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The Hong Kong University of Science and Technology

Department of Mathematics

Seminar on Pure Mathematics

**Fourier integrals and Sobolev embedding on
rearrangement-invariant quasi-Banach function spaces**

By

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Abstract

We extend the mapping properties for the fractional integral operators, the convolution operators, the Fourier integral operators and the oscillatory integral operators to rearrangement-invariant quasi-Banach function spaces. We also generalize the Fourier restriction theorem and the Sobolev embedding theorem to rearrangement-invariant quasi-Banach function spaces. We obtain the above results by introducing two families of rearrangement-invariant quasi-Banach function spaces. Furthermore, these two families of rearrangement-invariant quasi-Banach function spaces also give us some embedding and interpolation results of Triebel-Lizorkin type spaces and Hardy type spaces built on rearrangement-invariant quasi-Banach function spaces.

Date: Friday, 23 March 2018

Time: 11:00a.m. - 12:00p.m.

**Venue: Room 5560, Academic Building
(near Lifts 27 & 28), HKUST**

All are welcome!