THE FIELDS INSTITUTE

ABSTRACTS 1.2

FOR RESEARCH IN MATHEMATICAL SCIENCES

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Duality of Correspondences and a Non Commutative Nevanlinna-Pick Theorem

To a W*-correspondence E over a von Neumann algebra M (contained in B(H)) we associate a dual W*-correspondence (over M'). We define the algebra $H^{\infty}(E)$ and show that the points of the open unit ball of the dual determine "most" of the representations of this algebra. We also show that the commutant of an induced representation of this algebra is given by an induced representation of the algebra associated with the dual W*correspondence. I will also present a Nevanlinna-Pick type theorem (recapturing results of Davidson-Pitts and Popescu). This is a joint work with P. Muhly.