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## Abstracts of Short Communications and Posters

### Section:

## 8. Analysis

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Kohr, Mirela, Babeş-Bolyai University, Cluj-Napoca, Romania
**A direct boundary integral formulation for a Stokes flow problem**
In this paper the author gives a direct boundary integral method for a two-dimensional Stokes flow in the presence of a compound liquid particle and an elastic deformable particle. The problem is formulated as a system of Fredholm integral equations of the second kind, having the flow velocity on the interfaces of the compound particle and the traction on the boundary of the deformable particle as the unknowns. The existence and the uniqueness result of the solution is established when the boundaries are Lyapunov curves of the class $C^\infty$ and the boundary data is smooth.
Reference: M. Kohr, The Study of Some Viscous Flows by Boundary Integral Methods, *Cluj University Press*, 1997