
SERGII MYROSHNYCHENKO, University of the Fraser Valley

Polytope Reconstruction: floating and illuminating structures

The surface of buoyancy (or surface of centers) of a convex body plays a central role in the study of floating bodies. Its properties and significance have been the focus of extensive recent work by D. Florentin, H. Huang, D. Ryabogin, C. Schutt, B. Slomka, E. Werner, B. Zawalski, N. Zhang, among others. In this talk, we address the problem of unique determination of a convex polytope by its surface of buoyancy or by its Dupin floating body. We also consider the dual questions in the setting of illumination bodies. The presented results are based on joint work with S. Dann and O. Herscovici.