ALBERT-LUDWIGS-
UNIVERSITÄT FREIBURG

FAKULTÄT FÜR ANGEWANDTE WISSENSCHAFTEN

# Fakultäts - Kolloquium

Zeit: Mittwoch, 11. 6. 1997, 17.00 Uhr c.t.
Ort: Raum 02-017, Geb. 52, Am Flughafen 17

## Finite State Methods for Image Definition, Compression and Manipulation

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### Abstract

We will discuss a new method for image-data compression and manipulation based on finite automata. It has been developed jointly with J. Kari. We interpret regular sets (defined by finite automata) as multiresolutional bi-level images. Then we introduce Weighted Finite Automata that define grayscale and color images. We will discuss our image compression method based on (weighted) finite automata. It is one of the best methods for high-rate compression of color images, certainly the best fractal method for image-data compression.

Finally, we will show how (weighted) finite transducers are used for image manipulation and more generally to implement operators on functions, e.g. integrals, (partial) derivatives etc.

Gastgeber: Prof. Dr. Thomas Ottmann

**Alle Interessenten sind recht herzlich eingeladen.**

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Organisation : Prof. Dr. B. Becker / H. Hengster
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