RIESZ DISTRIBUTIONS FOR DIFFERENTIAL FORMS

BENT ØRSTED

The classical Riesz distributions on Euclidian space are complex powers of the Euclidian norm function, and they are important for harmonic analysis, in particular for the study of the Laplace operator. In this lecture, based on joint work with Matthias Fischmann, we shall introduce a similar natural family of distributions, acting on differential forms on Euclidian space. Acting by convolution, they provide explicit versions of Knapp-Stein intertwining operators; and we give their meromorphic contiuations, Fourier transforms, and relations to conformal geometry.