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**National Institute for
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C O L L O Q U I U M

From rings to lattices

Dr Amartya Goswami (University of Johannesburg)

DATE: Monday, 15 July 2024 | 16h00–17h00 SAST
VENUES:
- Neelsie Cinema, Stellenbosch University
- Online

ABSTRACT

What is the set-up for doing abstract ideal theory? For commutative rings with identity; an answer has been provided by Dilworth and Ward, namely, multiplicative lattices. But what about arbitrary associative rings? The structures known as quantales, proposed by Mulvey, provide an appropriate framework for this purpose.

The aim of this talk is to review how various classes of ideals have been abstracted to elements in multiplicative lattices and quantales. We shall highlight recent progress in this area and explore further possibilities. Moreover, we shall consider some topological aspects of these classes of elements.

BIOGRAPHY

Dr Goswami is affiliated with both the Department of Mathematics and Applied Mathematics at the University of Johannesburg and the National Institute for Theoretical and Computational Sciences (NITheCS). His current research interests encompass associative rings and algebras, general topology and order, lattices, and ordered algebraic structures. He has authored 20 peer-reviewed articles and has delivered 37 talks at national and international conferences, seminars, and workshops. Since 2016, he has co-organised a special session on Categories, Algebra, Topology, and Logic (CATL) at the South African Mathematical Society (SAMS) Annual Congress each year.

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