On the volume ratio of projections of convex bodies.

Alexander Litvak

University of Alberta

joint with D. Galicer, M. Merzbacher, D. Pinasco.
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Series of works with C. Schütt, E. Werner, A.L. on Orlicz norms of sequences of random variables, order statistics and applications to convex geometry.
Many deep results in both, the classical (infinite-dimensional) Banach space theory and in its finite-dimensional counterparts, Local Theory of Banach Spaces and Asymptotic Geometric Analysis.
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Many works with P.Mankiewicz: a final solution of finite-dimensional counterpart of homogeneous problem (answering a question of V.Milman and improving previous results of M.Gromov and J.Bourgain); randomized isomorphic Dvoretzky theorem; a result on average distances between projections of convex bodies (extending, in a sense, famous Gluskin’s result on the diameter of Minkowski compactum); ... a survey “Quotients of finite dimensional Banach spaces; random phenomena” in Handbook of the geometry of Banach spaces (containing in particular, many applications of so-called Gluskin’s polytopes).
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Many works with S.Szarek: on spaces with bounded volume ratio; on duality of entropy numbers (with J.Bourgain and A.Pajor and with S.Artstein and V.Milman); on saturating constructions for normed spaces; ...
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Several works with H.König: on projection constant; on $p$-summing norms; ...
Many works with A. Pajor (some with other authors): a dimension-free bound on Gelfand numbers (improving Milman’s “low $M^*$-estimate”); on random polytopes; on random matrices; ...
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Nassif Ghoussoub:

Nicole was intense, determined and fierce with one main focus: Mathematics. She did not attempt to solve hard open mathematical problems. She simply declared war on them.