962-14-96 **Viatcheslav Kharlamov** and **Frank J. Sottile*** (sottile@math.umass.edu). *Maximally Inflected Curves.* Preliminary report.

A map from P^1 to P^n of degree d necessarily has $(n+1)(d-n+1)$ points where it is ramified, counted with multiplicities. We call these inflection points, as in the image curve, a point of simple ramification is an inflection point. A maximally inflected curve is a real curve, all of whose inflection points are also real. The existence of such curves is guaranteed by a result in the real Schubert calculus, and these curves are closely related to an important conjecture in that field. Maximally inflected plane curves satisfy some topological restrictions given by the Klein and Pluecker formulas. They also satisfy some more subtle restrictions whose existence was discovered experimentally. This talk will introduce these objects, then discuss symbolic and numerical techniques to generate examples of maximally inflected curves, and lastly describe the known topological restrictions, including those whose existence is only suspected via experiments. (Received July 30, 2000)