1057-13-280   **Hirotachi Abo**, **Holger Kley** and **Chris Peterson*** (`peterson@math.colostate.edu`). *On Locally Cohen-Macaulay unions of Surfaces in $\mathbb{P}^4$.*

This talk will focus on some combinatorial and geometric issues surrounding the construction of unions of surfaces in $\mathbb{P}^4$ that are locally Cohen-Macaulay. When combined with techniques such as liaison, reducible unions can be used to give explicit constructions of smooth surfaces in $\mathbb{P}^4$ with a non-trivial automorphism group. In addition, reducible locally Cohen-Macaulay schemes are often associated with exceptional vector bundles. Several examples illustrating this connection will be presented. (Received January 25, 2010)