

Dr Achilleas Psyllidis

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Profile

Independent researcher in the areas of Spatial Data Science and GeoComputation, with focus on the representation of and knowledge discovery about the dynamics social space. My research has developed from a substantive interest in understanding how human interactions evolve within urban systems and their hierarchies, at various spatial, social, and temporal scales. To this end, I have designed and developed novel (spatial) data science methods and technologies for the creation, enrichment, integration, and analysis of dynamic geo-social data. My most recent work focuses on the application of machine learning and neural networks to spatial data analysis and modelling. My work is supported by a substantial experience in combining and analysing heterogeneous and high-dimensional urban data from multiple sources, ranging from administrative data portals to social media. I have a strong academic background, 7 years of teaching experience in data science, architecture and urban planning studios, and programming tutorials, substantive record of publications, and awards in the areas of spatial data science, linked data, and spatial planning. I am committed to research and passionate for disseminating knowledge and teaching. Moreover, I have professional experience as registered Architect-Engineer in Europe. Aspiring an academic career with focus on urban and regional analytics, geo-computation, statistical spatial analysis, and spatial data science.

Research interests:

GeoComputation, Spatial data science, GIScience, Machine learning, Spatiotemporal data mining, Urban (data) analytics, Urban and regional systems, Knowledge representation, Data integration, (Geosocial) ontologies, Linked urban data.

Research Experience

2016 – Present Delft University of Technology (TU Delft) – Faculty of Electrical Engineering, Mathematics and Computer Science (EEMCS) – Department of Software Technology – Web Information Systems (WIS) group

Postdoctoral Researcher in Urban Data Science and Analytics

Research focus: Application of machine learning and neural networks to spatial data analysis and modelling of issues pertaining to human mobility, transportation, and social area analysis in urban and regional contexts. Knowledge extraction from high-dimensional and unstructured geo-social and temporal data using Semantic Web and linked data technologies.

2016 – Present Amsterdam Institute for Advanced Metropolitan Solutions (AMS Institute)

Research Fellow, Urban Data Analytics (interlinked with the postdoctoral position at TU Delft)
 Research and project lead of the Social Urban Data Lab (SUDL)

SUDL focuses on the development of novel data science methods and technology to provide insight into urban interactions. It addresses societal, urban and regional problems that range from human mobility and migration to social relationships and spatial inequality. Its mission is to create powerful digital reflections of urban interactions at scale, from sparse and ambiguous data sources, by combining machine learning with human computation and user modelling.

2012 – 2016 TU Delft – Faculty of Architecture and the Built Environment (A+BE) – Section of Computation and Performance

PhD Researcher in Spatial Data Science;

Thesis title: *“Revisiting Urban Dynamics through Social Urban Data: Methods and tools for data integration, visualization and exploratory analysis to understand the spatiotemporal dynamics of human activity in cities”*
 (Supervisors: Prof. ir. Kas Oosterhuis & Dr. ir. Nimish Biloria).

Summary: The thesis proposes the design and development of a framework of novel methods and tools for the integration, visualisation, and exploratory analysis of large-scale and heterogeneous social urban data to facilitate the understanding of urban dynamics. The research focuses particularly on the spatiotemporal dynamics of human activity in cities, as inferred from different sources of large-scale geo-social data (e.g. social media). The main objective is to provide new means to enable the incorporation of heterogeneous social urban data into city analytics, and to explore the influence of emerging data sources (i.e. data from geo-enabled social media and location-based social networks, mobile phone records, and sensor data) on the understanding of cities and their dynamics.

- 2012 – 2013** TU Delft – Faculty of Architecture and the Built Environment – Department of Urbanism
Researcher and Lecturer in the area of ‘Future Cities’ (The Why Factory – MVRDV & TU Delft),
 (Supervisors: Prof. ir. Winy Maas & Dr. ir. Nimish Biloria).

Education

- 2012 – 2016** TU Delft – Faculty of Architecture and the Built Environment (A+BE) – Section of Computation and Performance
PhD in Spatial Data Science (duration: 4 years – Defended on November 17, 2016).
First graduate of the A+BE Graduate School.
- 2012 – 2014** TU Delft – Graduate School A+BE
PhD Student in the Doctoral Education program (50 ECTS) – Completed in October 2014
 Courses taken: ‘Geo-Web, Sensor Networks, and 3D Geo-Visualization Technology’, ‘Big Data and Social Physics’, ‘Metrics for Smart Cities’, ‘Data Analysis with R’, ‘Coaching Individual Students’, ‘Coaching Project-based groups’.
- 2009 – 2011** National Technical University of Athens (NTUA) – School of Architectural Engineering
MPhil (Postgraduate Masters) in Architecture & Spatial Planning – (First Class Hons).
 Ranked *first* among his graduating class.
- 2001 – 2007** NTUA – School of Architectural Engineering
Engineering Diploma (Dipl. Eng.) in Architectural Engineering (duration: 5 years) – **(First Class Hons)**.
 Ranked *first* among his graduating class.

Honours, Awards & Scholarships

- 2012 – 2016** **Scholarship from the Alexander S. Onassis Foundation** for PhD studies in Spatial Data Science, (€53,000).
- 2012 – 2015** **Scholarship from the Greek State Scholarships Foundation (IKY) and the European Social Fund** (by the resources of the National Strategic Reference Framework 2007 – 2013 of the European Union) for PhD studies in Spatial Data Science, (€57,000).
- 2012 – 2016** **Individual Research Grant from the Foundation for Education and European Culture (IPEP)** for PhD studies in Spatial Data Science, (€17,000).
- 2014 – 2016** **Individual Research Grant from the A. G. Leventis Foundation** for PhD studies in Spatial Data Science, (€9,200).
- 2015** **1st Prize, Linked Open Data for Smart Cities**, for his research on data integration and interlinkage (“ROUTE” project), Ontology Engineering group, Universidad Politécnica de Madrid (UPM).
- 2011** **Thomaides Award for Science and Arts**, for the research on computational approaches to designing urban public spaces.
- 2008** **Technical Chamber of Greece (TEE) Award**, for the best graduation project in Architectural Engineering.
- 2007** **Andreas Ploumistos Award**, for ranking first among the graduating class of 2007 at the School of Architectural Engineering, NTUA.
- 2006** **Thomaides Award**, for achieving the highest average grade in the academic year 2005 – 2006 among all students at the National Technical University of Athens.
- 2006** **Lysandros Kaftantzoglou Award**, for achieving the highest average grade in the academic year 2005 – 2006 at the School of Architectural Engineering, NTUA.
- 2005** **Kalliopi Venizelou-Sfaellou Award**, for achieving the highest average grade in the academic year 2004 – 2005 at the School of Architectural Engineering, NTUA.
- 2004** **Stamos Stournas Award**, for achieving the highest average grade in the academic years 2002 – 2004 at the School of Architectural Engineering, NTUA.

2001 – 2006 **Awards and Scholarships from the Greek State Scholarships Foundation (IKY)**, for outstanding academic performance.

Research Grants

- 2017** Horizon 2020: SC6-ENG-GLOBALLY-2016-2017.
Title: SAGE – Sustainable Ageing for cities and citizens. Role: *Co-Investigator*. (Results expected: July 2017).
- 2017** Horizon 2020: SC6-Co-Creation-2016-2017.
Title: PRECISION – Policy REalization through data Empowerment for Civil Servants working with YOuNg people. Role: *Co-Investigator*. (Results expected: July 2017).
- 2016** ERA-NET Co-Fund Smart Cities and Communities – Urban Europe.
Title: CODALoop – Community Data Loops for energy-efficient urban lifestyles. Role: *Co-Investigator*, **€962,947**.

Teaching Experience

- 2017** AMS Institute – MSc program on Metropolitan Analysis, Design and Engineering (MSc MADE)
Curriculum developer for the course “Urban Data Analytics” (subject to final approval):
Duties: – *Designed and developed* the course curriculum.
- 2017** TU Delft – Faculty of Electrical Engineering, Mathematics, and Computer Science (EEMCS)
Assistant Lecturer in the course IN4325: “Information Retrieval” – MSc 1 Level, Master in Data Science and Technology (Course Coordinator: Dr. Alessandro Bozzon):
Duties: – Prepared and delivered lectures on spatial data mining and spatial thinking in information retrieval;
– Developed a quarter-long assignment on data-driven city profiles (regionalization using social media data);
– Guided and supervised the student groups (approx. 20 individual students);
- 2014** TU Delft – Faculty of EEMCS
Invited Lecturer in the course IN4252: “Web Science and Engineering” – MSc 1 Level, Master in Computer Science and Engineering (Course Coordinator: Prof. dr. ir. Geert-Jan Houben):
Duties: – Prepared and delivered lecture on urban informatics.
- 2014** University at Buffalo, the State University of New York (SUNY) – Departments of Architecture and Media Studies
Invited Lecturer in the “Second Nature” Summer School (in Amsterdam, the Netherlands) – Graduate Level:
Duties: – Delivered lecture on urban informatics, linked urban data, and methods and tools for urban data science.
- 2013** TU Delft – Faculty of A+BE
Course Coordinator, Curriculum developer & Lecturer in the course AR1AUE010: “Hyperbody Design Studio: Non-Standard Buildings” – MSc1 Level, Master in Architecture:
Duties: – Designed the course curriculum and prepared the content of the weekly lectures;
– Delivered lectures on computational approaches to architectural and urban design;
– Devised a method for online collaboration between the student groups (approx. 40 individual students);
– Guided and supervised the student groups throughout the design process;
– Marked the students’ projects.
- 2013** TU Delft – Faculty of A+BE
Course Coordinator, Curriculum developer & Lecturer in the course AR1AUE020: “Hyperbody Architectural Studies: Interactive Environments” – MSc1 Level, Master in Architecture:
Duties: – Designed the course curriculum and prepared the content of the weekly lectures;
– Tutored students on advanced computational design (using Processing, Arduino, Rhino/Grasshopper);
– Devised a method for online collaboration between the student groups (approx. 40 individual students);
– Guided and supervised the student groups throughout the design process;
– Marked the students’ projects.
- 2013** TU Delft – Faculty of A+BE
Course Coordinator, Curriculum developer & Lecturer in the course AR1AUE070: “Hyperbody Media Studies: Introduction to Interactive and Social Media” – MSc1 Level, Master in Architecture:
Duties: – Designed the course curriculum and prepared the content of the weekly lectures and student assignment;
– Delivered lectures on the use of social media as a source to understand urban dynamics;
– Assigned relevant scientific literature to the students;
– Guided and supervised the students throughout the semester assignment;
– Marked the students’ assignments (individual papers).

- 2013** TU Delft – Faculty of A+BE
Invited Lecturer & Master Class Coordinator at the Urbanism Week 2013 – Graduate & Postgraduate Level:
- Duties: – Designed the Master Class curriculum on “SmartScapes: Big Data and Urban Informatics for Performative Cities” and prepared the content of the lecture and student assignment;
 – Delivered lecture on methods and tools for urban data science;
 – Guided the students to studying cities through large-scale urban data from multiple sources (22 students);
- 2013** TU Delft – Faculty of A+BE & MVRDV
Course Coordinator, Curriculum developed & Lecturer in the course AR1TWF020: “The Why Factory Actualities Workshops” (in collaboration with: ir. Bas Kalmeyer) – MSc2 Level, Master in Urbanism:
- Duties: – Designed the course curriculum and prepared the content of the weekly lectures and student assignments;
 – Organized and coordinated the workshop “Real-Time City: The City as an ambient interface”
 – Delivered lectures on urban science methods and techniques, linked urban data, and applications of social media to the study of urban dynamics;
 – Devised a method for online collaboration between the student groups (30 individual students);
 – Guided and supervised the student groups;
 – Marked the students’ projects (design and development of physical interactive systems, embedded in the urban fabric, using heterogeneous real-time social urban data).
- 2012** NTUA – School of Architectural Engineering
Assistant Lecturer in the course ARCH4236: “Urban Design Studio 8A” – Senior Level: 8th semester (Course Coordinators: Prof. dr. Konstantinos Moraitis and Dr. Eleni Haniotou):
- Duties: – Designed the course curriculum in collaboration with the course coordinators;
 – Delivered lectures on computational approaches to urban design and planning;
 – Supervised student groups throughout the semester-long urban design assignment (approx. 80 students);
 – Marked the students’ assignments.
- 2012** NTUA – School of Architectural Engineering
Assistant Lecturer in the course ARCH4226: “Advanced Architectural Design Studio 8” – Senior Level: 8th semester (Course Coordinator: Prof. Maria Kafritsa):
- Duties: – Designed the course curriculum in collaboration with the course coordinator;
 – Delivered lectures on parametric design and computational approaches to architecture;
 – Supervised the student groups into issues of building technology of large-scale complex buildings (approx. 80 students);
 – Marked the students’ assignments.
- 2011** NTUA – School of Architectural Engineering
Assistant Lecturer in the course ARCH4213: “Advanced Architectural Design Studio 7” – Senior Level: 7th semester (Course Coordinator: Prof. Maria Kafritsa):
- Duties: – Designed the course curriculum in collaboration with the course coordinator;
 – Delivered lectures on parametric design, genetic algorithms, and agent-based systems;
 – Supervised the student groups throughout the semester-long design of a large-scale complex building (approx. 80 students);
 – Marked the students’ assignments.
- 2011** NTUA, with Université Paris Malaquais, Université Paris 8, TU Dortmund, and Universität Duisburg-Essen
Assistant Lecturer in the International Urban Design Workshop “Urban Futures 5.0” – Seniors & Graduates:
- Duties: – Guided and supervised the students in the design process;
 – Marked the student design assignments.
- 2011** NTUA, with Parsons School of Design NY and Université Paris 8
Assistant Lecturer in the International Academic Workshop “Against All Odds Project” – Seniors & Graduates:
- Duties: – Guided and supervised the students in the design process;
 – Marked the student design assignments.
- 2011** NTUA – School of Architectural Engineering
Assistant Lecturer in the course ARCH4236: “Urban Design Studio 8A” – Senior Level: 8th semester (Course Coordinators: Prof. dr. Konstantinos Moraitis and Dr. Eleni Haniotou):
- Duties: – Designed the course curriculum in collaboration with the course coordinators;
 – Delivered lectures on computational approaches to urban design and planning;
 – Supervised student groups throughout the semester-long urban design assignment (approx. 70 students);
 – Marked the students’ assignments.
- 2011** NTUA – School of Architectural Engineering

Assistant Lecturer in the course ARCH4226: “Advanced Architectural Design Studio 8” – Senior Level: 8th semester (Course Coordinator: Prof. Maria Kafritsa):

- Duties:
- Designed the course curriculum in collaboration with the course coordinator;
 - Delivered lectures on parametric design and computational approaches to architecture;
 - Supervised the student groups into issues of building technology of large-scale complex buildings (approx. 70 students);
 - Marked the students’ assignments.

2010 NTUA – School of Architectural Engineering

Assistant Lecturer in the course ARCH4213: “Advanced Architectural Design Studio 7” – Senior Level: 7th semester (Course Coordinator: Prof. Maria Kafritsa):

- Duties:
- Designed the course curriculum in collaboration with the course coordinator;
 - Delivered lectures on parametric design;
 - Supervised the student groups throughout the semester-long design of a large-scale complex building (approx. 70 students);
 - Marked the students’ assignments.

Masters Students’ Supervision

2016 – Present TU Delft – Faculty of EEMCS – Web Information Systems

MSc thesis supervisor for Hendra Hadhil Choiri, MSc student in Data Science & Technology

MSc thesis working title: “*Estimating Urban Attractiveness through Google Street View Images*” (ongoing – in collaboration with Dr. Alessandro Bozzon).

2016 – Present TU Delft – Faculty of EEMCS – Web Information Systems

MSc thesis supervisor for Arkka Dhiratara, MSc student in Data Science & Technology

MSc thesis working title: “*A Framework for Discovering Knowledge about Energy Consumption Behaviour from Social Media*” (ongoing – in collaboration with Dr. Alessandro Bozzon).

2016 – Present TU Delft – Faculty of EEMCS – Web Information Systems

MSc thesis supervisor for Erwin Buckers, MSc student in Data Science & Technology

MSc thesis working title: “*Measuring Business Attractiveness of City Shopping Centres*” (ongoing – in collaboration with Dr. Alessandro Bozzon).

2016 – Present TU Delft – Faculty of EEMCS – Web Information Systems

MSc thesis supervisor for Rucha Bapat, MSc student in Data Science & Technology

MSc thesis working title: “*Crowd-powered Conversational Agents in Cities*” (ongoing – in collaboration with Dr. Alessandro Bozzon).

2015 – 2016 TU Delft – Faculty of EEMCS – Web Information Systems

MSc thesis supervisor for Vincent Gong, MSc student in Computer Science, Information Architecture Track

MSc thesis title: “*Exploring Human Activity Patterns Across Cities through Social Media Data*” (in collaboration with Dr. Alessandro Bozzon and ir. Jie Yang).

Peer Reviewed Publications

Psyllidis, Achilleas, Bozzon, Alessandro, & Yang, Jie. (2017). *Neural Network-based Regionalization of Social Interactions to Improve the Prediction of New POI Locations*. Submitted to PLoS One (under review).

Psyllidis, Achilleas. (2016). *Revisiting Urban Dynamics through Social Urban Data: Methods and tools for data integration, visualization, and exploratory analysis to understand the spatiotemporal dynamics of human activity in cities*. PhD dissertation. A+BE | Architecture and the Built Environment, Delft. doi: <http://dx.doi.org/10.7480/abe.2016.18>

Psyllidis, Achilleas. (2015). *Ontology-Based Data Integration from Heterogeneous Urban Systems: A Knowledge Representation Framework for Smart Cities*. In: Ferreira J Jr, Goodspeed R (eds) Planning Support Systems and Smart Cities: Proceedings of the 14th International Conference on Computers in Urban Planning and Urban Management (CUPUM 2015). MIT, Cambridge, MA, USA, pp. 240-1 – 240-21.

Psyllidis, Achilleas, Bozzon, Alessandro, Bocconi, Stefano, & Bolivar, Christiaan-Titos. (2015). *Harnessing Heterogeneous Social Data to Explore, Monitor, and Visualize Urban Dynamics*. In: Ferreira J Jr, Goodspeed R (eds) Planning Support Systems and Smart Cities: Proceedings of the 14th International Conference on Computers in Urban Planning and Urban Management (CUPUM 2015). MIT, Cambridge, MA, USA, pp. 239-1 – 239-22.

- Psyllidis, Achilleas.** (2015). *OSMoSys: A Web Interface for Graph-Based RDF Data Visualization and Ontology Browsing*. In: Cimiano P, Frasincar F, Houben G-J, Schwabe D (eds) *Engineering in the Web in the Big Data Era: 15th International Conference on Web Engineering (ICWE 2015)*. LNCS 9114, Springer International Publishing, Switzerland, pp. 679–682. doi: http://dx.doi.org/10.1007/978-3-319-19890-3_56
- Psyllidis, Achilleas,** Bozzon, Alessandro, Bocconi, Stefano, & Bolivar, Christiaan-Titos. (2015). *A Platform for Urban Analytics and Semantic Integration in City Planning*. In: Celani G, Moreno Sperling D, Franco JMS (eds) *Computer-Aided Architectural Design Futures – New Technologies and the Future of the Built Environment: 16th International Conference (CAAD Futures 2015) – Selected Papers*. LNCS, CCIS 527, Springer, Berlin Heidelberg, pp. 21–36. doi: http://dx.doi.org/10.1007/978-3-662-47386-3_2
- Bocconi, Stefano, Bozzon, Alessandro, **Psyllidis, Achilleas,** & Bolivar, Christiaan-Titos. (2015). *SocialGlass: A Platform for Urban Analytics and Decision-making Through Heterogeneous Social Data*. In: Gangemi A, Leonardi S, Panconesi A (eds) *24th International World Wide Web Conference (WWW 2015)*. ACM, New York, NY, pp. 175–178. doi: <http://dx.doi.org/10.1145/2740908.2742826>
- Psyllidis, Achilleas,** & Bioria, Nimish. (2014). *OntoPolis: A semantic participatory platform for performance assessment and augmentation of urban environments*. In: *10th IEEE International Conference on Intelligent Environments 2014 (IE '14)*. IOS Press, Washington, DC, pp. 140–147. doi: <http://dx.doi.org/10.1109/IE.2014.28>
- Psyllidis, Achilleas,** & Bioria, Nimish. (2014). *From Big Data to Linked Data: Extracting and Interlinking Knowledge from the City through Semantic Web Technologies*. In: *Workshop on Smart Cities and Big Data International Research Workshop*, Aarhus, Denmark.
- Psyllidis, Achilleas.** (2013). *SmartScapes: Big Data and Urban Informatics for Performative Cities*. *ATLANTIS*, 24(2):20–25.
- Psyllidis, Achilleas,** & Bioria, Nimish. (2013). *Urban Media Geographies: Interfacing Ubiquitous Computing with the Physicality of Urban Space*. In: Geiger, J., Khan, O., Shepard, M. (eds.) *Media City 4: MEDIA CITIES*, International Conference. The University at Buffalo, State University of New York, New York NY USA, pp. 302–309.
- Psyllidis, Achilleas,** & Bioria, Nimish. (2013). *The Adaptive City: A Socio-technical Interaction-driven Approach Towards Urban Systems*. In: Charitos, D., Theona, I., Dragona, D., Rizopoulos, H., Meimaris, M. (eds.) *2nd International Hybrid City Conference*. University Research Institute of Applied Communication (URIAC) & Klidarithmos Publications, Athens, pp. 371–378.

Invited Talks

- 2017** Fabrique de la Cité, Paris, France
Invited Speaker at the “Future of Public Spaces” Workshop, March 17, 2017.
- 2017** Pakhuis de Zwijger, Amsterdam, the Netherlands
Invited Speaker for the AMS Science for the City series of lectures. *Improving Cities through Social Media*. February 17, 2017.
- 2016** TU Delft, Delft, the Netherlands
Invited Speaker at the Game, Set and Match III (GSM3) Conference. *Urban Data Science*. November 11, 2016.
- 2016** The Hague Academy for Local Governance, The Hague, the Netherlands
Invited Speaker for the training course on Smart Cities, September 20, 2016.
- 2014** South China University of Technology (SCUT), Guangzhou, China
Invited Speaker at the “Complex Urban Systems and Integrated Solutions” Conference of the Joint Research Centre for Urban Systems and Environment (USE), November 22, 2014.
- 2014** TU Delft, Faculty of A+BE, Department of Urbanism, Delft, the Netherlands
Invited Speaker at the Lecture Series of the “POLIS – Platform for Urbanism”, June 3, 2014.
- 2011** Historic Archives and Museum of Hydra, Hydra, Greece
Invited Speaker at the “11th Plateau: Perceptual Ecologies & Territorial Assemblage” International Conference, organizers: Architectural Association (AA) London, British Council Greece, Greek Ministry of Culture and Tourism, July 9, 2011.
- 2011** Centre for Mediterranean Architecture (KAM), Chania, Greece
Invited Speaker at the “P_Public 2011: International Conference on Public Spaces”, June 5, 2011.
- 2010** Centre for Mediterranean Architecture (KAM), Chania, Greece
Invited Speaker at the “P_Public 2010: International Conference on Public Spaces”, June 20, 2010.

Research Exhibitions & Demonstrations

- 2017** TU Delft, Central Library, Delft, the Netherlands (June 6 – 8, forthcoming)
Research Exhibition TUD175. Research project: SocialGlass.
- 2016** TU Delft, Central Library, Delft, the Netherlands (June 2)
Research Exhibition (DIG-it!) – International Festival of Technology. Research project: SocialGlass.
- 2015** World Trade Centre, Rotterdam, the Netherlands (June 25)
15th International Conference on Web Engineering (ICWE). Research project: OSMoSys (poster).
- 2015** De Flint, Amersfoort, the Netherlands (March 25)
ICT OPEN 2015. Research project: SocialGlass.
- 2015** Amsterdam Institute for Advanced Metropolitan Solutions (AMS), Amsterdam, the Netherlands (February 19)
AMS Partner Event. Research project: SocialGlass.
- 2015** TU Delft, Faculty of A+BE, Delft, the Netherlands (January 9)
173rd Dies Natalis. Research project: SocialGlass.
- 2014** TU Delft, Faculty of EEMCS, Delft, the Netherlands (December 3)
IBM – TU Delft Collaborative Innovation Centre Kick-off Event. Research project: SocialGlass.
- 2014** TU Delft, Central Library, Delft, the Netherlands (November 11)
DIG-it! Research Exhibition. Research project: SocialGlass.
- 2014** Erasmus University Medical Centre, Rotterdam, the Netherlands (September 26)
New Horizons Festival – European Researchers' Night. Research project: SocialGlass.
- 2014** IBM Headquarters, Amsterdam, the Netherlands (September 12)
IBM Extreme Blue Expo. Research project: SocialGlass.

Summer/Winter Schools

- 2015** Universidad Politécnica de Madrid (UPM), Ontology Engineering Group
1st Summer School on Smart Cities and Linked Open Data (LD4SC-15). Madrid, Spain (June 7–12).
- 2005** Università degli Studi di Firenze, School of Engineering
ECOPOLIS: Sustainable Planning and Design Principles. Florence, Italy (February 20–27).

Software Development

- 2014 – Present** TU Delft, Faculty of EEMCS, Web Information Systems group
SocialGlass. Role: *Principal investigator & Co-developer* (Project lead: Dr. Alessandro Bozzon):

About: SocialGlass is a novel web-based platform that supports the integration, visualization, and exploratory analysis of large-scale and heterogeneous social urban data to facilitate the understanding of the spatiotemporal dynamics of human activity in cities. The platform systematically combines data from several geo-enabled social media (e.g. Twitter, Instagram, Sina Weibo), location-based social networks (e.g. Foursquare), publicly available socio-economic data for cities, data from web-enabled sensor networks, and further provides mechanisms for the incorporation of custom sources. SocialGlass provides an interactive map-based user interface with various visualisation and filtering possibilities, alongside a dashboard for real-time monitoring of social activity and flows. It further enables the mapping of socio-demographic information, human activity and movement patterns, place popularity, traffic conditions, as well as citizens' and visitors' opinions and preferences with regard to specific venues in the city. SocialGlass has been applied in several real-world case studies in cities across the world.

Website: <http://social-glass.tudelft.nl>

- 2014 – Present** TU Delft, Faculty of A+BE, Hyperbody research group
OSMoSys. Role: *Developer.*

About: The OSMoSys framework comprises a set of novel web-based tools for the interactive visualisation and exploration of ontologies and multidimensional linked urban data. The framework aims to facilitate the consumption and employment of linked urban data in city analytics. OSMoSys consists of an interface for RDF data and OWL ontologies, using a force-directed graph layout, as well as of an ontology browser for interactive

navigation through the hierarchy of classes, properties, and individuals, using a multi-pane user interface. In addition, OSMoSys is supplemented by an upper-level ontology that describes the different networks in cities and the relationships between their elements, based on relevant established standards and roadmaps. OSMoSys supports uploading of custom ontologies and interlinked datasets, so that non-experienced users understand their structure (through visual exploration), evaluate their completeness, and potentially exploit them in other applications.

Website: <http://osmosys.hyperbody.nl>

- 2015** TU Delft, University College Dublin, Trinity College Dublin & École des Mines de Saint-Etienne
ROUTE. Role: *Principal Developer* (in collaboration with: Matthew Horrigan, Oudom Kem, and Diarmuid Ryan):
- About: The goal of the ROUTE project was to transform publicly available urban data about transport networks into multidimensional linked data. The use case concerns the entire public transport network of the city of Athens, Greece, and comprise 9 large-scale initial data sets (approx. 2.1M tuples) derived from three different sources (i.e. the Athens Urban Transport Organization – OASA, the Road Transportation Organization – OSY, and the Urban Railways Company – STASY). To enable the data interlinkage process, the Route Ontology of Urban Transportation Networks was designed, developed, and implemented. The ontology formally describes public urban transportation routes, concepts pertinent to trip services, pickup and drop-off types, time intervals, frequency, and geographical information about stops and points of interest. The ontology is available in English, French, Greek, and Irish Gaelic. The resulting multidimensional linked dataset comprises approx. 4.6M RDF triples and is available on the Linked Open Data cloud. (*1st Prize, Linked Open Data for Smart Cities*).

Website: <https://github.com/ROUTE-OWL/ROUTE-OWL.github.io>

Professional Experience

- 2016 – Present Researcher at TU Delft**, Faculty of EEMCS, WIS group
 (Mekelweg 4, 2628 CD, Delft, the Netherlands):
 Duties: – Postdoctoral Researcher in urban data science;
 – Assistant Lecturer and Masters students' supervisor.
- 2016 – Present Research Fellow at the AMS Institute**
 (Mauritskade 62, 1092 AD, Amsterdam, the Netherlands):
 Duties: – Research and Project Lead of the Social Urban Data Lab (SUDL);
 – Researcher on urban data analytics.
- 2012 – 2016 Lecturer and Researcher at TU Delft**, Faculty of A+BE, Hyperbody research group
 (Julianalaan 134, 2628 BL, Delft, the Netherlands):
 Duties: – PhD Candidate in spatial data science, Section of Computation & Performance;
 – Lecturer at the Chair of Hyperbody: Digitally-driven Architecture.
- 2012 – 2013 Lecturer and Researcher at TU Delft**, Faculty of A+BE, The Why Factory research institute for future cities between TU Delft & MVRDV (Julianalaan 134, 2628 BL, Delft, the Netherlands):
 Duties: – Researcher on future cities, Department of Urbanism;
 – Lecturer in the Department of Urbanism.
- 2010 – 2012 Assistant Lecturer at NTUA**, School of Architectural Engineering (28is Oktovriou 42, 106 82, Athens, Greece):
 Duties: – Assistant Lecturer in the Building Science Lab, Department of Architectural Design;
 – Assistant Lecturer in the Urban Design Lab, Department of Urban and Regional Planning.
- 2011 Architect at Arsis Architects** (Chatzikosta 8A, 115 21, Athens, Greece):
 Duties: – Concept design, Masterplan, Urban and landscape design, 3D visualizations, Sustainability analysis.
 Projects: – Competition entry for the Regeneration of the fishing shelter and the river landscape in Liopetri, Famagusta, Cyprus.
- 2008 – 2015 Self-employed Architect-Engineer** (Kalantzakou 29, 123 51, Aegaleo, Athens, Greece):
 Duties: – All-around architect from Concept to Technical Design phases;
 – Urban planner and designer;
 – 3D visualizations and vector illustrations;
 – On-site engineer (construction supervision).
 Projects: – Competition entry for the Urban regeneration of Augustenborg, Denmark (2009);
 – Residential Complex in Neo Faliro, Athens, Greece (2012);
 – Competition entry for the Canopy of the open-air market in Ermoupolis, Syros, Greece (2010);
 – Urban Analytics Consultant for the competition entry for the Urban regeneration of the Forus area, Stavanger, Norway (2015).

- 2008 – 2012 Architect at Loucopoulos & Solomon Architects** (Maiandrou 23, 115 28, Athens, Greece):
- Duties: – All-around architect from Concept to Technical Design phases;
 – Architectural designer and Urban planner;
 – Design team organizer;
 – Responsible for building permits;
 – 3D visualizations, vector illustrations, and physical model-making;
 – Preparation of material for architectural exhibitions and public presentations.
- Projects: – Urban regeneration of Salats region, Kilkis, Greece: Conceptual, Masterplan, and Definitive Design study commissioned after the preceded urban design competition (1st Prize) (2009 – 2011);
 – Residential Complex of the OTE Estate Development and Construction Company in Chaidari, Athens, Greece: All design phases and building permit after the preceded architectural competition (1st Prize) (2009 – 2011);
 – Large-scale Canopy for the archaeological site of Aristotle's Lyceum, Athens, Greece: Definitive Design study after the preceded architectural competition (1st Prize) (2010 – 2011);
 – Hotel Complex (225 rooms) on Skiathos island, Greece (2008 – 2010);
 – Office Building in Aghios Demetrios, Athens, Greece (2008 – 2009).
- 2006 – 2007 Architectural columnist for the Greek Architects e-Magazine** (Rovertou Galli 35, 117 42, Athens, Greece):
- Duties: – Monthly articles on advanced architectural design and computational approaches to urban planning.

Professional Exhibitions (Refereed)

- 2011** Benaki Museum, Athens, Greece (July 2011)
AAO – Against All Odds International Exhibition. Project: Sustainability improvement of school courtyards.
- 2011** Centre for Mediterranean Architecture, Chania, Greece (June 2011)
P_PUBLIC 2011 International Exhibition of Projects on Urban Public Space. Project: Regeneration of the fishing shelter and the river landscape in Liopetri, Famagusta, Cyprus.
- 2010** Centre for Mediterranean Architecture, Chania, Greece (June 2010)
P_PUBLIC 2010 International Exhibition of Projects on Urban Public Space. Projects: (a) Urban regeneration of Athens' seafront; (b) Urban planning of the Sønderborg fjord area in Augustenborg, Denmark.
- 2009** Danish Architecture Centre, Copenhagen, Denmark (November 2009)
EUROPAN 10 – “Inventing Urbanity”. Project: Urban regeneration of Augustenborg, Denmark.
- 2005** Istanbul Technical University, Istanbul, Turkey (July 2005)
22nd International Union of Architects (UIA) World Congress. Project: “EcoHub: Experimental sustainable school buildings”.
- 2004** Opéra de Paris, Paris, France (October 2004)
UIA + VELUX Exhibition of the International Competition “Light of Tomorrow”. Project: “Form Follows Cli(ght)mate”.

Membership (Academic & Professional)

- 2016 – Present** Member of the Onassis Scholars' Association.
- 2014 – Present** Member of the JRC for Urban Systems and Environment (USE) between TU Delft (NL) & SCUT (China).
- 2008 – Present** Accredited member of the Technical Chamber of Greece (TEE), Architect-Engineer (No. **115900**).
- 2008 – Present** Accredited member of the Association of Greek Architects – Athens Association of Architects (SADAS-PEA).

Reviewer

Urban Planning, Computers in Urban Planning and Urban Management (CUPUM).

Languages

- English** Fluent speaker, excellent communication skills (Level C2);
- Dutch** Very good level in verbal and writing abilities. Excellent understanding skills (Level C1);
- Greek** Native speaker.

Technical Skills

Data/Spatial analysis	R programming language, GeoDa
GIS systems	QGIS, ArcGIS
Geo-databases	PostgreSQL/PostGIS, SQLite/Spatialite
Web scripting	HTML, CSS, PHP, JavaScript, jQuery
Semantic Web	OWL, RDF, RDFS, OpenRefine
Ontologies	Protégé
Network analysis	Gephi, R igraph
Information management	Endnote
Illustrations	Adobe Illustrator (vector), Adobe Photoshop (raster)
Desktop publishing	Microsoft Office, Adobe InDesign
3D design	Rhinoceros, 3D Studio Max (with Mental Ray), AutoCAD 3D
Parametric design	Grasshopper, Processing
Internet of Things	Arduino
Operating systems	Mac-OS, Windows