

984-32-89

Daniel C. Cohen (cohen@math.lsu.edu), Department of Mathematics, Louisiana State University, Baton Rouge, LA 70803, and **Peter Orlik*** (orlik@math.wisc.edu), Department of Mathematics, University of Wisconsin, Madison, WI 53706. *Gauss-Manin connections for arrangements.*

We study the Gauss-Manin connection for the moduli space of an arrangement of complex hyperplanes in the cohomology of a nonresonant complex rank one local system. Aomoto and Kita determined this Gauss-Manin connection for arrangements in general position. We use their results and an algorithm constructed in this paper to determine this Gauss-Manin connection for all arrangements. (Received January 13, 2003)