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**Bernd Fischer\*** ([fischer@math.mu-luebeck.de](mailto:fischer@math.mu-luebeck.de)), Institute of Mathematics, Medical University of Luebeck, Wallstrasse 40, 23560 Luebeck, Germany. *On fast non-rigid matching.*

In recent years various methods to perform a non-rigid and fully automated matching of two given images have been proposed. They all have in common that they minimize some non-linear functional subject to a regularizing term. Among the variety of different schemes, we mention the elastic matching, the viscous fluid matching, and the demons method. In this talk we draw connections between the most prominent non-rigid deformation methods and comment on fast solution techniques. The talk is supplemented by various experiments based on real life data. (Received September 27, 2000)