



ANALYSIS SEMINAR

A new finite depth subfactor which appears in a quadrilateral of factors

by

Marta Asaeda

University of California at Riverside

ABSTRACT

A subfactor is a pair of von Neumann algebra with inclusion $N \subset M$. The study of classification of subfactors was initiated by V. Jones and has been developed in the past few decades, involving various areas of mathematics, such as low-dimensional topology, conformal field theory. In the recent years, intermediate subfactors $N \subset P \subset M$ has been studied.

A quadrilateral of factors is a pair of intermediate subfactors $N \subset P \subset M$, $N \subset Q \subset M$ such that $P \vee Q = M$, $P \wedge Q = N$. We show that there is a quadrilateral of factors with some conditions, so that $P \subset M$ is a subfactor with index $(5 + \sqrt{17})/2$, and $N \subset P$ is a subfactor with index $(7 + \sqrt{17})/2$. This work is joint with Pinhas Grossman.

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Millikan 213, Pomona College

For more information contact Asuman G. aksoy at aaksoy@cmc.edu