GRADUATE SEMINAR

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The Homotopy Type of the Complement of a Coordinate Subspace Arrangement

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Abstract:

We discuss about a family of simplicial complexes K, namely shifted complexes, for which the associated complement of a coordinate subspace arrangement $U(K)$ is homotopy equivalent to a wedge of spheres. In order to show this, we introduce the moment-angle complex $\mathcal{Z}_K$ that turns to be a deformation retract of $U(K)$ and hence is homotopy equivalent to the latter. We conclude the talk with a result showing that the family $\mathcal{F}_0$, of simplicial complexes K for which the associated moment-angle complex $\mathcal{Z}_K$ is homotopy equivalent to a wedge of spheres, is closed under two operations on simplicial complexes.

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