



Ollendorff Minerva Center for Vision and Image Sciences
German-Israeli Binational Workshop, October 20-21, 2004
 Department of Electrical Engineering, Auditorium (10th floor)
 Andre Meyer Building, Technion—Israel Institute of Technology, Haifa, Israel

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| 09:00 – 09:30 | Reception and Registration |
| 09:30 – 09:40 | Welcome Prof. Aviv Rosen , Senior VP Technion, Israel |
| 09:40 – 09:50 | Introduction Prof. Yehoshua Zeevi , Department of Electrical Engineering, Technion, Israel |
| Source Separation Wednesday, October 20, Morning Session Chair: Prof. Arie Feuer , Department of Electrical Engineering, Technion | |
| 09:50 – 10:20 | Blind Source Separation, Deconvolution and Localization Using Sparsity Priors Dr. Michael Zibulevsky , Department of Electrical Engineering, Technion, Israel |
| 10:20 – 10:40 | A Fast Algorithm for Simultaneous Diagonalization of Matrices in Application to Blind Source Separation Andreas Ziehe , Fraunhofer Institute FIRST, Berlin |
| 10:40 – 11:10 | Off-Origin Hessians of the Characteristic Function and Their Use for Static or Convolutional Blind Source Separation Dr. Arie Yeredor , Electrical Engineering Department, Tel-Aviv University, Israel |
| 11:10 – 11:30 | Coffee Break |
| 11:30 – 11:50 | Blind Separation of Spatio-Temporal Data Sources Hilit Unger , Department of Electrical Engineering, Technion, Israel |
| 11:50 – 12:20 | Underwater Vision Dr. Yoav Schechner , Department of Electrical Engineering Technion, Israel |
| 12:20 – 12:40 | Blind Deconvolution Using the Relative Newton Algorithm and Learnable Sparse Representations Alex Bronstein , Department of Electrical Engineering, Technion, Israel |
| 12:40 – 13:00 | Efficient Non-parametric Independent Component Analysis Sarit Shwartz , Department of Electrical Engineering, Technion, Israel |
| 13:00 – 15:00 | Lunch Break |

| Variational Methods Wednesday, October 20, Afternoon Session Chair: Dr. Danny Keren, Department of Computer Science, Haifa University | |
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| 15:00 – 15:30 | Variational Deconvolution of Images Blurred with Known Kernels Dr. Martin Welk , Saarland University, Saarbruecken, Germany |
| 15:30 – 15:50 | Integrated Active Contours for Texture Segmentation Chen Sagiv , Tel-Aviv University, Israel |
| 15:50 – 16:20 | Image Enhancement by Generalized Diffusion Prof. Yehoshua Zeevi , Electrical Engineering Department, Technion, Israel |
| 16:20 – 16:40 | Coffee Break |
| 16:40 – 17:00 | Real-Time Variational Optic Flow Computation with Multigrid Methods Andres Bruhn , Saarland University, Saarbruecken, Germany |
| 17:00 – 17:30 | Relations between Diffusion Filtering and Wavelet Shrinkage Prof. Joachim Weickert , Saarland University, Saarbruecken, Germany |
| 3D & Medical Imaging Thursday, October 21, Morning Session Chair: Part 1: Prof. Dan Adam, Department of Biomedical Engineering, Technion Chair: Part 2: Dr. Haim Azhari, Department of Biomedical Engineering, Technion | |
| 09:00 – 09:30 | Reception |
| 09:30 – 10:00 | Quantification of Spatial Structure of Human Bone Biopsies Using 3D Measures of Complexity Prof. Juergen Kurths , University of Potsdam, Physics, Potsdam, Germany |
| 10:00 – 10:30 | Modeling by Example Dr. Ayellet Tal , Department of Electrical Engineering, Technion |
| 10:30 - 11:00 | Volume Models for Anatomy Teaching and Surgery Simulation Prof. Hoehne University Hospital Hamburg-Eppendorf, Hamburg, Germany |
| 11:00 – 11:20 | Coffee Break |
| 11:20 – 11:50 | Experimental Evaluation of Image Quality in Medical Volume Visualization Dr. Andreas Pommert , Institute of Medical Informatics, University Hospital, Hamburg-Eppendorf, Hamburg, Germany |
| 11:50 – 12:10 | Segmentation of Thin Structures in 3D Medical Images Michal Holtzman Gazit , Department of Electrical Engineering, Technion, Israel |
| 12:10 - 12:40 | On Image Processing and Computer Vision in Medical Imaging" Dr. Moshe Porat , Department of Electrical Engineering, Technion, Israel |
| 12:40 – 13:00 | Medical imaging - from Analog Information to Digital Data Hagai Kirshner , Department of Electrical Engineering, Technion, Israel |
| 13:00 – 14:30 | Lunch Break |



| Image Acquisition & Enhancement Open to Industry Thursday, October 21, Afternoon Session Chair: Part 1: Prof. David Malah, Department of Electrical Engineering, Technion Chair: Part 2: Dr. Yonina Eldar, Department of Electrical Engineering, Technion | |
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| 14:30 – 15:00 | Reception and Registration |
| 15:00 – 15:10 | Welcome Prof. Israel Cidon, Head of CCIT, Department of Electrical Engineering, Technion |
| 15:10 – 15:40 | Implicit Beltrami Flow in Higher Co-Dimensions Dr. Nir Sochen, Department of Applied Mathematics, Tel-Aviv University, Israel |
| 15:40 – 16:10 | A Feature Selection Algorithm Based on the Global Minimization of a Generalization Error Bound Prof. Ron Meir, Department of Electrical Engineering, Technion, Israel |
| 16:10 – 16:30 | Color Image Denoising and Blind Deconvolution Using the Beltrami Operator Ran Kafory, Department of Electrical Engineering, Technion, Israel |
| 16:30 – 16:50 | Optimal Sparse Representations in Blind Deconvolution and Blind Source Separation: a Learning Approach Michael Bronstein, Department of Electrical Engineering, Technion, Israel |
| 16:50 – 17:10 | Enhancement of Color Images by Efficient Demosaicing Liron Grossman, Department of Electrical Engineering, Technion, Israel |
| 17:10 – 17:30 | Coffee Break |
| 17:30 – 18:00 | Structural Adaptive Smoothing Methods for Imaging Problems Dr. Polzehl, Weierstrass-Institut für Angewandte Analysis und Stochastik (WIAS), Germany |
| 18:00 – 18:30 | Hybrid Imaging: Recent Advances in Physics-based Vision Dr. Yoav Schechner, Department of Electrical Engineering, Technion, Israel |
| 18:30 – 18:50 | Inlier-based Independent Component Analysis Frank Meinecke, Fraunhofer Institute FIRST, Berlin, Germany |
| 18:50 – 19:00 | Concluding Remarks |

Organizing Committee:

Prof. Klaus-Robert Mueller, Fraunhofer Institute FIRST, Berlin, Germany

Prof. Joachim Weickert, Saarland University, Saarbruecken, Germany

Prof. Yehoshua Zeevi, Electrical Engineering Department, Technion, Israel

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