

Emergent Research:

The PIMS Postdoctoral Fellow Seminar



Pacific Institute *for the*
Mathematical Sciences

May 17, 2023 | 9:30am Pacific

Essential normality of

Bergman modules on

egg domains



ABSTRACT:

During 2005-2006, Arveson and Douglas formulated a challenging conjecture in multivariable operator theory regarding the essential normality of compressed shifts in the usual Hilbert spaces of analytic functions, say, Bergman spaces on strongly pseudoconvex domains. (Essential normality means normality modulo compact operators.) In this talk, after stating this conjecture, I will report on a joint work with Xiang Tang about the essential normality of Bergman spaces on several classes of egg domains. These egg domains are generalizations of the unit ball and are weakly pseudoconvex in general. If time permits, I will say a few words about a resulting K-homology index theorem and discuss p-essential normality (that is normality modulo p-summable operators).

For more information and registration:

<https://www.pims.math.ca/seminars/PIMSPDF>

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SPEAKER BIO:

Mohammad Jabbari received his Ph.D. in Mathematics from Washington University in St. Louis in 2019 with a dissertation about the index theory of Toeplitz operators on algebraic spaces. He was then a postdoctoral researcher at Centro de Investigacion en Matematicas (CIMAT), and then a Senior Lecturer in the Department of Mathematics at Vanderbilt University. His background is in Electrical Engineering (BSc and MSc), and he worked as an antenna and radar engineer for three years. In August 2023 he will be joining the University of Regina as a PIMS Postdoctoral fellow under the sponsorship of Prof. Martin Argerami.

ABOUT PIMS PDF SEMINARS:

PIMS ongoing lecture series featuring our Postdoctoral Fellows every three weeks. You will have the opportunity to connect with emerging research in the mathematical sciences from a PIMS Postdoctoral Fellow. PIMS PDFs are amongst the top young researchers in Canada, and this is an excellent opportunity to learn about them, and their work.

