MOATAZ ABDELAAL

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Stuttgart, 70176, Germany
Arabic (native), English (C2), German (B1)

EDUCATION

Ph. D. Candidate, Computer Science, University of Stuttgart, Germany, 2018-Present

Title: Visualizing Time-dependent Data
Supervisor: Prof. Dr. Daniel Weiskopf
Expected Gradation: 2023

M. Sc., Computer Science, University of Stuttgart, Germany, 2017

Profile: Visual Computing
Grade: 1.8 (1.0 is the best possible)
Master Thesis: Multi-Timescale Dynamic Graph Visualization **(Outstanding Master Thesis)**
Advisors: Assistant Prof. Dr. Michael Burch and Prof. Dr. Daniel Weiskopf

B. Sc., Computer Science, University of Helwan, Egypt, 2010

Profile: Software Engineering
Grade: 3.8 (4.0 is the best possible)

RESEARCH EXPERIENCE

Researcher, VISUS Institute, University of Stuttgart, 2018-Present

Research Interests: Visualization, Visual Analytics, Human Computer Interaction

RESEARCH PROJECTS

Visual Topic-based Analysis of Scientific Community Structure

A visualization tool to explore and analyze publication datasets

`Java-desktop, Prefuse`

Abdelaal, Moataz, Florian Heimerl, and Steffen Koch. "ColTop: Visual topic-based analysis of scientific community structure." In 2017 International Symposium on Big Data Visual Analytics (BDVA), pp. 1-8. IEEE, **2017**.

Dynamic Graph Visualization

Improving the state-of-the-art techniques for dynamic graph visualization

`Java-web, html, javascript`

Abdelaal, Moataz, Marcel Hlawatsch, Michael Burch, and Daniel Weiskopf. "Clustering for stacked edge splatting." In Proceedings of the Conference on Vision, Modeling, and Visualization, pp. 127-134. **2018**.

Abdelaal, Moataz, Antoine Lhuillier, Marcel Hlawatsch, and Daniel Weiskopf. "Time-Aligned Edge Plots for Dynamic Graph Visualization." In 2020 24th International Conference Information Visualisation (IV), pp. 248-257. IEEE, **2020**. **(Best Paper Award).**

Visual Analytics for Fibre Composite Building Systems - Ongoing

A visualization tool to support architects in designing new fibre-composite structures

`C#, WPF`

Evaluating Bipartite Layout for Network Visualization - Ongoing

A user-study to evaluate the efficacy of bipartite layout in network visualization

`R, d3, html, javascript`

Visualization of Nonlinear Programming for Robot Motion Planning

A visualization tool for understanding and troubleshooting high-dimensional optimization problems

Conceptualization, Supervision, and Writing

Hägele, David, **Moataz Abdelaal**, Ozgur S. Oguz, Marc Toussaint, and Daniel Weiskopf. "Visualization of nonlinear programming for robot motion planning." In Proceedings of the 13th International Symposium on Visual Information Communication and Interaction, pp. 1-8. **2020**. **(Best Paper Award).**

Wissen und Transfer - WiTra-LB (A Collaboration with Fraunhofer)

A knowledge-transfer platform powered by `Tableau` to present the latest advances in architecture research

Consultation and Evaluation

https://ressourceneffizienz-und-klimaneutralitaet.de/wissenspool/

TEACHING EXPERIENCE

Tutor, University of Stuttgart, 2018- Present

Courses: Information Visualization, Scientific Visualization, Theoretical Foundations of Visual Computing

Teaching Assistant, University of Helwan, Egypt, 2011-2015

Courses: Object-oriented Programming, Web Programming, Data Structures, Database Systems, Introduction to Information Systems

PROFESSIONAL EXPERIENCE

.Net Web Developer, Storeserver, Stuttgart, Mar. 2017- Sept. 2017

`ASP.NET, C#, HTML, Javascript, SQL Server 2012`

Java Web Developer, Harf, Egypt, 2011- 2012

`JAVA, Servlets and JSP, SQL Server 2005`