

Shankar P

CONTACT INFORMATION

Present Address

Assistant Professor,
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No.13, Main Street,
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RESEARCH INTERESTS

Functional analysis, Operator algebras and Operator theory.

EXPERIENCE

- Assistant Professor at **Cochin University of Science And Technology**, Ernakulam. January 2021 - Present.
- NBHM Post-doctoral Fellow at **Indian Statistical Institute**, Bangalore. July 2019 - January 2021.
Mentors: Jaydeb Sarkar, B V Rajarama Bhat.
- Visiting Scientist at **Indian Statistical Institute**, Bangalore. February 2018 - June 2019.
Mentors: Jaydeb Sarkar, B V Rajarama Bhat.

EDUCATION

- **Kerala School of Mathematics**, Kozhikode. October 2018
Ph.D., Mathematics
Thesis titled: A Study of hyperrigid operator systems in C^* -algebras
Advisor: A. K. Vijayarajan.
- **Pondicherry University**, Puducherry 2012
M.Sc., Mathematics
- **Sacred Heart College**, Tirupattur 2009
B.Sc., Mathematics

HONOURS AND ACHIEVEMENTS

- Awarded SERB - TARE Project for three years from 2022 to 2025 (18 Lakh).
- Awarded NBHM Post-Doctoral Fellowship in 2019.
- Awarded CSIR Research Fellowship in 2012.
- Received a Gold Medal in M.Sc., Mathematics.

PUBLICATIONS

1. B. V. Rajarama Bhat, Soumyashant Nayak, and P. Shankar, *On products of symmetries in von Neumann algebras*, Accepted (2023), To appear in Journal of Operator Theory, arXiv:2204.00009v1.
2. Sandipan De, Jaydeb Sarkar, P. Shankar, and Sankar T. R., *Pairs of projections and commuting isometries*, J. Operator Theory **91** (2024), no. 1, 261-294.

3. V. A. Anjali, V. B. Kiran Kumar and P. Shankar, *An Expository Note on Wavelets and Graph C^* -algebras*, Indian J. Pure Appl. Math. **55** (2024), no. 1, 123–137.
4. A. Augustine, M. Garayev and P. Shankar, *Composition Operators, Convexity of Their Berezin Range and Related Questions*, Complex Anal. Oper. Theory **17** (2023), 126 .
5. P. Muthukumar and P. Shankar, *Multiplication operators between discrete Hardy spaces on rooted trees*, Lobachevskii Journal of Mathematics, 2022, Vol. 43, No. 11, pp. 3252–3263.
6. C.S. Arunkumar, P. Shankar, and A.K. Vijayarajan, *Boundary representations and rectangular hyperrigidity*, Banach J. Math. Anal. **15** (2021), no. 2, 38.
7. P. Shankar and A. K. Vijayarajan, *Hilbert modules characterization for weak hyperrigid operator systems*, J. Anal. **28** (2020), 905-912.
8. P. Shankar, *Hyperrigid generators in C^* -algebras*, J. Anal. **28** (2020), 791-797.
9. M. N. N. Namboodiri, S. Pramod, P. Shankar and A. K. Vijayarajan, *Quasi hyperrigidity and weak peak points for non-commutative operator systems*, Proc. Indian Acad. Sci. Math. Sci. **128** (2018), no. 5, 128:66.
10. P. Shankar and A. K. Vijayarajan, *Tensor products of hyperrigid operator systems*, Ann. Funct. Anal. **9** (2018), no.3, 369-375.
11. S. Pramod, P. Shankar and A. K. Vijayarajan, *Separating and quasi hyperrigid operator systems in C^* -algebras*, Tbilisi Math. J. **10** (2017), no. 4, 55-61.
12. P. Shankar and A. K. Vijayarajan, *Hyperrigid operator systems and Hilbert modules*, Ann. Funct. Anal. **8** (2017), no. 1, 133-141.

CONFERENCE
PROCEEDINGS

1. V. A. Anjali, Athul Augustine and P. Shankar, *Z-Hyperrigidity and Z-boundary representations*, 3C Empresa. Investigación y pensamiento crítico, **11** (2022), no. 2, 173-184.
2. V. A. Anjali, Athul Augustine and P. Shankar, *Tensor products of weak hyperrigid sets*, 3C Empresa. Investigación y pensamiento crítico, **11** (2022), no. 2, 164-171.

PREPRINTS

1. Athul Augustine, and P. Shankar, *The structure of twisted power partial isometries*, communicated, arXiv:2211.07753, (2022).
2. A. Augustine, M. Garayev and P. Shankar, *On the convexity of the Berezin range of composition operators and related questions*, arXiv:2401.03176, (2024).
3. Sandipan De, Jaydeb Sarkar, P. Shankar, and Sankar T. R, *Isometric pairs with compact + normal cross-commutator*, arXiv:2401.10807, (2024).

REVIEWER OF

- AMS Math Review.

PRESENTATIONS
AND INVITED
TALKS IN
CONFERENCES
AND WORKSHOPS

- *The non-commutative analogue of Korovkin's sets and peak points* in "Symposium on Geometry of Banach Spaces" held at Indian Institute of Technology, Hyderabad, India (December 01-02, 2019).
- *Weak hyperrigidity and Hilbert modules* in "34 th Annual Conference of the Ramanujan Mathematical Society" held at Pondicherry University, Puducherry, India (August 01-03, 2019).
- *Hyperrigid generators in C^* -algebras* in "Recent Advances in Operator Theory and Operator Algebras" held at Indian Statistical Institute, Bangalore, India (December 13-19, 2018).

WORKSHOPS AND
CONFERENCES
ATTENDED

- Operator Theory and Complex Geometry, IISER, Kolkata (November 24 - 26, 2022).
- "IFCAM Summer School " on Mathematical Aspects of Quantum Mechanics, Indian Institute of Science, Bangalore (June 01 - 12, 2022).
- Noncommutative Geometry and its Applications, National Institute of Science Education and Research, Bhubaneswar (January 06-10, 2020).
- KBS Fest, Indian Statistical Institute, Bangalore (December 12-14, 2019).
- Symposium on Operator Theory, Indian Institute of Science, Bangalore (February 20-22, 2019).
- International Workshop on Leavitt Path Algebras and K - Theory, Cochin University of Science and Technology, Cochin (July 01-03, 2017).
- Recent Advances in Operator Theory and Operator Algebras, Indian Statistical Institute, Bangalore (December 13-22, 2016).
- T.S.S.R.K. Rao Fest, Indian Statistical Institute, Bangalore (September 22-24, 2016).
- Research Workshop on Analysis, Cochin University of Science and Technology, Cochin (July 25-28, 2016).
- Advances in Noncommutative Mathematics, Indian Statistical Institute, Bangalore (January 18-22, 2016).
- Complex Geometry and Operator Theory, Indian Statistical Institute, Bangalore (December 01-03, 2015).
- Recent Advances in Operator Theory and Operator Algebras, Indian Statistical Institute, Bangalore (December 09-19, 2014).
- Advanced Instructional School in Operator Theory, Indian Statistical Institute, Bangalore (June 2-21, 2014).
- Semigroups, Algebras and Operator Theory, Cochin University of Science and Technology, Cochin (February 26-28, 2014).
- IMSc-ISI joint workshop on Subfactors, Institute of Mathematical Sciences, Chennai (December 30, 2013 - January 10, 2014).

REFERENCES

1. A. K. Vijayarajan
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(Thesis Advisor)

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3. B. V. Rajarama Bhat,
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