Editorial: Marr Prize and Honorable Mentions at ICCV 2005

CHRISTOPH SCHNÖRR

schnoerr@uni-mannheim.de

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In order to commemorate David Marr, IJCV continues in this issue the tradition to publish papers that were awarded the Marr Prize at the IEEE International Conference on Computer Vision (ICCV).

Under the guidance of the program chairs of the 10th ICCV'05 held in Beijing, Bill Freeman (MIT), Luc Van Gool (U Leuven, ETH Zurich) and Subhasis Chaudhuri (IIT Bombay), four papers were selected in a process meeting the high and well-established standards of previous conferences:

Marr Prize

- Globally Optimal Estimates for Geometric Reconstruction Problems, by Fredrik Kahl and Didier Henrion

Honorable Mention

- A Theory of Refractive and Specular Shape by Light-Path Triangulation,¹ by Kiriakos N. Kutulakos and Eron Steger
- Detecting Irregularities in Images and in Video, by Oren Boiman and Michal Irani

- On the Spatial Statistics of Optical Flow, by Stefan Roth and Michael J. Black

The paper by Kahl and Henrion reflects a major trend known from the field of machine learning: Modern optimization techniques can be applied to a wide range of problems in our field. They are a valuable tool for classifying approaches and for the design of algorithms with provable properties. In the future, advanced approaches of mathematical programming will be applied not only to established problems of computer vision, but they will also influence problem modeling and representation directly.

The remaining three papers demonstrate in diverse directions the ever-increasing amount of visual data complexity that state-of-the-art approaches of computer vision are able manage.

Note

1. Authors considerably elaborated the conference version of this paper. It will therefore appear in a future issue of IJCV.