution of fractional differential equations under uncertainty, *2nd International Conference and workshop on Mathematical Analysis,* Langkawi, Malaysia, August 2016, **(Oral Presentation).**

- Impulsive fractional differential equations under uncertainty, *International Conference on Fractional Differentiation and its Applications (ICFDA16)*, Novi Sad, Serbia, July 2016, **(Oral Presentation).**

- A novel technique for solving fuzzy differential equations of fractional order using Laplace and integral transforms, *Fuzzy Systems (FUZZ-IEEE), World Congress on Computational Intelligence*, Vancouver, Canada, July 2016,

(Oral Presentation).

- Toward the existence and uniqueness of solutions for fractional integro differential equations under uncertainty, *2nd International Conference on Mathematical Sciences and Statistics* (ICMSS2016), January 2016, Kuala Lumpur, Malaysia. AIP Proceeding, **(Oral Presentation).**

- On new solutions of linear system of first-order fuzzy differential equations with fuzzy coefficient, *1st international conference on intelligent decision science*, September 2015, Dubai, UAE.

- An Iterative Method for Solving Fuzzy Fractional Differential Equations, *International Conference on Soft Computing in Data Science 2015 (SCDS2015),* Putrajaya, Malaysia, September 2015, Springer Conference Proceeding, **(Oral Presentation).**

- Fuzzy Finite Laplace Transforms, *2nd International Conference on Statistical Applications in Science, Business and Engineering (ICSSBE2015)*, Putrajaya, Malaysia, September 2015, **(Oral Presentation).**

- A fractional multistep method for solving a class of linear fractional differential equations under uncertainty, *7TH INTERNATIONAL CONFERENCE ON RESEARCH AND EDUCATION IN MATHEMATICS (ICREM 7)*, Kuala Lumpur, Malaysia, August 2105, IEEE Proceeding, **(Oral Presentation).**

- Toward the existence of solutions of fractional sequential differential equations with uncertainty, *Fuzzy Systems (FUZZ-IEEE), World Congress on Computational Intelligence*, Istanbul, Turkey, August 2015, IEEE Proceeding, **(Oral Presentation).**

- On a numerical solution for fuzzy fractional differential equation using an operational matrix method, *International Symposium on Mathematical Sciences and Computing Research (iSMSC)*, Kuala Lumpur, Malaysia, May 2015, **(Oral Presentation).**

- An Efficient Fuzzy Fractional Model for Chemical Reactions arising in Palm Oil and its Approximate Solution, *International Conference on Applied Sciences & Industrial Technology*, Port Dickson, Malaysia February 2015, **(Oral Presentation).**

- AN APPROXIMATION SOLUTION OF FUZZ DIFFERENTIALEQUATIONS USING A NEW TWO STEP RK METHOD, *International Conference for Mathematics, Statistics and Financial Mathematics (ICMSFM2014)*, Malaysia, November 2014, **(Oral Presentation).**

- Nearest interval-valued approximation of interval-valued fuzzy numbers, 3rd *International Conference on Mathematical Applications in Engineering*, Malaysia, September 2014, **(Oral Presentation).**

- Some bounds of solution of first order dual equations under uncertainty, *Regional Fundamental Science Congress*, UPM, Malaysia, August 2014, **(Oral Presentation).**

- FTFBE: A numerical approximation for fuzzy time-fractional Bloch equation, *Fuzzy Systems (FUZZ-IEEE), World Congress on Computational Intelligence*, China, July 2014, IEEE proceeding pp. 418-423, **(Oral Presentation).**

- A Legendre Approximation for Solving a Fuzzy Fractional Drug Transduction Model into the bloodstream, *Advanced Soft Computing and Data Mining Conference*, June 2014, Kuala Lumpur, Malaysia, Springer Conference Proceeding, **(Oral Presentation).**

- A Runge-Kutta method with lower function evaluations for solving hybrid fuzzy differential equations, *5th Asian Conference of Intelligent Information and Database Systems (ACIIDS 2013)*, March 2013, Kuala Lumpur, Malaysia, Springer Conference Proceeding

- Extended Simpson rule for solving first order Fuzzy Differential Equations using Generalized Differentiability, *International Conference on Mathematical Sciences and Statistics (ICMSS 2013)*, February 2013, Kuala Lumpur, Malaysia, Springer Conference Proceeding.

- A three stage fourth order Runge-Kutta composite method for solving fuzzy Ordinary differential equations using Characterization Theorem, *International Conference on Mathematical Sciences and Statistics (ICMSS 2013)*, February 2013, Kuala Lumpur, Malaysia, **(Oral Presentation).**

- Numerical Solutions of Fuzzy Differential Equations using Predictor Corrector Method under Generalized Differentiability. *International Conference on Computer Engineering & Mathematical Sciences (ICCEMS 2012)*. August 2012. Kuala Lumpur, Malaysia, **(Oral Presentation).**

- Extended Midpoint method for solving fuzzy differential equations, *IEEE Symposium on Humanities, Science and Engineering (SHUSER 2012)*, Jun 2012, Kuala Lumpur, Malaysia, IEEE Proceeding, **(Oral Presentation).**

- An Improved Runge-Kutta Method for Solving Fuzzy Differential Equations Under Generalized Differentiability, *2nd International Conference in Fundamental and Applied Sciences*, June 2012. Kuala Lumpur, Malaysia, AIP Conference Proceeding, **(Oral Presentation).**

- Solutions of Interval Differential Equations under Generalized Hukuhara Difference, *ICSTE 2011*, August 2011, Kuala Lumpur, Malaysia. ASME Press, **(Oral Presentation).**

- A scale invariant moving finite element method for solving nonlinear diffusion equations, *42nd Annual Iranian Mathematics Conference*, September 2011, Vali-e-Asr University, Rafsanjan, Iran, **(Poster Presentation).**

- An artificial neural network method for the solution of porous medium equations, *42nd Annual Iranian Mathematics Conference*, September 2011, Vali-e-Asr University, Rafsanjan, Iran, **(Poster Presentation).**

- An artificial neural network method for solving thin film equations, *1st Iranian National Conference on Chaos, Fractal and Complex systems*, December 2011, Islamic Azad University, Mashhad, Iran, **(Oral Presentation).**

- Numerical simulation of tumor development stages using artificial neural network, *3rd Iranian National Conference on Applications of Mathematics and Control Theory in Medical Sciences*, December 2011, Islamic Azad University, Bojnord, Iran, **(Poster Presentation).**

- A moving finite element method for the numerical solution of nonlinear partial differential equations, *40th Annual Iranian Mathematics Conference*, September 2009, Sharif University of Technology, Tehran, Iran, **(Oral Presentation).**

- A scale invariant moving finite element method based on a conservation law, *39th Annual Iranian Mathematics Conference*, August 2008, Shahid Bahonar University of Kerman, Kerman, Iran, **(Poster Presentation).**

- Gradient weighted moving finite element method with local time step refinement, *39th Annual Iranian Mathematics Conference*, August 2008, Shahid Bahonar University of Kerman, Kerman, Iran.

- A numerical method for solving time-dependent partial differential equations by using moving mesh methods based on mass conservation law, *38th Annual Iranian Mathematics Conference*, September 2007, University of Zanjan, Zanjan, Iran, **(Poster Presentation).**

Invited Talks

- **Workshop on Introduction to Fuzzy Settings Theory and Its Applications**, Institute for Mathematical Research, Universiti Putra Malaysia, 12 December 2018.

- **4th Seminar and Workshop on Numerical Analysis (SAWONA2018)**, Institute for Mathematical Research, Universiti Putra Malaysia, 3-4 April 2018.
- **Workshop on Computational Mathematics**, Department of Mathematics, Universiti Putra Malaysia, 1-2 August 2017.

- **Workshop on Fuzzy Setting Theory with Applications to differential equations**, Department of Mathematics, Universiti Putra Malaysia, 11-12 Feb 2015.

Conferences/ Workshops attended

- **8th International Conference on Mechanical and Manufacturing Engineering (ICME'17),** 22-23 July 2017, Langkawi, Malaysia.
- **Effective Proposal Preparation for European Postdoctoral Research Fellowships, EURAXESS ASEAN**, 14 June 2017, University of Malaya**.**
- **Advanced Materials Conference (AMC 2016),** 28-29 November 2016, Langkawi, Malaysia.

- **Seminar and Workshop on Numerical Analysis (SAWONA 2016),** 26-27 April 2016, UPM, Malaysia.
- **Workshop of Nanocellulous: Fundamental to Applications,** 21-22 March 2016, Institute of Tropical Forestry and Forest Products (INTROP), UPM, Malaysia.
- **Publishing in Q1 Journals Workshop**, 7-8 April 2015, IEEE Electron Device Society, Malaysia.
- **Malaysia Polymer International conference 2015 (MPIC 2015),** 10-11 Jun 2015, Putrajaya, Malaysia.
- **7th Iranian Elite Talks,** 17 February 2015, UPM, Malaysia.
- **Workshop on Advanced Materials and Nanotechnology 2014 (WAMN 2014),** 25-26 August 2014, UPM, Malaysia
- **UKM-FLINDERS Nanotechnology Summer School 2013 (NSS 2013),** 24-27 Jun 2013, UKM, Malaysia
- **Seminar and Workshop on Numerical Analysis (SAWONA 2013),** 23-24 April 2013, UPM, Malaysia.

Editor and Referee in peer-reviewed journals and conferences

I. Associate Editor

- Progress in Fractional Differentiation and Applications, An International Journal, Natural Sciences Publishing. (SCOPUS indexed)

II. Guest Editor

- Special Issue on Advances in dynamical systems with uncertain parameters: Applications to mechanical systems, *Advances in Mechanical Engineering*, SAGE Journals, IF: 0.640, August 2016.

III. Referee (Total: 57)

- IEEE Transaction on Fuzzy Systems, (IEEE), (ISI).
- Fuzzy Sets and Systems (Elsevier), (ISI)
- Applied Mathematics and Computation (Elsevier), (ISI)
- Chaos, An Interdisciplinary Journal of Nonlinear Science, (AIP), (ISI).
- Soft computing, (Springer), (ISI).
- Journal of Computational and Applied Mathematics, (Elsevier), (ISI).
- Journal of Applied Mathematics and Computations, (Elsevier), (ISI).
- Mathematics and Computers in Simulation, (Elsevier), (ISI).
- Fuzzy Optimization and Decision Making, (Springer), (ISI).
- Mathematical Methods in Applied Sciences, (Wiley), (ISI).
- Journal of Intelligent and Fuzzy Systems (ISI)
- Journal of Vibration and Control (ISI)
- Neural Computing and Applications, (Springer), (ISI).
- Physica Scripta, (IOP Science), (ISI)
- Plos One, (ISI).
- Turkish journal of Mathematics (ISI).
- Advances in Difference Equations (ISI).
- Applied Mathematics & Information Sciences (Natural Sciences Publishing), (ISI).
- FILOMAT, (ISI)

- Journal of Nonlinear Sciences and Applications (JNSA), (ISI)
- Open Mathematics, (De Gruyter), (ISI)
- Open Physics, (De Gruyter), (ISI)
- Nonlinear Engineering- Modeling and Application, (De Gruyter), (Scopus)
- Measurement and Control, (SAGE), (ISI)
- Advances in Mechanical Engineering, (SAGE), (ISI).
- Journal of Soft Computing and Applications (ISC)
- Journal of Applied Mathematics and Computing, (Springer), (Scopus).
- Malaysian Journal of Mathematical Sciences, (Scopus)
- Multidiscipline Modeling in Materials and Structures, (Emerald), (Scopus)
- Axioms, (MDPI), (Scopus)
- International Journal of Mathematical Modelling and Numerical Optimisation, (Inderscience), (Scopus).
- International Journal of Differential Equations, (Hindawi), (Scopus).
- Abstract and Applied Analysis, (Hindawi), (Scopus).
- Advances in Fuzzy Systems, (Hindawi), (Scopus).
- British Journal of Mathematics & Computer Science, (Scopus).
- Ain Shams Engineering Journal, Elsevier. (Scopus).
- International Journal of Operational Research (IJOR), Inderscience. (Scopus).
- Journal of Taibah University for Science, Elsevier, (Scopus).
- Journal of King Saud University - Science, Elsevier, (Scopus).
- Alexandria Engineering Journal, Elsevier, (Scopus).
- Mathematics in Computer Science, Springer, (Scopus).
- Computation, MDPI, (Scopus)
- Computational Methods for Differential Equations, University of Tabriz, (ESCI)
- Moroccan Journal of Pure and Applied Analysis, Springer
- Annals of Fuzzy Mathematics and Informatics (Mathematical Reviews).
- Soft Computing in Civil Engineering (DOAJ)
- Rocky Mountain Mathematics Journal
- International Journal of Applied and Computational Mathematics, Springer
- Heliyon, Elsevier
- International Journal of Applied Physics and Mathematics.
- Mathematical and Computational Applications, MDPI.
- International Journal of Industrial Mathematics, (ISC).
- zbMATH
- *Member of Scientific Committee* at International Workshop on Mathematical Methods in Engineering, April 27-29, 2017, Ankara, Turkey.
- *Referee* at 7th International Conference on Research and Education in Mathematics (ICREM7), August 2015, Kuala Lumpur, Malaysia.
- *Referee* at 2nd International Conference on Mathematical Sciences and Statistics (ICMSS2016), January 2016, Kuala Lumpur, Malaysia.
- *Referee* at 3rd International Conference on Mathematical Sciences and Statistics (ICMSS2018), February 2018, Putrajaya, Malaysia.
- *Referee* at INTERNATIONAL QUANTITATIVE RESEARCH AND APPLICATIONS CONFERENCE 2018 (IQRAC2018), August 2018, Serawak, Malaysia.

Research Interests

- Fractional Calculus
- Fuzzy set and systems
- Interval Arithmetic

- Spectral Methods
- Finite Element Methods
- Mathematical modeling
- Numerical simulations using MATLAB

Research Credits

Google Scholar Citations

https://scholar.google.com/citations?user=DLvhmvYAAAAJ&hl=en
Citations: 497
h-index: 12
i10-index:16

***Scopus ID:* 55602202100**

h-index: 10
Citations: 350 total citations by 193 documents

Publons Profile:

publons.com/a/1304086/

IT skills

- High Knowledge of MATLAB Programming
- Enough Knowledge of C++ Programming
- High knowledge of LATEX Environment
- Familiar with MICROSOFT OFFICE

Linguistic skills

- Farsi- Native Speaker
- English- Fluent

Research funds Achievements

(Total Projects: 12; Total Budget: RM 900000.00~$217000.00)

- Fundamental research grant scheme (FRGS), Title: **A novel hybrid model based on Geometric picture fuzzy sets and fuzzy differential equations simulating medical diagnosis**, Year 2019-2021, Provided by Ministry of Higher Education, Malaysia, Project No.: Accepted, Budget: RM 58000.00, **(Leader of the Project).**

- Fundamental research grant scheme (FRGS), Title: **A novel numerical technique for solving Fractional-order Tumor Model Under Uncertainty based on Fractional Step Runge-Kutta method**, Year 2019-2021, Provided by Ministry of Higher Education, Malaysia, Project No.: Accepted, Budget: RM 49000.00. **(Ali Ahmadian prepared the first draft). (Member of the Project).**

- **International Joint Research Grant,** Title: **Spectral solution for fractional**

dynamical models with nonsingular kernel derivative under interval arithmetic: Applications to applied sciences*,* Provided by University Mediterranea of Reggio Calabria, Reggio Calabria, **ITALY,** Budget: €3000.00. **(Leader of the Project).**

- University Grant for High Impact Research (Putra-GPB), Title: **Hybrid methods for direct integration for special higher order code ordinary differential equations**, Year 2017-2019, Provided by Universiti Putra Malaysia, Malaysia, Project No.: UPM/700-1/GPB/2017/9543500, Budget: RM 73000.00. **(Member of the Project).**

- University Grant under Islamic Azad University-Science and Research Branch, Tehran, Iran, Title: **Numerical methods for the solution of fuzzy differential equations of fractional-order**, Provided by Iran's National Elites Foundation, Iran, 2017-2018, Budget: $5000. **(Ali Ahmadian prepared the first draft). (Member of the Project).**

- University Grant for Multidisciplinary Research (Putra-IPB), Title: **Spherical nanocellulose-nanoSilver hybrid: Synthesis, cytotoxicity effects on human cells and mathematical simulation of the governing pharmacokinetics-pharmacodynamic (PKPD) models for the optimization of drug delivery system**, Year 2017-2019, Provided by Universiti Putra Malaysia, Malaysia, Project No.: GP-IPB-9542402, Budget: RM 68000.00 (Total budget: RM 280000.00), (**Ali Ahmadian prepared the first draft [Mathematical part]**). **(Member of the Project).**

- Fundamental research grant scheme (FRGS), Title: **An Operational Matrix method for the Numerical Simulation of the Fuzzy Fractional Pantograph Equations based on a Tau Method**, Year 2015-2017, Provided by Ministry of Higher Education, Malaysia, Project No.: FRGS/1/2015/SG04/UPM/01/2, Budget: RM 74000.00, (**Ali Ahmadian prepared the first draft**). **(Member of the Project).**

- Fundamental research grant scheme (FRGS), Title: **FULL COMPONENT WISE PARTIONING, A STATE OF THE ART METHOD FOR SOLVING ORDINARY DIFRENTIAL EQUATIONS**, Year 2015-2017, Provided by Ministry of Higher Education, Malaysia, Project No.: FRGS/1/2015/ST06/ UPM/01/2, Budget: RM 80000.00. **(Member of the Project).**

- Fundamental research grant scheme (FRGS), Title: **Solution of Time Bloch Equations under Type-2 Fuzzy Differentiability by Fuzzy Laplace Transforms**, Year 2014-2016, Provided by Ministry of Higher Education, Malaysia, Project No.: FRGS/2/2014/SG04/ UPM/02/2, Budget: RM 94000.00,
(Ali Ahmadian prepared the first draft). **(Member of the Project).**

- University grant (Putra), Title: **A NEW CLASS OF BLOCK BACKWARD DIFFERENTIATION FORMULA FOR THE PARALLEL SOLUTION OF FIRST ORDER STIFF IVPs AND SECOND ORDER**, Year 2013-2015, Provided by Universiti Putra Malaysia, Malaysia, Project No.: GP-IBT/ 2013/9410100, Budget: RM 132200.00. **(Member of the Project).**

- Exploratory research grant scheme (ERGS), Title: **A Legendre tau method for solving fractional dynamical systems with uncertainty**, Year 2013-2015, Provided by Ministry of Higher Education, Malaysia, Project No.: ERGS/1-2013/5527182, Budget: RM 88000.00, **(Ali Ahmadian prepared the first draft). (Member of the Project).**

- Fundamental research grant scheme (FRGS), Title: **Accelerated Runge-Kutta Method for solving Second order fuzzy differential equations**, Year 2012-2014, Provided by Ministry of Higher Education, Malaysia, Project No.: 02-01-12-1142FR, Budget: RM 146000.00, **(Ali Ahmadian prepared the first draft). (Member of the Project).**