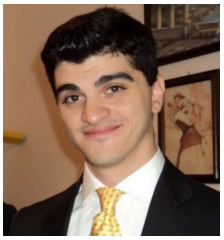

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ALESSIO ARLEO

SHORT BIO

Alessio Arleo received his PhD formation in Industrial and Information Engineering at the University of Perugia, under the supervision of Prof. Walter Didimo and Prof. Giuseppe Liotta.

During his PhD, he spent three months (Jan-Mar 2017) as a visiting PhD student in Davis, California, at Prof. Kwan-Liu Ma *VIDI* Lab, and he attended several schools, conferences, and workshops.

His main research interests lie within the fields of (distributed) layout algorithms for static and dynamic graphs, information visualization, visual analytics, algorithm engineering and system development. On the above topics he wrote several papers, he collaborated with several international researchers and participated to grants. He has teaching experience, as well as in supervising students. Recently, he also worked on the representation and interaction with graphs in virtual environments and on the visualization of dynamic networks.

In 2017, he co-founded the academic spin-off "*CONTATTI yi-zhong-yi Srl*", a company made up by engineers and linguists that offers advanced ICT solutions and smart technologies to promote and develop tourism in Italy, with a particular focus on Chinese tourists.

He earned his PhD April 2018 at University of Perugia in *Computer and Industrial Engineering*. Since May 2018, he has been working as Post-Doc at the *Centre for Visual Analytics Science and Technology (CVAST)*, TU Wien.

CURRENT POSITION

Post-Doc at TU Wien in *Visual Analytics*
Apr. 2018- (Apr.2021)

The main focus is on Model Building and Visual Analytics, a research area in the "Research Cluster Smart Communities and Technologies" (Smart CT).

EDUCATION

PHD in Industrial and Information Engineering
2014-2018

Thesis title: "Distributed Large Graph Visualization: Algorithms and Experiments"
Advisors: Prof. Giuseppe Liotta and Prof. Walter Didimo
Thesis Reviewers: Prof. Kwan-Liu Ma, Prof. Andrea Pietracaprina

3rd IEEE Italy Section Summer School
September 17th – 23rd 2017, University of Perugia, Perugia (IT)

Bertinoro Workshop on Graph Drawing
March 6th – 11th 2016, University Residential Center, Bertinoro (IT)

1st IEEE Italy Section Summer School
June 21st – 28th 2015, University of Perugia, Perugia (IT)

BigDat 2015 Winter School
January 26th – 30th 2015, Universitat Rovira i Virgili , Tarragona (ES)

Computational Social Science Summer School
July 21st – 25th 2014, University of Catania, Lipari (IT)

Master's degree in Computer and Automation Engineering
2011 - 2014

Thesis: "Programming and development of an iOS app for AR navigation".
Title achieved *cum laude*.

PUBLICATIONS (FULL LIST)

D. Ceneda, A. Arleo, T. Gschwandtner, S. Miksch
Show Me Your Face: Towards an Automated Method to Provide Timely Guidance in Visual Analytics
To Appear on IEEE Transactions on Visualization and Computer Graphics (TVCG), 2021

A. Arleo, S. Miksch, D. Archambault
A Multilevel Approach for Event-Based Dynamic Graph Drawing
EuroVis 2021 - Short Papers, 2021

V. Filipov, A. Arleo, S. Miksch
Exploratory User Study on Graph Temporal Encodings
IEEE 14th Pacific Visualization Symposium (PacificVis), 2021

A. Arleo, W. Didimo, G. Liotta, S. Miksch, F. Montecchiani
VAIM: Visual Analytics for Influence Maximization
Proceedings of the 28th International Symposium on Graph Drawing and Network Visualization, 2020

R. A. Leite, A. Arleo, J. Sorger, T. Gschwandtner, and S. Miksch
Hermes: Guidance-enriched Visual Analytics for economic network exploration
Visual Informatics 4 (4), pp. 11-22, 2020

J. Sorger, M. Waldner, W. Knecht, and A. Arleo

Immersive Analytics of Large Dynamic Networks via Overview and Detail Navigation

IEEE International Conference on Artificial Intelligence and Virtual Reality (AIVR), pp. 144-1447, 2019

A. Arleo, C. Tsigkanos, C. Jia, R. A. Leite, I. Murturi, M. Klaffenböck, S. Dustdar, M. Wimmer, S. Miksch, and J. Sorger

Sabrina: Modeling and Visualization of Economy Data with Incremental Domain Knowledge

IEEE Visualization Conference (VIS), pp. 51-55, 2019

C. Tsigkanos, A. Arleo, J. Sorger, and S. Dustdar

How do firms transact? Guesstimation and Validation of Financial Transaction Networks with Satisfiability

IEEE 20th International Conference on Information Reuse and Integration for Data Science (IRI), pp. 15-22, 2019

V. Filipov, A. Arleo, P. Federico, and S. Miksch,

CV3: Visual Exploration, Assessment, and Comparison of CVs

Computer Graphics Forum 38 (3), pp. 107-118, 2019

A. Arleo, W. Didimo, G. Liotta, F. Montecchiani

A Distributed Multilevel Force-directed Algorithm

IEEE Transactions on Parallel and Distributed Systems 30 (4), pp. 754 – 765, *2019*

A. Arleo, W. Didimo, G. Liotta, F. Montecchiani

Profiling distributed graph processing systems through visual analytics

Future Generation Computer Systems 87, pp. 43-57, 2018

A. Arleo, C. Binucci, E. Di Giacomo, W. Evans, L. Grilli, G. Liotta, H. Meijer, F. Montecchiani, S. Whitesides, S. Wismath

Visibility Representations of Boxes in 2.5 Dimensions

Computational Geometry 72, pp. 19-33, 2018

A. Arleo, W. Didimo, G. Liotta, F. Montecchiani

GiViP: A Visual Profiler for Distributed Graph Processing Systems

International Symposium on Graph Drawing and Network Visualization, pp. 256-271, 2017

A. Arleo, Oh-Hyun Kwon, Kwan-Liu Ma

GraphRay: Distributed Pathfinder Network Scaling

IEEE 7th Symposium on Large Data Analysis and Visualization (LDAV), pp.74-83, 2017

A. Arleo, W. Didimo, G. Liotta, F. Montecchiani
Large graph visualizations using a distributed computing platform
Information Sciences (381), pp. 124-141, 2017

A. Arleo, W. Didimo, G. Liotta, F. Montecchiani
A Distributed Multilevel Force-directed Algorithm,
International Symposium on Graph Drawing and Network Visualization, pp. 3-17, 2016

A. Arleo, C. Binucci, E. Di Giacomo, W. Evans, L. Grilli, G. Liotta, H. Meijer, F. Montecchiani, S. Whitesides, S. Wismath
Visibility Representations of Boxes in 2.5 Dimensions,
International Symposium on Graph Drawing and Network Visualization, pp 251-265, 2016

A. Arleo, W. Didimo, G. Liotta, F. Montecchiani
A Million Edge Drawing for a Fistful of Dollars,
International Symposium on Graph Drawing and Network Visualization, pp 74-83, 2015

A. Arleo, F. De Luca, G. Liotta,F. Montecchiani, I. Tollis
GraphBook: Making graph Paging Real,
International Symposium on Graph Drawing and Network Visualization, p. 509, 2014

RESEARCH EXPERIENCE

Visiting PHD student
January 5th – April 05th 2017, *University of California*, Davis (CA)
During this experience, further knowledge was acquired about distributed computing and algorithms. This programming paradigm was then applied to visualization problems studied at UC Davis, at prof. Kwan-Liu Ma's VIDI Lab.

TEACHING EXPERIENCE

"Information Design and Visualization" Co-Lecturer – *at TU Wien*
04/2021 – Ongoing
Co-Lecturer of the "Information Design and Visualization" course held at TU Wien, teaching the "Information Visualization Techniques" lecture.

"Scientific Writing" Seminar Coordinator and Co-Lecturer– *at TU Wien*
02/2019 – Ongoing
In this seminar students learn how to approach paper writing and literature search, participating to a simulated conference.

"Information Visualization" Co-Lecturer – *at TU Wien*
11/2018 – Ongoing
Co-Lecturer of the "Information Visualization" course held at TU Wien, teaching the "Graphs and Trees" lecture.

Teacher of "Big Data Management" - *at ECIPA Umbria*
07/2017 - 10/2017

This teaching activity took place at the ECIPA Umbria, an association that organizes training courses at national and European levels.

Tutor - *at University of Perugia (Terni branch)*
04/2017 - 06/2017
Tutor in "Computer Science fundamentals" course at University of Perugia branch in Terni.

GRANTS

Participant of AMANDA: Algorithmics for MAssive and Networked DAta (2012)
MIUR PRIN project (55,000 EUR), prot. 2012C4E3KT 001.
Website: http://www.dia.uniroma3.it/~amanda

Participant of "INFINITY - Models and algorithms for the visual representation of information on the driving styles of a big dataset of drivers" (2014).
Contract between the Department of Engineering of the University of Perugia and the company Sistematica SpA, within the regional call, Innovative Actions, FESR 2007-2013.

Grant by Umbria Regional Administration.
Contract for the feasibility study for developing a tourist and travel information website for Umbria Regional Administration integrating innovative services for tourists.

CONFERENCES AND WORKSHOPS

Papers Co-Chair of:
12th Visual Analytics for Healthcare (VAHC) workshop at IEEE VIS 2021
Program Committee member of:
PacificVIS 2021 Visualization Notes

SCIENTIFIC REVIEW ACTIVITY (PARTIAL)

IEEE Pacific Visualization Symposium, International Symposium on Graph Drawing and Network Visualization, Expert Systems with Applications journal (Ed. Elsevier), Discussiones Mathematicae journal, Pattern Recognition journal (Ed. Elsevier), Workshop on Visual Analytics in Healthcare, IEEE Conference on Visual Analytics Science and Technology (VAST), IEEE Conference on Information Visualization.

PROFESSIONAL EXPERIENCE

Internship at University of Perugia
01/2013 - 04/2013
Development of a Web Application using JavaScript and Ajax.

Web Developer at Nuova Dimensione Medica (NDM)
09/2012 - 03/2013
Development of an e-learning platform.

TECHNOLOGY TRANSFER

In December 2017, "*CONTATTI yi-zhong-yi Srl*", was founded: a spin-off company of the University of Perugia. The company is made up by engineers and linguists and it is aimed at offering advanced ICT solutions and smart technologies to promote and develop tourism in

Italy. In particular, the company has Chinese tourists as main target for its solutions and services.

I hereby authorize the processing of the personal data contained in this CV in compliance with the Italian Personal Data Protection Code (Legislative Decree no. 196 of 30 June 2003).

Wien, July 29th 2021

(Alessio Arleo)