

Department of Mathematical Sciences
Colloquium

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*Friction Stir Welding as an Example of Why Material
Discontinuities Should Be Modeled*

Many important processes such as forging, drawing, extrusion, and rolling involve high strains and high strain rates. Materials undergoing these processes are usually modeled as viscous liquids. This assumption, however, makes it impossible to obtain material discontinuities such as shear bands, twins, and other material inhomogeneities that are often crucial to understanding the process. Friction Stir Welding is a new and unique joining technique that in many ways seems to involve the flow of very viscous metals, but it will be shown that an essential part of the process can only be understood if a model capable of producing a material discontinuity is used.

**Friday, November 11, 2005 at 3 pm. in Bell Hall 143
The University of Texas at El Paso**

Refreshments will be served in front of the colloquium room,
15 minutes before the start of the colloquium.

For further information, please contact Dr. Pavel Šolín, Bell Hall 220. Phone:
(915) 747-6770, email: solin@utep.edu.