1056-53-792   **Katja Sagerschnig*** (`katja.sagerschnig@univie.ac.at`), Nordbergstraße 15, 1090 Vienna, Austria. *Generic rank two distributions on five-manifolds and associated conformal structures.*

It follows from a classical paper of E. Cartan that maximally non-integrable distributions of rank 2 on 5-manifolds have an equivalent description as parabolic geometries. Based on Cartan's work, P. Nurowski associated to such a distribution a natural conformal class of pseudo-Riemannian metrics of signature $(2, 3)$. In this talk we will discuss how methods from the theory of parabolic geometries can be employed for the study of these conformal structures. The presentation may include the construction of metrics from the conformal class based on the notion of a generalized contact form, a characterization of conformal structures associated to 2-distributions among all conformal structures of signature $(2, 3)$, and the decomposition of the space of conformal Killing fields into symmetries of the distribution and almost Einstein scales. (Received September 17, 2009)