

THE CATHOLIC UNIVERSITY OF AMERICA
Washington, DC 20064

SEMINAR IN FUNCTIONAL ANALYSIS
AND RELATED AREAS

Wednesday, March 15, 2023

5:10 p.m. - 6:50 p.m. (including a coffee break)

SPEAKER: Susmita Seal
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TITLE: Small combination of slices and dentability in ideals of Banach spaces.

ABSTRACT: Dentability, Huskability and Small combination of slices of all closed, bounded, convex subsets of a Banach space are known as Radon-Nikodym Property (RNP), Point of Continuity Property (PCP) and Strong Regularity (SR) respectively of that Banach space. These three properties were studied extensively in geometry of Banach spaces. In our talk we will only concentrate on “localization” of Dentability, Huskability and Small combination of slices to the closed unit ball of Banach spaces that will give three new geometric properties, namely BDP, BHP and BSCSP of Banach spaces, weaker than RNP, PCP and SR respectively. The major difference between all the local properties and the actual properties lie in hereditary property. We will show that none of the properties BDP, BHP and BSCSP is hereditary in general whereas RNP, PCP and SR are all hereditary. We will proceed to show that there are some special subspaces that inherit the properties BDP, BHP and BSCSP from the whole space. This talk is based on a joint work [BS] with Professor Sudeshna Basu.
[BS] S. Basu, S. Seal; “Small combination of slices and dentability in ideals of Banach spaces”, accepted in Journal of Convex Analysis. Available at arXiv:2109.04963

The presentations will be given via Zoom. The corresponding link will be sent to everyone in advance.

ORGANIZERS: V. Bogdan (The Catholic University of America), P. Kainen (Georgetown University), R. Kalpathy (The Catholic University of America), and A. Levin (The Catholic University of America).

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