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João Ventura Salvador Lopes



Research Interests

Architecture

Digital architecture

Urbanism

Urban design

Spatial Analysis

Data mining

Academic Qualifications

University/Institution	Type	Degree	Period
ISCTE-IUL	Post-graduation	Curso de Pós Graduação em Arquitectura Digital (0111) [ISTA]	2013
Faculdade de Arquitectura da Universidade do Porto	Licenciade	Arquitectura	1998

Teaching Activities

Teaching Year	Sem.	Course Name	Degree(s)	Coord .
2019/2020	2º	Phd Thesis in Architecture of Contemporary Metropolitan Territories II		No
2016/2017	2º	Kine[sis]tem - Shading Systems	Specialization Seminar in Kine[SIS]tem - Shading Systems;	No
2015/2016	2º	Surfaces In-Play	Specialization Seminar in Surfaces In-Play;	No

Total Citations

Web of Science®	4
Scopus	8

Publications

• Scientific Journals

- Scientific journal paper

1	Pezzica, C., Lopes, J. V. & Paio, A. C. R. (2017). Informed design decision-making: from digital analysis to urban design. A contemporary approach for the redevelopment of public open spaces. <i>Gestão e Tecnologia de Projetos</i> . 12 (3), 9-26 - Times Cited Google Scholar: 5
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• Other Publications

- Architecture project publications

1	Neves, António & Lopes, João Ventura (2008). Casa em Gondim, obra e projecto (House in Gondim, work and project).
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• Books and Book Chapters

- Book chapter

1	Lopes, J. V. (2018). A data mining based methodology for the multidimensional study of public open spaces. In David Leite Viana, Franklim Moraes and Jorge Vieira Vaz (Ed.), <i>Formal methods in architecture and urbanism</i> . Cambridge: Cambridge Scholars Publishing.
2	Altieri, Marcelo, Jabbari, Mona & Lopes, João Ventura (2015). 9. Aplicação da space syntax como ferramenta de simulação. In Oliveira, Vitor and Monteiro, Cláudia (Ed.), <i>Diferentes Abordagens No Estudo da Forma Urbana</i> . (pp. 77-85). Porto: Rede Lusófona de Morfologia Urbana; FEUP Edições.

• Conferences/Workshops and Talks

- Publication in conference proceedings

1	Lopes, J., Paio, A. & Beirão, J. N. (2019). The morphology of public open spaces as visual opportunity fields: a space syntax approach based on revelation and VGA maps customization with SalaScript. In Sousa, JP, Henriques, GC and Xavier, JP (Ed.), eCAADe SIGraDi 2019: Architecture in the Age of the 4th Industrial Revolution. (pp. 277-286). Porto: ECAADe-EDUCATION & RESEARCH COMPUTER AIDED ARCHITECTURAL DESIGN EUROPE. - Times Cited Scopus: 1 - Times Cited Google Scholar: 1
2	Lopes, J. V. (2018). Linking data mining, spatial analysis and algorithmic design: A review on a primer workshop based on Python. In Viana, D. L., Morais, F., and Vaz, J. V. (Ed.), 4th Symposium Formal Methods in Architecture. Book of Abstracts. (pp. 63). Porto: C. E. S. A. P. – Cooperativa de Ensino Superior Artístico do Porto.
3	Ventura, J. V., Paio, A., Beirão, J. N., Nunes, L. & Pezzica, C. (2017). Multidimensional study of urban squares through perimetral analysis: three Portuguese case studies. In Teresa Heitor, Miguel Serra, João Pinelo Silva, Maria Bacharel e Luísa Cannas da Silva (Ed.), 11th International Space Syntax Symposium, SSS 2017. (pp. 85.1-85.20). Lisboa: Instituto Superior Tecnico, Departamento de Engenharia Civil, Arquitetura e Georrecursos. - Times Cited Scopus: 1 - Times Cited Google Scholar: 5
4	Paio, A., Cutini, V., Pezzica, C., Lopes, J. V. & Bevilacqua, M. G. (2016). Urban squares morphologies: contributions of a multidimensional analysis. In Duvernoy, S. (Ed.), Nexus 2016: Architecture and mathematics: Abstracts. (pp. 113-117). Donostia-San Sebastián: Kim Williams Books.
5	Pezzica, C., Lopes, J. V. & Paio, A. (2016). Square design: From digital analysis to urban design. In SIGraDi 2016, XX Congress of the Iberoamerican Society of Digital Graphics. (pp. 86-93). Buenos Aires: Blucher Design Proceedings. - Times Cited Google Scholar: 4
6	Lopes, J, Paio, A., Beirão, J. N., Pinho, E. M. & Nunes, Luis (2015). Multidimensional analysis of public open spaces: Urban morphology, parametric modelling and data mining. In Martens, B, Wurzer, G, Grasl T, Lorenz, WE and Schaffranek, R (Ed.), Real Time - Proceedings of the 33rd eCAADe Conference. (pp. 351-360). Viena: CUMINCAD. - Times Cited Scopus: 6 - Times Cited Google Scholar: 12
7	Lopes, J. V. (2015). A data mining based methodology for the multidimensional study of public open spaces. In David Leite Viana, Franklim Morais, Jorge Vieira Vaz (Ed.), 3rd Symposium Formal Methods in Architecture. (pp. 35-35). Porto: Escola Superior Artística do Porto.
8	Teixeira, R., Lopes, J. V., Paio, A. & Guerreiro, M. R. (2015). Parametric modelling of walls: Visual permeability to urbanity. In Anais do XIX Congresso da Sociedade Ibero-americana de Gráfica Digital 2015. (pp. 786-791). Florianópolis: Edgard Blücher. - Times Cited Google Scholar: 1
9	Lopes, J. V. (2014). Geometria do motorista de táxi e sua emergência no plano da cidade. In Vera Viana (Ed.), Geometrias 2014 Proceedings. (pp. 163-171). Lisboa: APROGED and ISCTE-IUL.
10	Lopes, J. V., Paio, A. & Sousa, J. (2014). Parametric Urban Models Based on Frei Otto's Generative Form-Finding Processes. In N. Gu, S. Watanabe, H. Erhan, M. Hank Haeusler, W. Huang, R. Sosa (Ed.), Proceedings of the 19th International Conference on ComputerAided Architectural Design Research in Asia CAADRIA. (pp. 595-604). Kyoto: The Association for Computer-Aided Architectural Design Research in Asia (CAADRIA). - Times Cited Web of Science®: 4 - Times Cited Google Scholar: 10

11	Lopes, J. V., Paio, A. & Sousa, J. (2014). Self-generated urban networks through digital physical simulation based on Frei Otto's form-finding processes . In Alberto T.Estévez (Ed.), Proceedings of the 2nd International Conference of Biodigital Architecture and Genetics. (pp. 196-206). Barcelona: Escola Tècnica Superior d'Arquitectura Universitat Internacional de Catalunya (ESARQ-UIC).
12	Lopes, J. V., Paio, A. & Guerreiro, M. R. (2013). A complexidade no estudo e planeamento da cidade: Conceitos e potencialidades. In Pinto, N. N., and Almeida, A. (Ed.), Actas do PNUM 2013: Forma Urbana nos Territórios de Influência Portuguesa: Análise, Desenho, Quantificação. (pp. 489-491). Coimbra: Department of Civil Engineering of the University of Coimbra.

- Talk

1	Lopes, João Ventura, Paio, A. & José N. Beirão (2019). The Morphology of Public Open Spaces as Visual Opportunity Fields - A space syntax approach based on Revelation and VGA maps customization with SalaScript. Architecture in the Age of the 4th Industrial Revolution - Proceedings of the 37th eCAADe and 23rd SIGraDi Conference.
2	Lopes, João Ventura (2018). Emergência e Composição. O desenho e a análise multidimensional de praças e vazios urbanos. 3º Encontro Nacional de Investigação em Arquitectura (ENIA).
3	Lopes, João Ventura (2018). Linking Data Mining, Spatial Analysis and Algorithmic Design. 4th international symposium - formal methods in architecture, workshop presentation.
4	Lopes, João Ventura & Fiorito, Stefano (2018). Web-Scraping and Data Mining techniques on Geographical Information. 3rd workshop of the Design Computation Summer School 2018.
5	Lopes, João Ventura (2018). Linking Data Mining, Spatial Analysis and Algorithmic Design. A review on a primer workshop based on Python. 4th international symposium Formal Methods in Architecture.
6	Lopes, João Ventura (2018). A perspective on Data Mining and Machine Learning in spatial analysis and the study of urban form. Casa do Património Digital - Semana Cultural da Universidade de Coimbra.
7	Lopes, João Ventura (2018). Exploring the Visibility Field of Public Open Space with DepthSpace3D: The Case of Santiago and Largo da Oliveira Squares in Guimarães. 2nd Meeting OPO'Arch FormalMethods'2018.
8	Lopes, João Ventura (2017). PhD research work. Presentation at a DCG session for a visiting group of professors from TUM (Technical University of Moldova).
9	Lopes, João Ventura (2017). Data Mining for the masses. DCG Super Week Workshops - Sharing knowledge, FAUL.
10	Lopes, João Ventura (2017). DM4SQUARE: A data mining based methodology for the multidimensional study of public open spaces. 1st International Meeting of ISTAR DLS - Digital Living Spaces.
11	Lopes, João Ventura (2017). Context, Parametric Urban Design, Data Mining: a multidimensional approach to public open space. 1st Open Day: Processos Digitais Colaborativos, URBAN SENSING: data-driven design research.
12	Lopes, João Ventura (2017). Quality in Public Open space. An Urban Design Perspective. 2º Colóquio em Territórios Metropolitanos Contemporâneos.

13	Lopes, João Ventura & Oliveira, M.J. (2017). Performance Based Design - Ladybug & Honeybee. Masterclass on environmental analysis in Grasshopper algorithmic design platform at the Kine[SYS]tem'17 Shading Systems - International Summer School.
14	Lopes, João Ventura (2017). Multidimensional Study of Urban Squares Through Perimetral Analysis: Three Portuguese case studies. 11th International Space Syntax Symposium.
15	Lopes, João Ventura (2017). Urban morphology and data mining; The automated classification of Portuguese squares by unsupervised machine learning techniques. Lecture in the Parametric Urban Design postgraduate course, FAUL.
16	Lopes, João Ventura & Camilla Pezzica (2016). Urban Squares Morphologies: Contributions of a Multidimensional Analysis. Nexus 2016 - Architecture and Mathematics.
17	Lopes, João Ventura (2016). Multidimensional analysis of public open spaces Urban morphology, parametric modelling and data mining. International Workshop Lisbon2016 SITREP Design Studio.
18	Lopes, João Ventura (2016). Praça da República (Porto), um caso de estudo. Open lecture and workshop on space syntax theory and practice at the Seminar 1.4. of MIA, CESAP, Porto.
19	Lopes, João Ventura (2016). Presentation of the PhD research. Specialization Course in Collaborative Territories (2nd Edition).
20	Lopes, João Ventura (2016). Desenho algorítmico, data mining e morfologia urbana – uma aproximação metodológica ao estudo multidimensional do espaço público aberto. 1º Colóquio em Territórios Metropolitanos Contemporâneos.
21	Lopes, João Ventura (2015). A data mining based methodology for the multidimensional study of public open spaces. 3rd symposium FORMAL METHODS IN ARCHITECTURE BOOK OF ABSTRACTS.
22	Lopes, João Ventura (2015). PhD research work. 1st PNUM Workshop on urban morphology: Diferentes Abordagens no Estudo da Forma Urbana.
23	Lopes, João Ventura (2015). PhD research work. Presentation at the workshop Urban Spatial Analysis: QGIS and SpaceSyntaxToolKit (Prof. Jorge Gil), ISTAR-IST, Lisbon.
24	Lopes, João Ventura (2015). Multidimensional Analysis of Public Open Spaces. Urban Morphology, Parametric Modelling and Data Mining. Real Time Extending the Reach of Computation, 33rd Education and research in Computer Aided Architectural Design in Europe (eCAADe) Conference.
25	Lopes, João Ventura (2014). Emergence and composition; Natural strategies of compromise between place and context in parametric urban design. 32nd eCAADe Conference PhD Workshop.
26	Lopes, João Ventura (2014). Theoretical aspects and practical introduction to the algorithm graphic editor Grasshopper. Lecture at the Postgraduate Course of Advanced Studies in Digital Architecture (CEAAD2014).
27	Lopes, João Ventura (2014). The potential of parametric and algorithmic systems in urban analysis and design. Theoretical aspects and practical introduction to the algorithm graphic editor Rhino/Grasshopper. Open lecture at the Master in Architecture and Urbanism of Gallaecia Superior School.
28	Lopes, João Ventura & Oliveira, S. M. (2014). Computational Design: CAD-CAM tools: Scripting and Parametric Design. 1st OIKONET International Workshop: Contemporary living patterns in mass housing in Europe.

29	Lopes, João Ventura (2014). Parametric Urban Models Based on Frei Otto's Generative Form-Finding Processes. Rethinking Comprehensive Design: Speculative Counterculture, Proceedings of the 19th International Conference on Computer- Aided Architectural Design Research in Asia CAADRIA 2014.
30	Lopes, João Ventura (2014). Self-generated urban networks through digital physical simulation. 2nd International Conference Of Biodigital Architecture & Genetics.

Awards

1st prize in the international competition "Opo'Arch Formal Methods Prize 2018", with the objective of promoting public acknowledgment of authors of Space Syntax 3D analysis using the digital tool Depth Space 3D. CESAP, Porto. (2018)

Organization/Coordination of Events

Type of Organization/Coordination	Event Title	Organizer	Year
Member of free course/summer school's organizing committee	Web-Scraping and Data Mining techniques on Geographical Information	DCG-FAUL	2018
Member of free course/summer school's organizing committee	Linking Data Mining, Spatial Analysis and Algorithmic Design	4th international symposium - formal methods in architecture, CESAP	2018
Member of free course/summer school's organizing committee	DCG Super Week Workshops - Sharing knowledge, Data Mining for the masses	DCG-FAUL	2017
Member of free course/summer school's organizing committee	Kine[SYS]tem Shading Systems - International Summer School	ISCTE-IUL	2017
Member of free course/summer school's organizing committee	International Conference and Summer School on Changeable Architectures "Architecture InPlay"	ISCTE-IUL	2016
Member of scientific event's organizing committee	Praça da República (Porto), a case study. Open lecture and workshop on space syntax theory and practice	CESAP, Porto	2016
Member of free course/summer school's organizing committee	Situation Reports on Architecture and Urbanity (SITEREP) Lisbon2016	SITEREP, ISCTE-IUL	2016
Member of free course/summer school's organizing committee	1st OIKONET International Workshop "Contemporary living patterns in mass housing in Europe"	OIKONET, ISCTE-IUL	2014
Member of free course/summer school's organizing committee	STTF2013 ISCTE-IUL Summer School: Sustainable Technologies and Transdisciplinary Futures: From Design to Collaborative Digital Fabrication	ISCTE-IUL	2013
Member of scientific event's organizing committee	Digital Alberti Exposition in ESAP (Porto)	FAUL, ESAP	--