M. Adil Yalçın

Data Interface Designer

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Ph.D. Candidate, Computer Science University of Maryland, College Park

Lowering the barriers in rich visual & interactive data analysis for a broad audience
is the driving motivation of my work. I target challenges in design, development, engineering, and computation. Human Computer Interaction Lab (HCIL) is my current home for research.

Most of my solutions become part of **Keshif** (www.keshif.me), an out-of-the-box visual data exploration environment for the web.

> To <u>work with me</u> to build next-gen data analytics solutions based on human-centered design and research, or for consulting, contact me at ✉ **yalcin@umd.edu** or 🔗 **(linkedin.com/in/adilyalcin)** .
>
> *I am a green card holder and do not need visa sponsorship.*

🎓 Education

Ph.D. Candidate — Sep. 2010 - Dec. 2016 (Expected)
Computer Science, University of Maryland, College Park, USA
Thesis: **Towards Rapid, Effective and Flexible Visual Data Exploration**
Advisors: Niklas Elmqvist, Ben Bederson

Master of Science — June 2010
Computer Engineering, Bilkent University, Ankara, Turkey
Thesis: Real-Time Simulation and Visualization of Deformations on Heightfields
Advisor: Bülent Özgüç, Co-Advisor: Tolga Çapın

Bachelor of Science — June 2008
Computer Engineering, Middle East Technical University, Ankara, Turkey
Senior Project: Operational Simulation System - OPSIMUS

🖌 Skills

- ✨ Goal
- ♥ User Interfaces / Visualization / Front End / Design
- 🔧 Development
- 📔 Data Processing / Back End
- 👍 Computer Graphics, Simulation

Effective, simple solutions to complex challenges
JavaScript, HTML5, CSS3, d3, Photoshop, Tableau

SublimeText, less, Version control (git/svn)
Node.js, SQL, Python, Java, Matlab
C++, C, OpenGL / GLSL, OpenCL / Cuda, Lua

📄 Publications

AggreSet: Rich and Scalable Set Exploration using Visualizations of Element Aggregations
M. Adil Yalçın & Niklas Elmqvist & Ben Bederson

INFOVIS '15 - IEEE Transactions on Visualization and Computer Graphics (Proc. of the VAST / InfoVis / SciVis 2015)

Cognitive Stages in Visual Data Exploration
M. Adil Yalçın & Niklas Elmqvist & Ben Bederson

BELIV '16 - Proceedings of Beyond Time and Errors: Novel Evaluation Methods for Visualization at IEEE VIS 2016

Keshif: Out-of-the-Box Visual and Interactive Data Exploration Environment
M. Adil Yalçın & Niklas Elmqvist & Ben Bederson

VIP '16 - Visualization In Practice Workshop at IEEEVIS

Information Visualization
M. Adil Yalçın & Catherine Plaisant

Big Data and Social Sciences - CRC Publishing

PixelPie: Maximal Poisson-disk Sampling with Rasterization
Cheuk Yiu Ip & M. Adil Yalçın & David Luebke & Amitabh Varshney

HPG '13 - Proceedings of the 5th High-Performance Graphics Conference

GPU Algorithms for Diamond-based Multiresolution Terrain Processing
M. Adil Yalçın & Kenneth Weiss & Leila De Floriani

EGPGV '11 - Proceedings of the 11th Eurographics conference on Parallel Graphics and Visualization

Incorporating Learning Analytics into Basic Course Administration: How to Embrace the Opportunity to Identify Inconsistencies and Inform Responses
Lindsey B. Anderson & Elizabeth E. Gardner & Andrew D. Wolvin & Rowena Kirby-Straker & Adil Yalcin & Ben Bederson

NCA 2015 - 101th Annual meeting of the National Communication Association

Real-Time Simulation and Visualization of Deformations on Heightfields
M. Adil Yalçın

M.Sc. Thesis - Bilkent University

A Generic Multi-View Rendering Engine Architecture
M. Adil Yalçın & Tolga Çapın

Game Engine Gems Volume 2 - A.K. Peters

Route Visualization in Indoor Panoramic Imagery with Open Area Maps
Mateis Stroila & M. Adil Yalcin & Joe Mays & Narayanan Alwar

ICMEW '12 - IEEE International Conference on Multimedia and Expo Workshops

Editing Heightfield using History Management and 3D Widgets
M. Adil Yalçın & Tolga Çapın

ISCIS '09 - 24th International Symposium on Computer and Information Sciences

💼 Work Experience

START (National Consortium for the Study of Terrorism and Responses to Terrorism) - College Park, MD Research & Development ✂ Global Terrorism Database	**2016 - now**
SESYNC (National Socio-Environmental Synthesis Center) - Annapolis, MD Research & Development ✂ Data to Motivate Synthesis	**2015 - 2016**
Teaching and Learning Transformation Center, UMD - College Park, MD Research & Development ✂ Education Data Analysis	**2014 - 2015**
AT&T Labs Research - Florham Park, New Jersey R&D Internship ✂ Free viewpoint synthesis using depth and color sensors	**2012 Summer**

✏️ Projects and Tools

Keshif: Data Made Explorable
ℹ️ *Keshif is a visual interactive data exploration enviroement, built for the web, designed for expressiveness with minimalism.*

MusicDigger
ℹ️ *MusicDigger is a tool that lets you "discover discographies" and "browse artist networks".*

OpenRenderingEngine (OpenREng)
ℹ️ *A 3D rendering library that supports mobile and desktop GPUs on modern OpenGL.*

Base Terrain Engine
ℹ️ *Base Engine is built from various research projects on terrain meshes.*

Parallel Region Quad-Tree Construction on GPUs
ℹ️ *A bottom-up approach to construct quadtrees from an arbitrary image or set of nodes.*

Discrete Voronoi Diagrams using Programmable Graphics Hardware
ℹ️ *Implementation of a fast GPu algorithm to generate Voronoi Diagrams for 2D points.*