

# Dr. Achilleas Psyllidis

Date of birth September 12, 1983  
 Nationality Greek  
 Mobile number +31 (0)63 4648139  
 Email address A.Psyllidis@tudelft.nl | apsyllidis@gmail.com | achilleas.psyllidis@ams-institute.org  
 LinkedIn <https://nl.linkedin.com/in/achilleaspsyllidis>

## Summary

Postdoctoral researcher in Spatial Data Science and Urban Analytics, focusing on applications in urban and regional contexts. I currently work with the Web Information Systems group at Delft University of Technology (TU Delft), concentrating on urban analytics (Principal Investigator & Project Lead of the SocialGlass research agenda on urban big data analytics and forecasting), as well as with the Amsterdam Institute for Advanced Metropolitan Solutions (AMS), leading the Social Urban Data Lab (SUDL). I have 6 years of academic research experience in the identification, development, and implementation of geographically-focused data science-based solutions to help improve the understanding and forecasting of daily urban and regional dynamics. Leveraging on my background in both urban planning and data science, my most recent work focuses on data-driven approaches to characterizing places, as well as the activities, experiences, and interactions of people in them and the processes that drive their behavior. My research involves working with large, unstructured, and user-contributed geosocial data from a wide range of sources, with the aim to extract rich descriptions of and gain insight into the dynamics of human activities in urban places, and the dimensions that contribute to the character of a place. To this end, I combine spatial analysis and geographic information retrieval methods with (deep) machine learning and neural networks to build methods and scalable software tools that facilitate people extract knowledge from and maximize the value of unstructured data. Application domains include human mobility, urban design, transportation, spatial interaction modeling, energy consumption behavior, and facility siting. In addition to my research portfolio, I have more than 7 years' teaching experience in urban analytics, geographic information retrieval, urban planning, and computer-aided design, at both graduate and undergraduate levels. My interdisciplinary background bridges across the fields of spatial data science, urban and regional planning, and architectural engineering. My commitment and dedication to research and knowledge dissemination have been rewarded with several awards for academic excellence, a prize for linked urban data solutions to public transportation, scholarships, individual research grants, and two First Class Honors (Summa Cum Laude) degrees (Highest GPA in graduating class and across Faculties).

### Research interests:

Spatial data science, Urban analytics, Geographic information retrieval, Urban and regional planning, Machine learning, Location analysis, (Geosocial) Ontologies, Linked urban data.

## Education

- 2012 – 2016** Delft University of Technology (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 / Summa Cum Laude).**  
 Ranked *first (Highest GPA)* among his graduating class. *Highest cumulative GPA across all Faculties of NTUA.*
- 2001 – 2007** NTUA – School of Architectural Engineering  
**Engineering Diploma (Dipl. Eng.) in Architectural Engineering** (duration: 5 years) – *(First Class Hons / Summa Cum Laude).*  
 Ranked *first (Highest GPA)* among his graduating class.

## Academic Appointments

**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 Spatial Data Science and Urban Analytics

Research focus & responsibilities: Investigating and building geocomputational methods and tools to support the analysis of issues associated with human activity dynamics, urban design, crowd management, transportation, energy consumption behavior, and facility siting in urban and regional contexts. Design and development of pioneering spatial data science tools and technologies for real-time urban analytics. Enrichment, analysis, and visualization of high-dimensional and dynamic geosocial data, based on machine learning, neural networks, and advanced spatial data mining and geographic information retrieval techniques. *Principal Investigator* of the SocialGlass research agenda on urban big data analytics and forecasting and *Project Lead* of the homonymous online system. Teaching courses on urban analytics and geographic information retrieval to Master's students, supervising PhD and MSc theses, and disseminating knowledge through several outreach activities.

**2016 — Present** Amsterdam Institute for Advanced Metropolitan Solutions (AMS Institute)

**Research Fellow**, Urban Analytics (interlinked with the postdoctoral position at TU Delft)  
**Principal Investigator** (as of September 2018), Urban Data & Intelligence research theme

Research focus & responsibilities: *Research and project lead of the Social Urban Data Lab (SUDL)*. Launched this new initiative within the AMS Institute to promote interdisciplinary approaches to urban analytics and geocomputation through research, education, and outreach. Emphasis is on pioneering new methods and tools to harness the power of urban big data and help city stakeholders and communities better understand and predict the dynamics of cities and metropolitan regions. As *Principal Investigator* of the Urban Data & Intelligence research theme, I shape the research, education, and valorization portfolio of AMS regarding the role of urban data and science in the planning and development of cities.

**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, visualization, 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 geosocial 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 city planning and on the understanding of urban environments.

**2013 — 2016** TU Delft – Faculty of A+BE – Section of Computation and Performance

**Researcher and Lecturer** with the Hyperbody research group (Digitally-driven architecture & urbanism).

Research focus & responsibilities: Research and teaching on computationally and data-driven urban planning.

**2012 — 2013** TU Delft – Faculty of A+BE – Department of Urbanism

**Researcher and Lecturer** in the area of ‘Future Cities’ (The Why Factory – MVRDV & TU Delft).

Research focus & responsibilities: Research on geospatial technologies and spatiotemporal data – primarily from IoT devices – to support real-time urban analytics. Lecturer on topics relating to urban big data and planning.

**2010 — 2012** NTUA – School of Architectural Engineering

**Assistant Lecturer** (Urban & Regional Planning Lab — Building Science Lab).

Research focus & responsibilities: Teaching and research on urban and regional analytics and planning, as well as on computational (parametric and algorithmic) approaches to the design of public spaces and large-scale buildings.

### Affiliations

**2017 — Present** Joint Research Center for Spatial Information between TU Delft and Wuhan University — **Affiliated Researcher**

**2016 — Present** Center for BOLD (Big, Open, and Linked Data) Cities — **Affiliated Researcher**

**2014 — Present** JRC for Urban Systems and Environment between TU Delft and South China University of Technology — **Affiliated Researcher**

## Honors, Awards & Scholarships

- 2018** **Individual Research Grant from the Onassis Scholars' Association** for the coverage of the research and publication expenses associated with the journal article entitled "Regionalization of Social Interactions and Points-of-Interest Location Prediction with Geosocial Data", (€1,863).
- 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 (Highest GPA) the graduating class of 2007 at the School of Architectural Engineering, NTUA.
- 2006** **Thomaides Award**, for achieving the highest cumulative 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 cumulative grade in the academic year 2005 – 2006 at the School of Architectural Engineering, NTUA.
- 2005** **Kalliopi Venizelou-Sfaellou Award**, for achieving the highest cumulative grade in the academic year 2004 – 2005 at the School of Architectural Engineering, NTUA.
- 2004** **Stamos Stournas Award**, for achieving the highest cumulative 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 Funding

### *Awarded*

- 2017** NWA Start Impulse.  
Title: Big Data for Vulnerable Youth Policy in Cities. Role: *Co-Investigator*, **€130,000**.
- 2016** Strategic research income for launching the Social Urban Data Lab at the AMS Institute, **€500,000**.

### *Shortlisted*

- 2017** Horizon 2020: SC6-ENG-GLOBALLY-2016-2017.  
Title: SAge – Sustainable Ageing for cities and citizens. Role: *Co-Investigator*. (Shortlisted: 3rd out of 17 submitted proposals).
- 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*. (Shortlisted: 3rd out of 50 submitted proposals).
- 2017** DRI (Delft Research-based Initiatives) Health Initiative.

Title: Understanding the potential restorative effects of hospital window views through crowdsourcing and convolutional neural networks. Role: *Principal Investigator*. (Shortlisted: 5th out of 25 submitted proposals).

## Teaching Experience

- 2017** AMS Institute – MSc program on Metropolitan Analysis, Design and Engineering (MSc MADE)  
**Curriculum developer & Lecturer** for the course YMS31303: “Metropolitan Data I: Urban Analytics”:  
 Duties: – *Designed and developed* the course curriculum.  
 – Prepared and delivered lectures on spatial analysis, spatial data mining, and geocomputation.
- 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 geographic 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 urban 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

- 2018 – Present** TU Delft – Faculty of EEMCS – Web Information Systems  
**MSc thesis supervisor** for Vasileios Miliias, MSc student in Data Science & Technology  
 MSc thesis working title: “*Extracting the Collective Sense of Urban Places from Place-Based Web Data*” (ongoing).
- 2017 – Present** TU Delft – Faculty of EEMCS – Web Information Systems  
**MSc thesis supervisor** for Bas de Böck, MSc student in Data Science & Technology  
 MSc thesis title: “*Understanding Traffic Events by Enriching Traffic Data with Geosocial Data*” (in collaboration with Dr. Alessandro Bozzon). Defense date: September 10, 2018.
- 2017 – 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: “*A System for Enriched Characterization of POIs Using Multiple Data Sources*” (ongoing – in collaboration with Dr. Alessandro Bozzon).
- 2016 – 2017** TU Delft – Faculty of EEMCS – Web Information Systems  
**MSc thesis supervisor** for Hendra Hadhil Choiri, MSc student in Data Science & Technology  
 MSc thesis title: “*Quantifying and Predicting Urban Attractiveness with Street-View Data and Convolutional Neural Networks*” (in collaboration with Dr. Alessandro Bozzon). Defended: September 27, 2017.
- 2016 – 2017** TU Delft – Faculty of EEMCS – Web Information Systems  
**MSc thesis supervisor** for Arkka Dhiratara, MSc student in Data Science & Technology  
 MSc thesis title: “*A Knowledge Discovery Framework for Understanding Energy Consumption Behavior using Social Data*” (in collaboration with Dr. Alessandro Bozzon). Defended: September 26, 2017.
- 2016 – 2017** TU Delft – Faculty of EEMCS – Web Information Systems  
**MSc thesis supervisor** for Rucha Bapat, MSc student in Data Science & Technology  
 MSc thesis title: “*Crowd-powered Conversational Agents in Cities*” (in collaboration with Dr. Alessandro Bozzon and Dr. Pavel Kucherbaev). Defended: August 28, 2017.
- 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). Defended: April 19, 2016.

## Peer Reviewed Publications

- Psyllidis, Achilleas**, Yang, Jie, & Bozzon, Alessandro. (2018). “Regionalization of Social Interactions and Points-of-Interest Location Prediction with Geosocial data”. *IEEE Access, Special Issue: Social Computing Applications for Smart Cities*, vol. 6, no. 1, pp. 34334–34353. <https://doi.org/10.1109/ACCESS.2018.2850062>
- Sharifi, Shahin Noorian, **Psyllidis, Achilleas**, & Bozzon, Alessandro. (2018). “A Time-Varying p-Median Model for Location-Allocation Analysis”. In: Proceedings of the *21st Conference on Geo-Information Science (AGILE 2018)*, June 12–15, Lund, Sweden.
- Mauri, Andrea, **Psyllidis, Achilleas**, & Bozzon, Alessandro. (2018). “Social Smart Meter: Identifying Energy Consumption Behavior in User-Generated Content”. In: Companion Proceedings of *The Web Conference 2018 (WWW 2018)*, April 23–27, 2018, ACM, Geneva, Switzerland, pp. 195–198. <https://doi.org/10.1145/3184558.3186977>
- Psyllidis, Achilleas**, & Hadhil Choiri, Hendra. (2018). “A Convolutional Neural Network-based Model for Predicting the Perceived Attractiveness of Urban Places”. In: Proceedings of the *American Association of Geographers (AAG 2018) Annual Meeting*, April 10–14, 2018, New Orleans, LA, USA.

- Kucherbaev, Pavel, **Psyllidis, Achilleas**, Bozzon, Alessandro. (2017). "Chatbots as Conversational Recommender Systems in Urban Contexts". In: Proceedings of the *ACM RecSys 2017 workshop on Recommender Systems for Citizens (CitRec 2017)*, ACM, Como, Italy. <https://doi.org/10.1145/3127325.3127331>
- 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, 334 pages. doi: <https://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: [https://doi.org/10.1007/978-3-319-19890-3\\_56](https://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: [https://doi.org/10.1007/978-3-662-47386-3\\_2](https://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: <https://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: Proceedings of the *10th IEEE International Conference on Intelligent Environments 2014 (IE '14)*. IOS Press, Washington, DC, pp. 140—147. doi: <https://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: *Smart Cities and Big Data International Research Workshop*, April 4, 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.

### Book Review

- Psyllidis, Achilleas**. (2018). "Urban Analytics". *International Journal of Geographic Information Science (IJGIS)*, vol. 32, no. 11, pp. 2334—2335. <https://doi.org/10.1080/13658816.2018.1508688>

### Accepted Manuscripts

- Psyllidis, Achilleas**, Athanassiadis, Aristide, Massaro, Emanuele, & Binder, Claudia. (2018; forthcoming). "Ontology-Based Integration of Urban Sustainability Indicators". To appear in: C. Binder & S. Krauth (eds.), *Sustainability Assessments of Urban Systems*. Cambridge University Press, Cambridge, UK.

## Invited Lectures

- 2018** ISOCARP – International Society of City and Regional Planners, Munich, Germany  
**Keynote Speaker** at the New Urban Participation conference. *Urban Analytics: Questioning and explaining the city through data*. July 5, 2018.
- 2018** University of California Santa Barbara (UCSB), Santa Barbara, CA, USA  
**Invited Speaker** at the Colloquium Lectures series. *Reconciling with the Variety of Spatial Data Sources: Towards a next generation of geographically-focused data science*. February 1, 2018.
- 2017** Smart City Conference 2017, Eindhoven, the Netherlands  
**Invited Speaker**. *Spatial Data Science for Smart Cities*. September 28, 2017.
- 2017** Leiden University, Leiden, the Netherlands  
**Invited Speaker** at the Nacht van Kunst en Kennis. *Understanding Cities through Geosocial Big Data*. September 16, 2017.
- 2017** TU Delft, Delft, the Netherlands  
**Invited Speaker** at the 4th JRC Wuhan University & TU Delft workshop on Spatial Information. *Emerging Geosocial Data for Understanding and Forecasting Urban Dynamics*. July 4, 2017.
- 2017** Smart Urban Mobility symposium, Amsterdam, the Netherlands  
**Invited Speaker**. *Semantic Enrichment of Geosocial Data about Human Mobility and Activity in Urban Contexts*. June 29, 2017.
- 2017** Center for BOLD Cities, Erasmus University, Rotterdam, the Netherlands  
**Invited Speaker** at the symposium on Urban Big Data. *Understanding and Predicting Urban Dynamics through New Forms of Geosocial Data*. May 29, 2017.
- 2017** Center for Advanced Spatial Analysis (CASA), University College London (UCL), London, UK  
**Invited Speaker**. *Geocomputation in Urban and Regional Contexts: Now and beyond*. April 28, 2017.
- 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** Smart City Conference 2017, Eindhoven, the Netherlands (September 28)  
**Experience Market**. Research project: SocialGlass.



- 2017** TU Delft, Central Library, Delft, the Netherlands (June 6 – 8)  
**International Festival of Technology — Research Exhibition.** Research project: SocialGlass.
- 2017** The Next Web Conference, Amsterdam, the Netherlands (May 19)  
**Demonstration of Selected Projects.** 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.

## Conference and Meetings Presentations

- 2018** **Psyllidis, Achilleas.** “A Convolutional Neural Network-based Model for Predicting the Perceived Attractiveness of Urban Places”. *American Association of Geographers 2018 (AAG 2018) Annual Meeting*, New Orleans, LA, USA, April 12, 2018.
- 2017** **Psyllidis, Achilleas.** “Geocomputational technologies for urban analytics”. *Meeting of the EU URBACT Interactive Cities action planning network*, Amsterdam, the Netherlands, November 6, 2017.
- 2017** **Psyllidis, Achilleas.** “Bringing vulnerable youths back into the picture: Geocomputational methods and tools for evidence-based youth policy”. *BOLD Cities Meeting on Urban Big Data for Vulnerable Urban Groups*, Utrecht, the Netherlands, October 27, 2017.
- 2017** **Psyllidis, Achilleas.** “Data Science and Technology for Knowledge Discovery about Urban Interactions”. *MIT Department of Urban Studies and Planning & AMS Partners Meeting*, Amsterdam, the Netherlands, March 10, 2017.
- 2015** **Psyllidis, Achilleas.** “Ontology-Based Data Integration from Heterogeneous Urban Systems: A Knowledge Representation Framework for Smart Cities”. *14th International Conference on Computers in Urban Planning and Urban Management (CUPUM 2015)*, MIT, Cambridge, Massachusetts, USA, July 7–10, 2015.
- 2015** **Psyllidis, Achilleas, Bozzon, Alessandro, Bocconi, Stefano, & Bolivar, Christiaan-Titos.** “Harnessing Heterogeneous Social Data to Explore, Monitor, and Visualize Urban Dynamics”. *14th International Conference on Computers in Urban Planning and Urban Management (CUPUM 2015)*, MIT, Cambridge, Massachusetts, USA, July 7–10, 2015.
- 2015** **Psyllidis, Achilleas, Bozzon, Alessandro, Bocconi, Stefano, & Bolivar, Christiaan-Titos.** “A Platform for Urban Analytics and Semantic Integration in City Planning”. *16th International Conference on Computer-Aided Architectural Design Futures (CAAD Futures 2015)*, Sao Paulo, Brazil, July 6–10, 2015.
- 2015** **Psyllidis, Achilleas.** “OSMoSys: A Web Interface for Graph-Based RDF Data Visualization and Ontology Browsing”. *15th International Conference on Web Engineering (ICWE 2015)*, Rotterdam, the Netherlands, June 23–26, 2015.

- 2014**      **Psyllidis, Achilleas** and Bioria, Nimish. “OntoPolis: A semantic participatory platform for performance assessment and augmentation of urban environments”. *10th IEEE International Conference on Intelligent Environments 2014 (IE '14)*, Shanghai, China, July 2–4, 2014.
- 2014**      **Psyllidis, Achilleas** and Bioria, Nimish. “From Big Data to Linked Data: Extracting and Interlinking Knowledge from the City through Semantic Web Technologies”. *International Research Workshop on Smart Cities and Big Data*, Aarhus, Denmark, April 4, 2014.
- 2013**      **Psyllidis, Achilleas** and Bioria, Nimish. “Urban Media Geographies: Interfacing Ubiquitous Computing with the Physicality of Urban Space”. *International Conference on Media Cities (MediaCity 4)*, Buffalo, New York, USA, May 3–5, 2013.
- 2013**      **Psyllidis, Achilleas** and Bioria, Nimish. “The Adaptive City: A Socio-technical Interaction-driven Approach Towards Urban Systems”. *2nd International Hybrid City Conference*, Athens, Greece, May 23–25, 2013.
- 2011**      **Psyllidis, Achilleas**. “Associative Cityscapes: An Algorithmic Approach to the Design of Urban Public Spaces”. *1st European Conference on Public Spaces*, Thessaloniki, Greece, October 19–22, 2011.

## Seminar Organization

- 2017**      **1st European Seminar on Urban Data Science**. Organizer. Amsterdam Institute for Advanced Metropolitan Solutions, Amsterdam, the Netherlands (December 4).
- 2016**      **Smart Citizens in Smart Cities**. Co-Organizer. Delft Data Science, TU Delft, Delft, the Netherlands (December 1).
- 2016**      **The Social Dimension of Spatial Data**. Organizer. Amsterdam Institute for Advanced Metropolitan Solution, Amsterdam, the Netherlands (November 18).

## 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: *Project & Research Lead*:

About: SocialGlass is a novel web-based system that supports the fusion, 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 visualization 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 regarding specific venues in the city. SocialGlass has been applied in several real-world case studies in cities across the world. SocialGlass has been **nominated for the Accenture Innovation Awards 2017** and has been selected as *one of the 10 (out of 150) best innovations in the “Perfect Cities” category*.

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 visualization 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. 4.6 million 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>

## Media Exposure

- 2018** **Amsterdam Science magazine**. *Revisiting Urban Dynamics through Social Urban Data*. Forthcoming.
- 2017** **De Ingenieur**. *Through the social glass: Shaping the city through social media*. pp. 22–24 (Issue 8/2017, August 2017). <https://www.deingenieur.nl/artikel/stad-regelen-via-social-media> (in Dutch).
- 2017** **Het Parool**. *Met mobiele data zien of de stemming omslaat*. <https://www.parool.nl/amsterdam/met-mobiele-data-zien-of-de-stemming-omslaat~a4511904> (in Dutch).

## General Recognition

- 2018** Invited by King Willem-Alexander and Queen Máxima of the Netherlands to the Royal Palace in Amsterdam, as a prominent scientist in urban data science, to participate in the Palace Symposium on Artificial Intelligence (May 31, 2018).

## Reviewer

Urban Planning, Computers in Urban Planning and Urban Management (CUPUM), Journal of Smart and Sustainable Built Environment (SASBE).

## Professional Experience

- 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 & Urban Planner** (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”.

## Professional Society Membership

- 2017 – Present** American Association of Geographers (AAG).
- 2016 – Present** Onassis Scholars' Association.
- 2008 – Present** Technical Chamber of Greece (TEE), Architect-Engineer (No. 115900).
- 2008 – Present** Association of Greek Architects – Athens Association of Architects (SADAS-PEA).

## Professional Training

- 2017** NUMA, Paris, France (July 2017)  
**Start-up Acceleration training.**

## 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 (several libraries), Python (several libraries), GeoDa, Depthmap (Space Syntax)
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