



NAME:

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EDUCATION

Ph.D. in Pure Mathematics, Mathematical Analysis, Yazd University, Iran, 2015 (2010-2015)

Title of Ph. D. Thesis: Hilbert C^* -modules operators and operator matrices with applications.

M. Sc. in Pure Mathematics, Mathematical Analysis, Yazd University, Iran, 2007 (2005-2007)

Title of Thesis: Best approximation by downward sets with applications.

B. Sc. in Applied Mathematics, Yazd University, Iran, 2004 (1999-2004).

RESEARCH INTERESTS

- My research interests are in the field of operator theory and functional analysis. In particular, I am interested in operator inequalities, Hilbert C^* -modules, matrix analysis. Application of functional analysis to matrix theory, General theory of C^* -algebras.

AWARDS AND HONORS

- Obtained second class in M. Sc., Yazd uni., Yazd, Iran, 2007.
- Lecturer, University of Yazd (2008-2014)
- Short-term six-month sabbatical under the direction of professor Mohammad Sal Moslehian, University of Mashhad, Iran, 2014-2015.

PUBLICATIONS

Journal Papers:

- **M. Dehghani**, Characterization of inner product spaces by unitary Carlsson type orthogonalities, *Filomat*, 2022, to appear.
- M. Kian, **M. Dehghani**, M. Sattari, Matricial Radius: A Relation of Numerical Radius with Matricial Range, *Journal of Mathematical Extension*, Vol. 15, No. 3, (2021) (18)1-12.
- **M. Dehghani**, A. Zamani, Characterization of real inner product spaces by Hermite–Hadamard type orthogonalities, *J. Math. Anal. Appl.* **479** (2019) 1364–1382.
- A. Zamani, **M. Dehghani**, On exact and approximate orthogonalities based on norm derivatives, a chapter of book entitled “Ulam type stability”, Springer Nature Switzerland AG 2019.
- **M. Dehghani**, M. B. Dehghani and S.M. Moshtaghioun, Sequentially Right Banach spaces of order p , *Comment. Math. Univ. Carolin.*, (2019), to appear.
- M.Y. Abed, **M. Dehghani** and R. Jahanipur, Approximate ρ_X^Y -orthogonality and its preservation, *Ann. Funct. Anal.* (2019), to appear.
- **M. Dehghani**, M. Abed and R. Jahanipur, A generalized orthogonality relation via norm derivatives in real normed linear spaces, *Aequationes Math.* **93** (2019), no. 4, 651-667.
- **M. Dehghani**, M. Kian, On matricial ranges of some matrices, *J. Math. Ext.* **13**, No. 1, (2019), 83-102.
- M.B. Dehghani, S.M. Moshtaghioun and **M. Dehghani**, On the Limited p -Schur Property of Some Operator Spaces, *Int. J. Anal. Appl.*, **16** (1) (2018), 50-61.
- **M. Dehghani** and A. Zamani, Linear mappings approximately preserving ρ_* -orthogonality. *Indag. Math. (N.S.)* **28** (2017), no. 5, 992-1001.
- **M. Dehghani**, M. Kian and Y. Seo, Matrix power means and the information monotonicity. *Linear Algebra Appl.* **521** (2017), 57-69.
- M. Kian and **M. Dehghani**, Extension of the Kantorovich inequality for positive multilinear mappings. *Filomat* **31** (2017), no. 20, 6473-6481.
- M.S. Moslehian, A. Zamani, **M. Dehghani**, Characterizations of smooth spaces by ρ_* -orthogonality. *Houston J. Math.* **43** (2017), no. 4, 1187-1208.

- M. Kian and **M. Dehghani**, A noncommutative convexity in C^* -bimodules. *Surv. Math. Appl.* 12 (2017), 7-21.
- **M. Dehghani**, M. Kian. Y. Seo, Developed matrix inequalities via positive multilinear mappings, *Linear Algebra Appl.*, 484 (2015), 63-85.
- M. S. Moslehian and **M. Dehghani**, Operator convexity in Krein spaces, *New York J. Math.* 20 (2014) 133-144.
- **M. Dehghani** and S. M. S. Modarres, Operator arithmetic-harmonic mean inequality on Krein spaces, *J. Math. Ext.* Vol, 8, No. 1, (2014) 59-68.
- **M. Dehghani** and S. M. S. Modarres, M. S. Moslehian, Positive block matrices on Hilbert and Krein C^* -modules, *Surv. Math. Appl.* 8 (2013) 23-34.
- S. M. Modarres and **M. Dehghani**, New results for best approximation on Banach lattices, *Nonlinear Analysis: Theory, Methods & Applications*, Vol 70, Issue 9, (2009) 3342-3347.
- **مهدی دهقانی** و رسول کاظمی، توابع اندازه پذیر با مجموعه معینی از نماهای انتگرال پذیری، ریاضی و جامعه، جلد ۲، شماره ۱ (۱۳۹۴)، صص ۴۵-۵۰.
- رسول کاظمی و **مهدی دهقانی**، مجموعه‌های انتخابی از یک سری نامتناهی، فرهنگ و اندیشه ریاضی، سال ۳۷، شماره ۶۳ (پاییز و زمستان ۱۳۹۷)، صص. ۱۶۵ تا ۱۷۳.
- **مهدی دهقانی**، تعامد متساوی‌الساقین یکانی از نوع هرمیت-هادمارد در فضاهای نرم‌دار، موجک‌ها و جبر خطی، ۸ (۳)، ۱۴۰۱، ۱۷-۳۶.
- **مهدی دهقانی**، فضاهای ضرب داخلی: از اتحاد متوازی الاضلاع تا سه گانه جیمز، فرهنگ و اندیشه ریاضی، ۱۳۹۹، سال ۳۹، (شماره ۶۷) پاییز و زمستان ۱۳۹۹، صص ۱۰۷ تا ۱۲۳.
- رسول کاظمی، **مهدی دهقانی**، انتگرال‌گیری جزء به جزء و تغییر متغیر با کاربردهایی در قضیه گرین و یکتائی جواب معادلات دیفرانسیل عادی (ترجمه)، فرهنگ و اندیشه ریاضی، ۴۰ (۶۹)، ۱۴۰۰، ۱۸۱-۱۶۳.

Conference Papers:

- **M. Dehghani**, Some new characterizations of inner product spaces in terms of HH-I-orthogonality, 52th Annual Iranian Mathematics Conference, 30 August-02 September 2021, Shahid Bahonar University of Kerman, Kerman, Iran.
- **M. Dehghani**, Matricial ranges of 2 by 2 matrices: an overview, The 6th Seminar on Functional Analysis and its Applications, University of Isfahan, January 27-28, 2021.
- **M. Dehghani**, M. Kian, Non-commutative convexity in Hilbert C^* -bimodules, 3rd Seminar on Harmonic Analysis and Applications, January 21–22, 2015, University of Yazd, Iran.
- **M. Dehghani**, M. Kian, Multilinear mappings on matrix algebras, 46th Annual Iranian Mathematics Conference, 25-28 August 2015, Yazd university, Iran.
- **M. Dehghani**, Best simultaneous co-approximation in normed linear spaces, Extended Abstracts of the 42nd Annual Iranian Mathematics Conference, 2011 Vali-e-Asr University of Rafsanjan.
- **M. Dehghani**, Some results on Dunford-Pettis property of order p in C^* -algebras, 48th Annual Iranian Mathematics Conference, August, 22-25, 2017, Bu-Ali Sina University, Iran.
- **M. Dehghani**, Counterparts to the information monotonicity of the matrix power means, 2017 workshop on matrices and operators, Institute of Mathematics, Hunan University.
- **M. Dehghani**, On ε - ρ^* -rthogonality in normed linear spaces, The 3rd Seminar on Operator Theory and its Applications 8-9th March 2017, Ferdowsi University of Mashhad, Iran.
- M. Kian, **M. Dehghani**, Matricial radius of Hilbert space operators, The 3rd Seminar on Operator Theory and its Applications 8-9th March 2017, Ferdowsi University of Mashhad, Iran.
- **M. Dehghani**, A new norm derivatives orthogonality relation in normed spaces, 5th Seminar on Operator Theorey and its Applications, 13-14 Mach 2019, Institute for Advanced Studies in Basic Sciences, Zanjan.
- **M. Dehghani**, Some new characterizations of inner product spaces in terms of HH-I-orthogonality, 52th Annual Iranian Mathematics Conference, 30 August-02 September 2021, Faculty of Mathematics and Computer & Mahani Mathematical Research Center Shahid Bahonar University of Kerman, Kerman, Iran.

INVITED REVIEWER FOR JOURNALS

- **Reviewer of the Journal of Mathematical Extension (ISI), Islamic Azad University, Iran.**

GRADUATE AND UNDERGRADUATE COURSES

- **Undergraduate: Calculus I-II, Principles of Mathematical Analysis, Mathematical Analysis, Ordinary Differential Equations, Engineering Mathematics, Introductory Probability and Statistics.**
- **Postgraduate (M. Sc.): Functional analysis and its application in geodesy, Real analysis 1, Operator theory 1.**

COMPUTER SKILLS

Windows, Office, HTML, LaTeX.

LANGUAGE SKILLS

	SPEAKING	READING	WRITING
PERSIAN	VG	VG	VG
ENGLISH	G	VG	G
FERNCH	F	F	P
ARABIC	P	G	P