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Hirotschi Abo* (abo@math.colostate.edu), Weber 101, Department of Mathematics, Colorado State University, Fort Collins, CO 80523. *Construction of rational surfaces in projective fourspace.*

I will talk about the construction of five different families of smooth rational surfaces of degree 12 in projective fourspace. These surface are new and of interest in the classification of smooth non-general type surfaces in projective fourspace. This classification problem is motivated by the theorem of Ellingsrud and Peskine, which says that the degrees of such surfaces are bounded. Moreover, the rational surfaces in projective fourspace were previously known up to degree 11, and these families set a new degree record.

These families were found in collaboration with Kristian Ranestad. (Received August 26, 2005)