

Curriculum Vitae

PERSONAL INFORMATION

Name: **Cagatay Turkey**

Current Post: Lecturer at giCentre, Dep. of Computer Science in City Univ. London
Contact address: Department of Computer Science, City University London,
Northampton Sq. London, EclV 0HB UK

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RESEARCH INTERESTS

Visualization, Visual analytics, Information Visualization, Human computer interaction,
Statistics, Data mining

ACADEMIC ACTIVITIES

Cagatay Turkey is the co-author of over 20 scientific publications, most of which are published in the most respected journals of the field, IEEE TVCG, IEEE CG&A, and CGF. He is a PC member for HCI-KDD expert board, EurasiaGraphics and MIUA conferences. He also serves as an active reviewer for IEEE VIS, EuroVis, IEEE TVCG, IEEE TBCC, CGI and several other journals and conferences. He served as a visiting researcher at Harvard University in 2013. He is currently the local work-package leader for the VALCRI (EU FP7) and an investigator for the FareVis (TSB) projects.

ACADEMIC WORK EXPERIENCE

Dec. 2013 - present	Lecturer in Applied Data Science at the Department of Computer Science at City University London, UK
Mar. 2013 - May 2013	Visiting research fellow at the School of Engineering & Applied Sciences in Harvard University, Cambridge, MA, USA
Jan. 2010 - Dec. 2013	Researcher at University of Bergen, Bergen, Norway
Jan. 2010 - Dec. 2013	Lecturer & Teaching Assistant at University of Bergen, Bergen, Norway
Sept. 2007 - June 2009	Research Assistant at Sabanci University, Istanbul, Turkey

EDUCATION

University of Bergen, Bergen, Norway

PhD., in Visualization, Jan. 2010 - Nov. 2014

- Thesis Title: Integrating Computational Tools in Interactive and Visual Methods for Enhancing High-dimensional Data and Cluster Analysis
- Advisor: Prof. Helwig Hauser (University of Bergen) and Prof. Peter Filzmoser (Vienna University of Technology)
- Area of Study: Interactive visual analysis

Sabanci University, Istanbul, Turkey

M.S., Computer Science & Engineering, Sept. 2007 - June 2009

- Thesis Topic: Information Theoretic Approaches for Computer Graphics Applications
- Advisor: Assoc. Professor Selim S. Balcişoy (Sabanci University)
- Area of Study: Computer Graphics

Middle East Technical University, Ankara, Turkey

B.S., Computer Engineering, Sept. 2001 - June 2006

PUBLICATIONS

Journal articles

- P. Angelelli, S. Oeltze, J. Haasz, C. Turkay, E. Hodneland, A. Lundervold, A. J. Lundervold, B. Preim & H. Hauser, “Interactive Visual Analysis of Heterogeneous Cohort Study Data”, in press *IEEE Computer Graphics and Applications*, 2014
- A. Birkeland, C. Turkay & I. Viola, “Perceptually Uniform Motion Space”, *IEEE Transactions on Visualization and Computer Graphics*, May 2014
- Turkay, C., Lex, A., Streit, M., Pfister, H. and Hauser, H. (2014). “Characterizing cancer subtypes using dual analysis in Caleydo StratomeX”. *IEEE Computer Graphics and Applications*, 34(2), 38-47.
- J. Parulek, C. Turkay, N. Reuter, I. Viola., “Visual Cavity Analysis in Molecular Simulations”, *BMC Bioinformatics*, 14(Suppl 19), 2013
- Turkay, C., Lundervold, A., Lundervold, A. J., & Hauser, H., “Representative Factor Generation for the Interactive Visual Analysis of High-Dimensional Data”, *IEEE Transactions on Visualization and Computer Graphics 18(12) (InfoVis 2012)*, 2012
- Solteszova, V., Turkay, C., Price, M. C., & Viola, I., “A Perceptual-Statistics Shading Model”, *IEEE Transactions on Visualization and Computer Graphics 18(12) (SciVis 2012)*, 2012
- Turkay, C., Filzmoser, P., & Hauser, H., “Brushing Dimensions-A Dual Visual Analysis Model for High-Dimensional Data”, *IEEE Transactions on Visualization and Computer Graphics 17(12) (InfoVis 2011)*, 2011
- Turkay, C., Parulek, J., Reuter, N., & Hauser, H., “Interactive visual analysis of temporal cluster structures”, *Computer Graphics Forum 30(3) (EuroVis 2011)*, 2011
- C. Turkay, E. Koc, S. Balcisoy, “Integrating information theory in agent-based crowd simulation behavior models”, *The Computer Journal*, 54(11), 2011
- C. Turkay, E. Koc, S. Balcisoy, “An information theoretic approach to camera control for crowded scenes”, *The Visual Computer 25(5)*, 2009

Book chapters

- C. Turkay, F. Jeanquartier, A. Holzinger, H. Hauser, “On Computationally-enhanced Visual Analysis of Heterogeneous Data and its Application in Biomedical Informatics”, *Lecture Notes in Computer Science 8401*, Springer Berlin Heidelberg, 2014
- C. Turkay, E. Koc, S. Balcisoy, “An information theoretical approach to crowd simulation”, *Digital Urban Modeling and Simulation*, Springer Berlin Heidelberg, 2012

Conference articles

- C. Turkay, A. Lundervold, A. J. Lundervold & H. Hauser, “Hypothesis Generation by Interactive Visual Exploration of Heterogeneous Medical Data”, in press, *Lecture notes in Computer Science (HCI-KDD within SouthCHI 2013)*, 2013
- Parulek, J., Turkay, C., Reuter, N., & Viola, I., “Implicit surfaces for interactive graph based cavity analysis of molecular simulations”, *IEEE Symposium on Biological Data Visualization (BioVis 2012)*, 2012
- Turkay, C., Parulek, J., & Hauser, H., “Dual analysis of DNA microarrays”, *Proceedings of the 12th International Conference on Knowledge Management and Knowledge Technologies (I-KNOW 2012)*, 2012

- Turkay, C., Parulek, J., Reuter, N., & Hauser, H., “Integrating cluster formation and cluster evaluation in interactive visual analysis”, *Proceedings of the Spring Conference on Computer Graphics*, 2011
- C.Turkay, E.Koc, S.Balcisoy, “An Information Theory Based Behavioral Model for Agent-Based Crowd Simulations”, *Computer and Information Science: Proc. 25th Int. Symp. Computer and Information Sciences*, 2010
- A.Cayci, S.Sumengen, C.Turkay, S.Balcisoy, Y.Saygin, “Temporal Dynamics of User Interests in Web Search Queries”, *Proceedings of 2009 IEEE International Symposium on Mining and Web MAW09*, 2009

Posters

- Turkay, C., Parulek, J., & Hauser, H., “Dual Analysis of High-Dimensional Biological Data”, VIZBI 2013, Boston, USA, 2013
- Turkay, C., Parulek, J., & Hauser, H., “Interactive Visual Analysis of Biological Data”, VIZBI 2012, Heidelberg, Germany, 2012
- Turkay, C., Parulek, J., Reuter, N., & Hauser, H., “Interactive Visual Analysis of Molecular Dynamics Simulations of Lipid Bilayers”, MedViz Conference, Bergen, Norway, 2011

PROJECT ACQUISITION ACTIVITIES

- Work-package local leader, *VALCRI: Visual Analytics for Sense-Making in Criminal Intelligence Analysis*, EU FP7 Project (13 million € in total), 2014-2018
- Investigator *FareViz*, TSB (Data exploration competition), (£472k in total), 2014-2016
- Co-authored *Stream Analysis: Interactive Visual Analysis of Streaming Data*, grant proposal within FRINATEK scheme from Norwegian Research Council, 2013
- Co-authored *Information Theory based Social Network Visualization Techniques*, funded by Turkish National Science Foundation, 2009
- Co-authored *Producing a Motion Capture System Using Standard Video Cameras*, funded by The Scientific And Technological Research Council Of Turkey, 2007

TALKS

- Invited talk at the Department of Computing, Tu Wien, Vienna Austria, 2014
Seamless Computations for Interactive Data Analysis
- Invited talk at the Department of Psychology, Harvard University, Cambridge, USA, April 2013
Hypothesis Generation Through Interactive Visual Data Analysis
- Invited talk at the GVI Group, SEAS, Harvard University, Cambridge, USA, April 2013
Dual Analysis Methodology for the interactive and visual analysis of high dimensional data
- Invited talk at Christian Michelsen Research, Bergen, Norway, March 2013
Brushing Dimensions – A new perspective on high dimensional data analysis
- Talk at ICT Research School, Bergen, Norway, May 2011
Interactive Visual Analysis of Clusters
- Talk at Bioinformatics Forum for Young Scientists, Ullensvang, Norway, March 2011
Interactive Visual Analysis of Molecular Dynamics Simulations of Lipid Bilayers
- Talk at ICT Research School, Bergen, Norway, May 2010
Interactive Visual Analysis Techniques

ACADEMIC
SERVICES

Programme Committee

- EurasiaGraphics 2014
- HCI-KDD
- MIUA 2014

Reviewer

- IEEE Transactions on Visualization and Computer Graphics, 2011, 2012, 2013, 2014
- VIS conferences (InfoVis, SciVis and VAST), 2010, 2011, 2012, 2013, 2014
- EuroVis (Computer Graphics Forum), 2012, 2013, 2014
- PacificVis, 2012, 2013
- The Visual Computer, 2012
- Computer Graphics International, 2008, 2011, 2012
- Advanced Visual Interfaces, 2010

Conference Organization

- Local organization responsible, EuroVA 2011, Bergen, Norway
- Organization assistance, EuroVis 2011, Bergen, Norway

TEACHING

- Introduction to Data Science (PG), City University London
- Databases (PG), City University London
- Seminar in Visualization (INF358), Fall 2012, University of Bergen
- Computer Graphics (INF251), Spring 2012, University of Bergen
- Discrete Structures (MNF130), Spring 2011, University of Bergen

Student supervision

- Project supervision, Andreas Lind, Multiresolution Analysis for Visual Analysis of Gene Expression Data, Spring 2011, University of Bergen
- Master Thesis, Prabu Vekataraman, A Unified Visualization Workbench for Integrative Bioinformatics Research, Fall 2010, University of Bergen
- Project supervision, Jonas Waage, Optical Tracking on the VizWall at Hyteknologisenteret, Fall 2010, University of Bergen
- Project supervision, Emre Koc, Crowd Simulation Applications, Spring 2009, Sabanci University
- Project supervision, Kamer Ali Yuksel, Crowd Simulation Applications, Spring 2009, Sabanci University

FELLOWSHIPS
& AWARDS

- UIB Meltzer Foundation project grant, 2012
- Second Best Paper Award at *Spring Conference on Computer Graphics*, 2011
- Sabanci University Graduate Student Scholarship, 2007 - 2009

COMMERCIAL
WORK
EXPERIENCE

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| Sept. 2006 - Sept. 2007 | R&D Engineer at Yogurt Technologies, Istanbul, Turkey. |
| Jul. 2006 - Sept. 2006 | Software Support Specialist at IBM Turkey, Istanbul, Turkey. |
| Dec. 2005 - May 2006 | R&D Engineer at Siemens Business Services, Sebit - Create Game Department, Ankara, Turkey. |

REFERENCES

Available upon request