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# Javad Farokhi-Ostad

## About me

I was born in a religious family in the holy city of Mashhad at 1983. I finished high school in 2002 as an excellent student (at Shahid Farazi-Mashhad). I was accepted to Birjand University for a bachelor's degree in mathematics at the October of the same year. In the student period, in addition to studying science, I was also engaged in cultural and social activities, so that in 2006, as a cultural elite with a caravan the elites of Umrah we were traveled to Meca. I am very interested in studying religious sciences.

In Mathematics;

My research interests and experiences consist of a wide range between pure mathematics (Functional Analysis, Operator Theory) and applied mathematics (Soft and Rough Set Theory, Data Mining, Signal processing, ...).

## Current position

### Assistant Professor,

Department of Basic Sciences,  
Birjand University of Technology,  
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## Born

Faridy, July 1, 1983, Mashhad, Iran

## Nationality and Native Language

Iranian , Persian

## Areas of specialization

Functional Analysis

Operator Theory

Data Mining

Rough set theory

## Education

### 2014-2019: PHD in Functional Analysis,

*Received First Class Honour*

Birjand University, Birjand, Iran.

Title of Ph.D Dissertation: “Modular operators on Hilbert  $C^*$ -modules and some results about their products” Score: 19.25 from 20.

Ph.D. Supervisor: Dr Ali Reza Janfada.

### 2006-2008: MSc in Harmonic Analysis

*Received First Class Honour*

Hakim Sabzevari University, Sabzevar, Iran.

Title of M.Sc Thesis: “Gabor frame and its relation to the principle of qualitative uncertainty”, Score: 19.25 from 20.

M.Sc. Supervisor: Professor Ali Akbar Arefijamaal.

### 2002-2006: B.Sc. in Pure Mathematics

Birjand University, Birjand, Iran.

## Teaching

Calculus I, Calculus II, Differential Equations, Linear Algebra, Fundamentals of Mathematical Analysis, Fundamentals of Mathematical Sciences, Fundamentals of Matrices and Linear Algebra, Complex functions, Numerical Method, ...

## Membership of societies

[Iranian Mathematical Society](#),

[Representative of the IMS at Birjand University of Technology](#)

## Publications & talks

### Journal articles

1. A. A. Estaji, T. Haghdadi and **J. Farokhi-Ostad**, L-ideals and rough sets based on L-ideals, *Knowledge and Information Systems*, 2021, To appear.
2. **J. Farokhi-Ostad**, Mahdi Mohammadzadeh Karizaki, Mahdi Aliakbari and Amin Hosseini, Solutions for the mixed Sylvester operator equations, *Facta Universitatis. Series: Mathematics And Informatics*, 2021, Accepted
3. M. Mohammadzadeh Karizaki and **J. Farokhi-Ostad** , New identities of Moore–Penrose inverses of operator products and their reverse order law, *Aequationes Mathematicae*, 2021, Accepted.
4. H. Baghani, J. Alzabut, **J. Farokhi-Ostad** and J. J. Nieto, Existence and uniqueness of solutions for a coupled system of sequential fractional differential equations with initial conditions, *Journal of Pseudo-Differential Operators and Applications*, 2020, Vol. 11, No. 4, 1731-1741.
5. A. A. Estaji, T. Haghdadi and **J. Farokhi-Ostad**, Proximity Boolean algebra, *Filomat*, 2020, Accepted.
6. **J. Farokhi-Ostad** and A. R. Janfada, Two equal range operators on Hilbert  $C^*$ -modules, *Sahand Communications in Mathematical Analysis*, 2020, To appear.
7. **J. Farokhi-Ostad** and A. R. Janfada, On Closed Range  $C^*$ -modular Operators, *The Australian Journal of Mathematical Analysis and Applications*, 2018, Vol. 15, No. 2, 1–7.
8. **J. Farokhi-Ostad** and A. R. Janfada, Products of EP operators on Hilbert  $C^*$ -modules, *Sahand Communications in Mathematical Analysis*, 2018, Vol. 10, No. 1, 61–71.
9. **J. Farokhi-Ostad** and M. Mohammadzadeh Karizaki, The reverse order law for EP modular operators, *J. Math. Computer Sci* , 2016, Vol. 16, 412–418.
10. **J. Farokhi-Ostad**, O. Baghani and H. Baghani, Robust Error Analysis of Solutions to Nonlinear Volterra Integral Equation in  $L^p$  Spaces, *The Australian Journal of Mathematical Analysis and Applications*, 2016, Vol. 13, No. 1, 1–7.
11. **J. Farokhi-Ostad** and M.H. Rezaei-Gol, Some Properties of Closed Range Operators, *International Journal of Mathematics Trends and Technology (IJMTT)*, 2016, Vol. 38, No. 3, 172–177.

## Journal articles

12. J. Farokhi-Ostad and A. R. Janfada, Convergence of bounded sequences in Hilbert  $C^*$ -modules equipped with orthonormal basis, *Int J. Nonlinear . Anal. Apple.*, Accepted.
13. M.H. Rezaei-Gol and J. Farokhi-Ostad. Especially Coupled Fixed Point Theorems in Partially Fuzzy Normed Space, *International Journal of Mathematics Trends and Technology (IJMTT)*, 2016, Vol. 38, No. 4, 172–177.
14. A. A. Estaji, T. Haghdadi and J. Farokhi-Ostad, Fuzzy nexus over an ordinal, *Journal of Algebraic Systems*, 2015, Vol, 31, No. 1, 65–82.
15. J. Farokhi-Ostad and A. R. Janfada, On closed range and normal operators in Hilbert  $C^*$ -modules, *Wavelets and Linear Algebra*, Under Review.
16. A. A. Estaji, J. Farokhi-Ostad and T. Haghdadi, Proximity weight and compactification on Proximity Boolean algebras, *Bulletin of the Iranian Mathematical Society*, Under Review.
17. H. Baghani, J. Alzabut and J. Farokhi-Ostad, New existence and uniqueness result for fractional BagleyTorvik differential equation, *Filomat*, Under Review.

## Book

**1399 J. Farokhi-Ostad**, *Moore - Penrose inverse and its applications in operator theory*, (Waiting for permission), 4derakht Publishers, Birjand, Iran.

## Seminar articles and talks

**1 J. Farokhi-Ostad**, G-frames and special modular operators, 51th Annual Iranian Mathematics Conference (AIMC51), 16-19 Feb, 2021, University of Kashan, Iran.

**2 J. Farokhi-Ostad**, M. Mohammadzadeh Karizaki and M. Aliakbari, Some results about generalized inverse for modular operators based on its components, 51th Annual Iranian Mathematics Conference (AIMC51), 16-19, Feb 2021, University of Kashan, Iran.

**3 M. Mohammadzadeh Karizaki, J. Farokhi-Ostad and M. Aliakbari**, Reverse order law for Moore-Penrose inverses of operators with acting involution, 51th Annual Iranian Mathematics Conference (AIMC51), 16-19, Feb 2021, University of Kashan, Iran.

**4 J. Farokhi-Ostad**, Operational Equations Systems, 10th Seminar on Linear Algebra and its Applications, 16-19, August 2020, Kerman, Iran.

**5 M. Mohammadzadeh Karizaki and J. Farokhi-Ostad**, The solution of the operator equations system, 4th Seminar on Operator Theory and Its Applications, March 7-8, 2018, University of Bojnord, Iran.

**6 J. Farokhi-Ostad and A. R. Janfada**, Triple reverse order law for some Moor-Penrose invertible operators, 4th Seminar on Operator Theory and Its Applications, March 7-8, 2018, University of Bojnord, Iran.

**7 J. Farokhi-Ostad and M. Mohammadzadeh Karizaki**, A system of mixed Sylvester-type of operator equations, 4th Seminar on Operator Theory and Its Applications, March 7-8, 2018, University of Bojnord, Iran.

**8 J. Farokhi-Ostad, A. R. Janfada** A solution of operator equation on Hilbert  $C^*$  modules, 9th Seminar on Linear Algebra and its Applications, 5-6 July, 2017, University of Tabriz, Iran.

**9 J. Farokhi-Ostad, A. R. Janfada** A characterization for Moore-Penrose invertible operators on Hilbert  $C^*$  modules, 9th Seminar on Linear Algebra and its Applications, 5-6 July, 2017, University of Tabriz, Iran.

**10 J. Farokhi, A. R. Janfada**, Closed range of two product projection, 5th Seminar on Functional Analysis and its Applications, July 12-13, 2017, University of Zanjan, Iran.

**11 J. Farokhi-Ostad, A. R. Janfada**, A characterization of EP operators on Hilbert  $C^*$  modules, 5th Seminar on Functional Analysis and its Applications, July 12-13, 2017, University of Zanjan, Iran.

**12 J. Farokhi-Ostad, A. R. Janfada**, On the norm inequality of Moor-Penrose inverse based on modular operators, 48th Annual Iranian Mathematics Conferences (AIMC48), August 22-25, 2017, Bu-Ali Sina University Hamedan, Iran.

**13 J. Farokhi-Ostad, A. R. Janfada**, On the closedness of the range of the product of modular operators, 9th National Conference of Mathematics of Payame Noor University, 17-18 October 2017, Kerman, Iran.

## Seminar articles and talks

- 14 J. Farokhi-Ostad and T. Haghdadi, Fuzzy Wavelet: New definition, 3th National Industrial Mathematics Conference 26 May 2016, Tabriz, Iran.
- 15 J. Farokhi-Ostad and T. Haghdadi, The extended of coupled fixed point theorem, 3th National Industrial Mathematics Conference 26 May 2016, Tabriz, Iran.
- 16 A. R. Janfada and J. Farokhi-Ostad, On topological zero divisor graph, 3th National Industrial Mathematics Conference 26 May 2016, Tabriz, Iran.
- 17 J. Farokhi-Ostad and M. Mohammadzadeh Karizaki Commuting modular operator, 2nd seminar on operator theory and its applications, 11-12 November 2015, Shiraz University, Iran.
- 18 M. Mohammadzadeh Karizaki and J. Farokhi-Ostad The reverse order low, 2nd seminar on operator theory and its applications, 11-12 November 2015, Shiraz University, Iran.
- 19 T. Haghdadi and J. Farokhi-Ostad, Admissibility conditions for groups generated by two matrices, 2th National Industrial Mathematics Conference 27 May 2015, Tabriz, Iran.
- 20 H. Baghani, J. Farokhi-Ostad and O. Baghani, A new method for error analysis in generalized Volterra integral equations in  $L^p$  space, 46th Annual Iranian Mathematics Conference (AIMC 46), 25-28 August 2015, Yazd University, Iran.
- 21 H. Baghani, J. Farokhi-Ostad and O. Baghani, On existence, uniqueness and stability of integral equation of a nonlinear, 46th Annual Iranian Mathematics Conference (AIMC 46), 25-28 August 2015, Yazd University, Iran.
- 22 J. Farokhi-Ostad On Existence and Uniqueness of Solutions of Volterra-Fredholm on Banach-Valued Integral Equation, 2th National Industrial Mathematics Conference, 27 May 2015, Tabriz, Iran.
- 23 J. Farokhi-Ostad, H. Baghani and O. Baghani, Fixed point results for mappings satisfying weakly contractive condition in partially ordered complete metric spaces, 21th Seminar on Mathematical Analysis and its Applications, 26-27 November 2014, Hamedan, Iran.
- 24 M. Mohammadzadeh Karizaki, J. Farokhi-Ostad, M. Hassani, The product of operators matrix with closed range, 21th Seminar on Mathematical Analysis and its Applications, 26-27 November 2014, Hamedan, Iran.
- 25 J. Farokhi-Ostad, H. Baghani and O. Baghani, Existence and uniqueness of  $L^1$  solutions for integral equation in several variable, 21th Seminar on Mathematical Analysis and its Applications, 26-27 November 2014, Hamedan, Iran.
- 26 A. A. Estaji, T. Haghdadi, and J. Farrokhi Ostad, Fuzzy nexus over an ordinal, 24th Iranian Algebra Seminar, November 12-13, 2014, Kharazmi University, Iran.

## Seminar articles and talks

27 J. Farokhi-Ostad and H. Baghani, Common fixed point theorems involving two pairs of weakly compatible mappings, 45th Annual Iranian Mathematics Conference (AIMC45), 26-29 August 2014, Seman, Iran.

28 M. Mohammadzadeh Karizaki and J. Farokhi-Ostad, Moore penrose inverse of product bounded adjointable module maps., 45th Annual Iranian Mathematics Conference (AIMC45), 26-29 August 2014, Seman, Iran.

29 J. Farokhi-Ostad and H. Baghani, Moore penrose inverse of product bounded adjointable module maps., 44th Annual Iranian Mathematics Conference (AIMC44), 27-30 August 2013, Mashhad, Iran.

30 J. Farokhi-Ostad, The new Expression of uncertainly principle In mathematics and Its relation with Electromagnet, 13th International Conference on Magnet, 4-5 September 2013, Hamat, Tunes.

31 J. Farokhi-Ostad, EP modular operators and triple reverse order law, 1th Seminar on Harmonic Analysis and Applications, 21-22 January 2013, Isfahan, Iran.

32 M. Mohammadzadeh Karizaki and J. Farokhi-Ostad Admissibility Conditions for Groups Generated by Two Matrices Hilbert  $C^*$  modules, 1th Seminar on Harmonic Analysis and Applications, 21-22 January 2013, Isfahan, Iran.

## Computer software

- Latex
- Xepersian
- Mathematica
- Microsoft Word
- Microsoft Excel
- Microsoft PowerPoint

## Research Project

**J. Farokhi-Ostad**, *Reverse Order Law in Hilbert  $C^*$ -Modules*, Birjand, Iran, 1396.

**J. Farokhi-Ostad** and T. Haghdadi, *Evaluation of customers of Tadjizkaran Shargh Company based on a mathematical model taken from soft and rough sets*, in Persian, Mashhad, Iran. 1398-1399.

## Services to Professional Communities

Referee for some National and International Research Journals