



Abdullah Bin Abu Baker

Curriculum Vitae

Education

- 2002-2005 **B.Sc. (Honours) in Mathematics**, Aligarh Muslim University, India, % – 71.6.
2005-2007 **M.Sc. in Mathematics**, Aligarh Muslim University, India, % – 72.5.
2007-2013 **Ph.D. in Mathematics**, IIT Kanpur, India, CPI – 8.25.

Ph.D. Thesis

- Title *On Some Classes of Projections in Banach Spaces and Related Topics.*
Supervisor Prof. Sudipta Dutta.
Defence Date September 03, 2013.
Description In this thesis we obtained several results concerning the representation of generalized bi-circular projections on arbitrary Banach spaces. We also proved structure theorems for generalized 3-circular projections on some finite dimensional Banach spaces.

Experience

Research

- Jun-Aug 13 **Visitng Scientist**, INDIAN STATISTICAL INSTITUTE, Bangalore Centre, India.
Worked on some problems in Banach space theory under Prof. T. S. S. R. K. Rao.
Oct-Dec 13 **Postdoctoral Fellow**, NATIONAL SAT-SEN UNIVERSITY, Kaohsiung, Taiwan.
Worked on reflexivity problems under Prof. Ngai-Ching Wong.
Mar 14-Mar 15 **Visitng Scientist**, INDIAN STATISTICAL INSTITUTE, Delhi Centre, India.
Worked on some problems related to the Riemannian mean of positive definite matrices under Prof. Rajendra Bhatia.

Teaching

- Mar-Jul 15 **Assistant Professor**, ALIGARH MUSLIM UNIVERSITY, India.
Jul-Dec 15 **Visiting Faculty**, IIIT ALLAHABAD, India.
Dec 15 - Present **Assistant Professor**, IIIT ALLAHABAD, India.

Ph.D. Students

- 2017-2022 Rahul Maurya, Visiting Scientist, Indian Statistical Institute, Bangalore Centre, India.
Thesis Title: *A study of Some Classes of Operators on Banach Spaces.*

Room No. 5105, Computer Center III, IIIT – Allahabad, U. P. 211015, India

☎ +91-532-292 2537 • ✉ abdullah@iiita.ac.in

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Publications

- (With Rahul Maurya) *Reflexivity of isometries on spaces of continuously differentiable functions*, **Ricerche di Matematica**, to appear.
- (With Fernanda Botelho) *Numerical index of vector-valued function spaces*, **Linear and Multilinear algebra**, to appear.
- (With Rahul Maurya) *Projections in the convex hull of isometries on $C^2[0, 1]$* , **Positivity** 25 (2021), no. 5, 2003-2016.
- (With Rahul Maurya) *Local isometries on subspaces and subalgebras of function spaces*, **Operators and Matrices** 16 (2022), no. 1, 11-18.
- *Reflexivity of isometries of order n* , **Colloquium Mathematicum**, 159 (2020), no. 2, 223-230.
- *Generalized 3-circular projections for unitary congruence invariant norms*, **Banach J. Math. Anal.**, 10 (2016), no. 3, 451-465.
- (With S. Dutta) *Structures of generalized 3-circular projections for symmetric norms*, **Proc. Indian Acad. Sci. Math. Sci.**, 126 (2016), no. 2, 241-252.
- (With Fernanda Botelho & James Jamison) *Representation of generalized bi-circular projections on Banach spaces*, **Acta Sci. Math. (Szeged)** 80 (2014), no. 3-4, 591-601.
- (With S. Dutta) *Projections in the convex hull of three surjective isometries on $C(\Omega)$* , **J. Math. Anal. Appl.**, 397 (2011), no. 2, 878-888.

Workshops Conducted

- Dec 31, 21 - Workshop on Geometry of Banach Spaces and its Applications (WGBSA-2021-22), IIIT
Jan 02, 22 Allahabad, India.
- Jan 14-16, 22 Workshop on Functional Analysis and its Applications (WFAA-2022), IIIT Allahabad,
India.

Talks/International Visits

- Dec 21 "Numerical index of vector-valued function spaces", **Invited Speaker**, Workshop on Geometry of Banach Spaces and its Applications, IIIT Allahabad, India.
- Jan 22 "Algebraic reflexivity of isometries on Banach spaces", **Invited Speaker**, Workshop on Geometry of Banach Spaces and its Applications, IIIT Allahabad, India.
- Jan 22 "Foundations of Functional Analysis", **Invited Speaker**, Workshop on Functional Analysis and its Applications, IIIT Allahabad, India.
- Jan 22 "Projections in the convex hull of isometries on Banach spaces", **Invited Speaker**, Workshop on Functional Analysis and its Applications, IIIT Allahabad, India.
- September 20 "Some Glimpses of Probability Theory", **Speaker at technical session (Online Mode)**, Faculty Development Programme on "Data Sciences", Department of Information Science and Engineering, Global Academy of Technology, Bengaluru, India.
- February 20 "Numerical index of vector-valued function spaces", **Invited Speaker**, Half-Day in Operator Theory Conference, The University of Memphis, USA.

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- June 19 "Maps preserving general means of positive operators", **Talk** at the National Sun Yat-Sen University, Kaohsiung, Taiwan.
- July 17 "Reflexivity-like problems in Banach spaces", **Paper Presentation**, Conference on Banach Spaces and Operator Theory with Applications, Adam Mickiewicz University, Poznan, Poland.
- September 16 "Algebraic Reflexivity of the Set of Isometries of order n ", **Talk** in TSSRK Fest, Indian Statistical Institute, Bangalore Centre, India.
- October 15 "Generalized Bi-circular and 3-circular Projections on Banach Spaces and Related Topics", **Poster Presentation**, Workshop on Problems and Recent Methods in Operator Theory in Memory of James Jamison, The University of Memphis, USA.
- October 15 "Generalized 3-circular Projections for Unitary Congruence Invariant Norms", **Paper Presentation**, American Mathematical Society Meeting, The University of Memphis, USA.
- March 15 "Generalized 3-circular Projections on Function Spaces", **Talk** in Conference on Geometry of Banach Spaces and Operator Theory, IIT Kanpur, India.
- November 13 "On some Classes of Projection in Banach Spaces", **Talk** at the National Sun Yat-Sen University, Kaohsiung, Taiwan.
- May 12 "Algebraic Reflexivity of the Set of n -Isometries of $C(X,E)$ ", **Paper Presentation**, The International Conference of Mathematics and statistics, The University of Memphis, USA.

Conferences/Workshops Attended

- June 15 International Conference on Recent Advances in Mathematical Biology, Analysis and Applications (ICMBAA 2015), Aligarh Muslim University, India.
- December 13 International Workshop on Operator Theory and its Applications (IWOTA 2013), Indian Institute of Science, Bangalore, India.
- August 10 International Congress of Mathematicians, 2010, Hyderabad. India.
- August 10 ICM Satellite Conference on Functional Analysis and Operator theory, Indian Statistical Institute, Bangalore Centre, India.
- June 09 Workshop on Geometry of Banach Spaces and Applications, Indian Statistical Institute, Bangalore Centre, India.
- September 08 Research Workshop in Optimization Theory and Applications, IIT Kanpur, India.

Schools/Training

- December 07 Fourth Annual Foundation School- I, IIT Kanpur, India.
- May-July 07 Summer Fellowship Programme of IIT Madras under Prof. Veeramani P.
- May-July 06 Summer visiting student-fellow of the Indian Academy of Sciences under Prof. Rajendra Bhatia, Indian Statistical Institute, Delhi Centre, India.

Extra Curricular Activities

- February 17 Secured 1st position in 110 m Hurdles (Faculty) in ASMITA 2017, IIIT Allahabad.
- 2009 - 12 Students' Senate nominee in the Senate Student Affairs Committee, IIT Kanpur.
- 2010 - 11 Students' Senate nominee in Senate Post Graduate committee, IIT Kanpur.

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- 2009 - 10 Senator for Ph.D. students in Students' Senate of IIT Kanpur.
- 2009 - 10 President of the Hall Executive Committee of Hall of Residence IV, IIT Kanpur.
- December 08 Played in football team of IIT Kanpur, Inter IIT Sports Meet, IIT Madras.
- 2008 Secured 2nd position in Football in the Intra Hall Sports Competition of Hall of Residence IV, IIT Kanpur.

Awards/Scholarships

- GATE 2007 All India Rank: 262 || GATE score: 361.
- 2006 Departmental Merit Scholarship, M.Sc. 1st year.
- February 06 Winner and 3rd prizes in Quiz and Lecture competitions respectively, Aligarh Mathematical Society week, Department of Mathematics, Aligarh Muslim University, Aligarh.
- 2005 3rd rank in B. Sc. (Honours) Mathematics.

References

- *Prof. Fernanda Botelho*, Dunn Hall 363, Department of Mathematical Sciences, The University of Memphis Memphis, TN 38152, USA
Email: mbotelho@memphis.edu || Phone: +1-901-678 3131.
- *Prof. T. S. S. R. K. Rao*, Stat Math Unit, Indian Statistical Institute, Bangalore Centre, India
Email: tss@isibang.ac.in || Phone: +91-80-28483001.
- *Prof. Ngai-Ching Wong*, Department of Applied Mathematics, National Sun Yat-sen University, Kaohsiung 80424, Taiwan, ROC
Email: wong@math.nsysu.edu.tw || Phone: +886-7-5252000 ext. 3818.
- *Prof. Lajos Molnar*, Department of Analysis, Bolyai Institute, University of Szeged, H-6720 Szeged, Hungary
Email: molnarl64@gmail.com