

PROCEEDINGS OF THE
ACM SIGKDD
WORKSHOP ON

VISUAL
ANALYTICS AND
KNOWLEDGE
DISCOVERY

VAKD '09

www.hiit.fi/vakd09

A full-day workshop in conjunction with
the 15th ACM SIGKDD Conference on Knowledge Discovery and Data Mining
in Paris, France, on 28 June 2009.

Kai Puolamäki, editor

Otaniemi, June 2009

Proceedings of the
ACM SIGKDD Workshop on Visual Analytics and Knowledge Discovery

Kai Puolamäki, editor

ISBN 978-1-60558-670-0

Otaniemi, June 2009

ACM SIGKDD Workshop on Visual Analytics and Knowledge Discovery: Integrating Automated Analysis with Interactive Exploration

General Chairs

Kai Puolamäki & Heikki Mannila (Helsinki Institute for Information Technology HIIT)
Alessio Bertone & Silvia Miksch (Danube University Krems)

Challenge Chairs

Mark A. Whiting & Jean Scholtz (Pacific Northwest National Laboratory)

Program Committee

Fosca Giannotti & Dino Pedreschi & Salvatore Rinzivillo (University of Pisa)
Georges Grinstein (University of Massachusetts Lowell)
Otto Huisman (International Institute of Geo-Information Science and Earth Observation)
Daniel A. Keim (University of Konstanz)
Catherine Plaisant (Human-Computer Interaction Lab, University of Maryland)
Tobias Schreck (Technische Universität Darmstadt)
Mike Sips (Max-Planck-Institut fuer Informatik)
Dimitrios Tzovaras (Center for Research & Technology Hellas)
Anders Ynnerman & Jimmy Johansson (Linköping University)

External Reviewers

Michele Coscia & Sami Hanhijärvi & Tim Lammarsch & Georg Pözlbauer &
Alessandra Raffaeta & Andreas Rauber & Roberto Trasarti

Sponsors

VisMaster, a European FP7 Coordination Action Project focused on Visual Analytics
PASCAL2 – Pattern Analysis, Statistical Modelling and Computational Learning
Helsinki Institute for Information Technology HIIT
Danube University Krems, Department of Information and Knowledge Engineering (DUK)
National Visualization and Analytics Center (NVAC)

Table of Contents

Interactive Spatio-Temporal Cluster Analysis of VAST Challenge 2008 Datasets <i>Gennady Andrienko & Natalia Andrienko</i>	5
Surveying the complementary role of automatic data analysis and visualization in knowledge discovery <i>Enrico Bertini & Denis Lalanne</i>	12
Visual Exploration of Categorical and Mixed Data Sets <i>Sara Johansson</i>	21
FpViz: A Visualizer for Frequent Pattern Mining <i>Carson Kai-Sang Leung & Christopher L. Carmichael</i>	30
Multiple Coordinated Views Supporting Visual Analytics <i>Bianchi Serique Meiguins & Aruanda Simões Gonçalves Meiguins</i>	40
Exploration and Visualization of OLAP Cubes with Statistical Tests <i>Carlos Ordonez & Zhibo Chen</i>	46
Hierarchical Difference Scatterplots – Interactive Visual Analysis of Data Cubes <i>Harald Piringer & Matthias Buchetics & Helwig Hauser & Eduard Gröller</i>	56
Visual Analysis of Documents with Semantic Graphs <i>Delia Rusu & Blaž Fortuna & Dunja Mladenić & Marko Grobelnik & Ruben Sipoš</i>	66
Algebraic Visual Analysis: The Catalano Phone Call Data Set Case Study <i>Anna A. Shaverdian & Hao Zhou & H. V. Jagadish & George Michailidis</i>	74
Heidi Matrix: Nearest Neighbor Driven High Dimensional Data Visualization <i>Soujanya Vadapalli & Kamalakar Karlapalem</i>	83