# ICM 1998, Berlin, Aug. 18–27

## Abstracts of Short Communications and Posters

### Section:

## 16. Applications

1991 MS Classification: 51, 52, 73
Kovalev, Mikhail, Moscow State University of Forestry, Russia
**Stability of hinged schemes and frameworks.**
The geometric properties of hinged constructions in $\mathbf{R}^d$ $(d \geq 2)$ are considered. This constructions consist of rigid rods, connected with each other and with some fixed points of the space by hinges, assuming any mutual rotations. A (kinematic) hinged scheme is the graph of such construction together with the collections of positions of its fixed hinges and lengths of its rods. A concept of stability of hinged schemes and frameworks is analyzed. Unsolved problems are stated. Among them is a conjecture about the instability of a scheme, admitting only one framework.
Reference: M. D. Kovalev, Geometric theory of hinged devices, *Russian Acad. Sci. Izv. Math.* **44** (1995), 1, 43-68.