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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 at Davis, California, in Prof. Kwan-Liu Ma Vidi Lab and attended three schools and several conferences and workshops.

His main research interests lie within the fields of (distributed) graph drawing algorithms, 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.

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*.

From May 2018 he works 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*

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)

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 Degree in Computer and Automation Engineering

2011 - 2014

Thesis: “Programming and development of an iOS app for AR navigation”.

Title achieved *cum laude*.

PUBLICATIONS

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

A Distributed Multilevel Force-directed Algorithm,

To appear on IEEE Transactions on Parallel and Distributed Systems, 2018

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

A Distributed Multilevel Force-directed Algorithm,

International Symposium on Graph Drawing and Network Visualization, 2016, pp 3-17, Springer

Alessio Arleo, Carla Binucci, Emilio Di Giacomo, William Evans, Luca Grilli, Giuseppe Liotta, Henk Meijer, Fabrizio Montecchiani, Sue Whitesides And Stephen Wismath

Visibility Representations of Boxes in 2.5 Dimensions,

International Symposium on Graph Drawing and Network Visualization, 2016, pp 251-265, Springer

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

A Distributed Force-Directed Algorithm on Giraph: Design and Experiments,

Information Sciences, issue 381, 2017, pp. 124-141

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, 2015, pp 74-83, Springer

A. Arleo, F. De Luca, G. Liotta, F. Montecchiani, I. Tollis,

GraphBook: Making graph Paging Real,

International Symposium on Graph Drawing and Network Visualization, 2014, p. 509, Springer

RESEARCH
EXPERIENCE
ABROAD

Visiting PHD student

January 5th – April 05th 2017, *University of California*, Davis (CA)

During this experience I further expanded my knowledge about distributed computing and algorithms. I applied this computing paradigm to visualization problems studied at UC Davis, at prof. Kwan-Liu Ma's VIDI Lab.

TEACHING
EXPERIENCE

Teacher of “Big Data Management”

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

I assisted the professor in the teaching "Computer Science fundamentals" 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/index.php>

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

24th International Symposium on Graph Drawing and Network Visualization

September 19th - 21st 2016, Athens, Greece

Bertinoro Workshop on Graph Drawing

March 6th - 11th 2016

23rd International Symposium on Graph Drawing and Network Visualization

September 24th - 26th 2015, California State University, Los Angeles (USA)

PROFESSIONAL
EXPERIENCE

Internship at University of Perugia

01/2013 - 04/2013

Development of a Web Client to interact with the server hosting TRART algorithm software implementation, using JavaScript and Ajax.

Web Developer at Nuova Dimensione Medica (NDM)

09/2012 - 03/2013

Development of an e-learning platform.

SCIENTIFIC
REVIEW
ACTIVITY

PacificVis, International Symposium on Graph Drawing and Network Visualization, Expert Systems with Applications journal (Ed. Elsevier), Discussiones Mathematicae journal.

TECHNOLOGY
TRANSFER

In December 2017, I co-founded “*CONTATTI yi-zhong-yi Srl*”, 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, September 9th 2018

(Alessio Arleo)