M. Adil Yalçın

www.adilyalcin.me
yalcin@umd.edu
2117 Hornbake Building,
University of Maryland,
College Park, MD 20742

Data ↔ Human Interface Designer

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 work with me 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 sponshorship.

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	**Effective, simple solutions to complex challenges**
User Interfaces / Visualization / Front End / Design	JavaScript, HTML5, CSS3, d3, Photoshop
Development	SublimeText, less, Version control (git/svn)
Data Processing / Back End	Node.js, SQL, Python, Java, Matlab
Computer Graphics, Simulation	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

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 — **2016 - now**
Research & Development ⁄ Global Terrorism Database

SESYNC (National Socio-Environmental Synthesis Center) - Annapolis, MD — **2015 - 2016**
Research & Development ⁄ Data to Motivate Synthesis

Teaching and Learning Transformation Center, UMD - College Park, MD — **2014 - 2015**
Research & Development ⁄ Education Data Analysis

AT&T Labs Research - Florham Park, New Jersey — **2012 Summer**
R&D Internship ⁄ Free viewpoint synthesis using depth and color sensors

Projects and Tools

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

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

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

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

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

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

Operation Simulations System (B.Sc. Senior Project)
OPSIMUS is a simulation system in which the aim of the users is to complete an operational task.