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Scale Space and PDE Methods in Computer Vision

5th International Conference, Scale-Space 2005
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Proceedings

Springer

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Preface

Welcome to the proceedings of the 5th International Conference on Scale-Space and PDE Methods in Computer Vision.

The scale-space concept was introduced by Iijima more than 40 years ago and became popular later on through the works of Witkin and Koenderink. It is at the junction of three major schools of thought in image processing and computer vision: the design of filters, axiomatic approaches based on partial differential equations (PDEs), and variational methods for image regularization. Scale-space ideas belong to the mathematically best-understood approaches in image analysis. They have entered numerous successful applications in medical imaging and a number of other fields where they often give results of very high quality.

This conference followed biennial meetings held in Utrecht, Corfu, Vancouver and Skye. It took place in a little castle (Schlösschen Schönburg) near the small town of Hofgeismar, Germany. Inspired by the very successful previous meeting at Skye, we kept the style of gathering people in a slightly remote and scenic place in order to encourage many fruitful discussions during the day and in the evening.

We received 79 full paper submissions of a high standard that is characteristic for the scale-space conferences. Each paper was reviewed by three experts from the Program Committee, sometimes helped by additional reviewers. Based on the results of these reviews, 53 papers were accepted. We selected 24 manuscripts for oral presentation and 29 for poster presentation.

It is a tradition at scale-space conferences to invite keynote speakers who can provide valuable additional inspirations beyond the mainstream topics in scale-space analysis. Also this time it was our pleasure to thank three leading experts for accepting our invitation for a keynote lecture: Prof. Achi Brandt of The Weizmann Institute of Science (Rehovot, Israel), Prof. Michael Unser of the Swiss Federal Institute of Technology (Lausanne, Switzerland), and Prof. Carl-Fredrik Westin of the Harvard Medical School (Boston, USA).

We thank all authors for their excellent contributions, and the referees for their time and valuable comments. Regarding local arrangements, we are indebted to the staff at Schlösschen Schönburg, as well as to Bernhard Burgeth, Martin Welk, and Uta Merkle of Saarland University. We also thank Micha Feigin, Julia Getslev and Lori Sochen for their help with the website and Yana Katz for her help with the proceedings. Finally we are grateful to the German Pattern Recognition Society (DAGM) for sponsorship.

We wish you an exciting journey through the latest results on scale-space ideas in image analysis.

April 2005 Ron Kimmel, Nir Sochen, and Joachim Weickert

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Carl-Fredrik Westin (Harvard Medical School, Boston, USA)

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