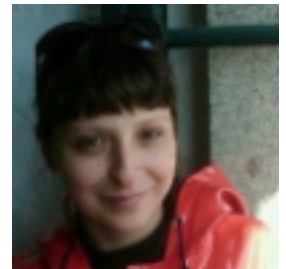


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Maria João de Oliveira

Integrated Researcher

ISTAR-Iscte - Information Sciences, Technologies and Architecture Research Centre



Contacts

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Curriculum

Architect, Designer and Teacher. Teaches Design @ISS - International Sharing School at Middle Years Programme (MYP). The current research focus is on the integration/combination of the developed biomimetic design methodologies in the International Baccalaureate® (IB) Middle Years Programme (MYP) .

PhD in Architecture - Biomimetic Design and Post Graduated in Digital Architecture. In the last decade she has organized and served on several scientific committees of international events, and provided tutoring and teaching services in several workshops and summer schools in the areas of biomimetics and biomimicry, digital fabrication and performance-based design. In recent years she has been part of the scientific review teams of several publishers and some renowned journals in his specialties. She has a Masters and a PhD in Architecture from Iscte-Instituto Universitário de Lisboa, and a specialization in Digital Architecture Product from a joint-venture between ISCTE and Faculdade de Arquitectura da Universidade do Porto (FAUP). She is an integrated researcher at ISTAR_iscte.

Research Interests

Biomimetic methods and methodologies, form, structure and material explorer, her main interests are focused in transdisciplinary projects, biomimetic research, shading structures, CAD/CAM and open source technologies, and environmental sustainability.

Academic Qualifications

University/Institution	Type	Degree	Period
ISCTE-Instituto Universitario de Lisboa	PhD	Doutoramento em Arquitectura dos Territórios Metropolitanos Contemporâneos	2019
ESPIRALSOFT Soluções Informáticas Lda	Training Session	Certificado de Competência Pedagógicas	2016
ISCTE-Instituto Universitario de Lisboa	Post-graduation	Seminário de Especialização em SITREP.at Lisboa: A Urbanidade dos Foruns Cívicos	2016
ISCTE-Instituto Universitário de Lisboa + Universidade do Porto - Faculdade de Arquitectura	Advanced Studies	Curso de Estudos Avançados em Arquitectura Digital	2013
Ar.Co Centro de Arte e Comunicação Visual	Technical Specialization Course	Escultura em Plástico	2010
Ar.Co Centro de Arte e Comunicação Visual	Free Course	História e Teoria de Ilustração e Banda Desenhada	2010
ISCTE-Instituto Universitario de Lisboa - Escola de Tecnologias e Arquitectura	Integrated M.Sc.	Mestrado Integrado em Arquitectura	2008

External Professional Activities

Period	Employer	Country	Description
Since 2022	International Sharing School Taguspark	Portugal	As a mentor in the Middle Years Program of the IB, I guide young creative minds through a multidisciplinary journey that encompasses the conception and execution of innovative projects in fields such as architecture, urban planning, graphic design, packaging, interior design, furniture, fashion, and more. I place special emphasis on the intersection of architecture and biomaterials, leading students in laboratory experiments to explore sustainable materials and develop ecologically innovative solutions. With advanced CAD and CAM tools integrated into the process, students transform their ideas into precise and functional prototypes, acquiring essential skills for contemporary design. My practice fosters a critical and collaborative mindset, preparing students to tackle the creative challenges of the 21st century with innovation and sustainable sensitivity.

2021 - 2022	Artys, Lda	Portugal	As an architect at Artys, I managed comprehensive, turnkey architectural services, ensuring every project was seamlessly guided from concept to completion. My role encompassed client consultation during the project design phase, navigating licensing processes, and meticulously selecting materials, furniture, and lighting to align with the client's vision and project objectives. I worked closely with clients to create personalized solutions, balancing aesthetic, functional, and technical needs. In addition to design and planning, I oversaw all aspects of project management, including site supervision to ensure the quality and fidelity of execution. This holistic approach allowed me to deliver bespoke architectural solutions that embodied the client's aspirations, while maintaining strict attention to detail, timelines, and budgets.
2019 - 2021	Lisbon School of Design	Portugal	Packaging module - packaging design - from its conception, planning, assembly and modularization, to its production techniques and strategies.
2019 - 2021	Lisbon School of Design	Portugal	Digital Tool - Adobe Package
2019 - 2021	MOFO, LDA	Portugal	Architect
2016 - 2019	Lisbon School of Design	Portugal	3D tool teacher applied to interior design - AutoCad, Sketchup e Vray.

Teaching Activities

Teaching Year	Sem.	Course Name	Degree(s)	Coord
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®	24
Scopus	125

Publications

- **Scientific Journals**
 - Scientific journal paper

1	Oliveira, M. J., Rato, V. & Leitão, C. (2021). Proof of Concept (PoC) 1.0—Implementing a bioshading system design method. <i>Biomimetics</i> . 6 (1) - Times Cited Scopus: 1
2	Nascimento, S., Pólvora, A., Paio, A., Oliveira, S., Rato, V., Oliveira, M. J....Sousa, J. P. (2016). Sustainable technologies and transdisciplinary futures: from collaborative design to digital fabrication. <i>Science as Culture</i> . 25 (4), 520-537 - Times Cited Web of Science®: 5 - Times Cited Scopus: 8 - Times Cited Google Scholar: 13
3	Madeira da Silva, T., Rato, V., Alves, P. M., Magalhães, M. V. & Oliveira, M. J. (2012). Reabilitação e melhoria ambiental em edifícios de grande porte organizados em galeria. <i>Revista PARC - Pesquisa em Arquitetura e Construção</i> . 3 (2), 76-97 - Times Cited Google Scholar: 1
4	Paio, A., Eloy, S., Rato, V., Ricardo, R. & Oliveira, M.J. (2012). Prototyping Vitruvius, new challenges: digital education, research and practice. <i>Nexus Network Journal</i> . 14 (3), 409-429 - Times Cited Web of Science®: 17 - Times Cited Scopus: 18 - Times Cited Google Scholar: 45
5	Madeira da Silva, T., Alves, P. M., Magalhães, M. & Oliveira, M. J. (2011). Edifícios de habitação social: diagnóstico e cenários de intervenção no edificado. <i>CIDADES, Comunidades e Territórios</i> . 22, 82-98 - Times Cited Google Scholar: 10

• Other Publications

- Architecture project publications

1	Oliveira, M.J., Pedro Azambuja Varela & Novo, E. (2013). Vaulted Cork Pavillion .
2	Pedro Azambuja Varela, Oliveira, M.J. & Novo, E. (2013). Vaulted Cork Pavillion.
3	Ribeiro, J.C., Ferrão, J.C., Oliveira, S., Atouguia, M., Oliveira, M.J., Teixeira, A....Costa, T.P. (2009). Casa na Ajuda.

- Non-peer-reviewed papers

1	Paio, A., Silva, B. & Oliveira, M.J. (2013). Living System – Discursive Wall. <i>ARQA – Arquitectura e Arte</i> . 106, 139-146
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- Architecture project reference

1	Ferrão, J.C., Ribeiro, J.C., Costa, T.P., Oliveira, M.J., Atouguia, M., Oliveira, S....Vaggione, P. (2009). Enlace, in Parque Urbano de Valdebebas. Valdebebas Urban Park book competition publication.
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- Other publications

1	R. Mendonça, Mendonça, R., Oliveira, M.J., Marques, F., Lourenço, A., Pinto, E....Barata, J. (2016). A Cooperative Multi-Robot Team for the Surveillance of Shipwreck Survivors at Sea. MTS/IEEE OCEANS Conference. - Times Cited Scopus: 61
2	Ribeiro, J.C., Ferrão, J.C., Atouguia, M., Oliveira, S. & Oliveira, M.J. (2007). 'De quanto pode a fortuna nas coisas humanas e de que modo se lhe deva resistir'. Blue Design. 3, 158-158

- Paper in press

1	Oliveira, M.J. (2025). KINE[SIS]TEM'17 Bridging Biomimetic Design and Environmental Analysis in Architecture. What's around Design?.
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• Books and Book Chapters

- Book chapter

1	Oliveira, M.J., Rato, V. & Leitão, C. (2021). Bioshading system design method (BSDM). In David Ting, Jacqueline Stagner (Ed.), Climate change science: Causes, effects and solutions for global warming. (pp. 195-222).: Elsevier. - Times Cited Scopus: 2 - Times Cited Google Scholar: 1
2	Ferrão, J.C., Ribeiro, J.C., Teixeira, A., Oliveira, M.J., Ferreira, F. , Costa, T.P....Amaral, M.M. (2010). Café in Sintra. In Monsa (Ed.), Small Bars: Architectural details. (pp. 202-209).: Instituto Monsa de Ediciones.
3	Ferrão, J.C., Ribeiro, J.C., Oliveira, S., Atouguia, M., Oliveira, M.J., Teixeira, A....Costa, T.P. (2010). House in Ajuda neighborhood. In Michel Toussaint com Patricia Bento d'almeida, Ricardo Carvalho (Ed.), Anuário de Arquitectura [13]. (pp. 150-161).: Caleidoscópio.

• Conferences/Workshops and Talks

- Publication in conference proceedings

1	Oliveira, M. J. & Osório, F. (2020). Nature pleated surfaces. In Sara Eloy, David Leite Viana, Franklim Morias, Jorge Vieira Vaz (Ed.), Formal methods in architecture: Proceedings of the 5th International Symposium on Formal Methods in Architecture (5FMA). (pp. 101-114). Lisboa: Springer.
2	Oliveira, M. J., Rato, V. & Leitão, C. (2020). Bioshading system design methodology - PoC 1.0. In Alberto T. Estévez (Ed.), BIODIG 2020 - 4th International Conference for Biodigital Architecture & Genetics. (pp. 192-201). Barcelona: BAG-UIC Barcelona, Institute for Biological Architecture & Genetics, Universitat Internacional de Catalunya.
3	Oliveira, M. J., Rato, V. M. & Leitão, C. (2018). KINE[SIS]TEM ´ 17: a methodological process for a Nature-Based Design. In Anetta Kpczyska-Walczak; Sebastian Biakowski (Ed.), 36th International Conference on Education and Research in Computer Aided Architectural Design in Europe. (pp. 561-570). Lodz: Lodz University of Technology. - Times Cited Scopus: 1 - Times Cited Google Scholar: 3

4	<p>Oliveira, M. J., Rato, V. & Leitão, C. (2018). KINE[SIS]TEM'17 From Nature to Architectural Matter International Conference. In Nexus Network Journal. (pp. 489-495). Lisboa: Kim Williams/Springer.</p> <p>- Times Cited Web of Science®: 1 - Times Cited Scopus: 2 - Times Cited Google Scholar: 1</p>
5	<p>Oliveira, M. J. DE, Sousa, J. P., Costa, V. C., Oliveira, S. M. & Mena, A. (2017). Musical morphogenesis - a self-organizing system . In Maria João de Oliveira e Filipa Crespo Osório (Ed.), Kine[SIS]tem - From Nature to Architectural Matter Conference Proceedings. (pp. 235-245). Lisbon: DINÂMIA'CET-IUL.</p>
6	<p>Oliveira, M. J., Rato, V. & Leitão, C. (2017). From natur(e) to architectural matter: responsive shading system. In Alberto T. Estevez (Ed.), 3rd International Conference on Biodigital Architecture and Genetics. (pp. 303-312). Barcelona: Bubok Publishing S.L.</p>
7	<p>Oliveira, M. J. de & Rato, V. (2016). Passive shading system: Towards parametric definition and virtual simulation. In Guimarães, N., Paio, A., Osório, F. C., Oliveira, M. J., e Oliveira, S. (Ed.), Architecture In-Play International Conferences Proceedings 2016. (pp. 108-114). Lisboa: Instituto Universitário de Lisboa (ISCTE-IUL).</p>
8	<p>Oliveira, M. J. de, Rato, V. & Leitão, C. (2016). Responsiveness based material - [a] passive shading control system. In Christodoulou, S. E., and Scherer, R. (Ed.), ECPPM2016 - eWork and eBusiness in Architecture, Engineering and Construction. (pp. 567-572). Limassol: CRC Press/Balkema.</p>
9	<p>Christensen, A. L., Duarte, M., Postolache, O., Sargento, S., Oliveira, M.J., Santana, P....Silva, F. (2015). Design of communication and control for swarms of aquatic surface drones. In Stephane Loiseau, Joaquim Filipe (Ed.), Proceedings of the International Conference on Agents and Artificial Intelligence (ICAART-2015). Lisboa: SCITEPRESS.</p> <p>- Times Cited Scopus: 30 - Times Cited Google Scholar: 49</p>
10	<p>Mena, A., Paio, A., Rocha, L., Marques-Pita, M., Assis, M., Oliveira, M.J....Costa, S. (2015). Morfogénese de um projeto. In Cristina Veiga-Pires, Luís Azevedo Rodrigues, Rita Borges, Sara Mira (Ed.), SciCom 2015. Lagos</p>
11	<p>Oliveira, M.J. & Rato, V. (2015). From morphogenetic data to performative behaviour. In Y. Ikeda, C. M. Herr, D. Holzer, S. Kaijima, M. J. Kim, M. A. Schnabel (Ed.), Proceedings of the 20th International Conference of the Association for Computer-Aided Architectural Design Research in Asia (CAADRIA 2015). Daegu: CumInCAD.</p> <p>- Times Cited Web of Science®: 1 - Times Cited Scopus: 1 - Times Cited Google Scholar: 3</p>
12	<p>Oliveira, M.J. & Rato, V. (2014). CORK'EWS: From microstructural composition into macrostructural performance. In Alberto T. Estévez (Ed.), Proceedings of the 2nd International Conference of Biodigital Architecture and Genetics. Barcelona: ESARQ.</p> <p>- Times Cited Google Scholar: 3</p>
13	<p>Oliveira, M. J. de., Paio, A. & Rato, V. M. (2012). Fabricating a living system: Uploading the design process into materiality performance. In Ahmet ALKAN, Mine ULUSOY (Ed.), ICONARCH International Congress of Architecture and Planning, (ICONARCH-1, Proceeding Book). (pp. 294-302). Konya: Selçuklu Municipality of Konya.</p>
14	<p>Paio, A., Silva, B., Oliveira, M. J. & Carvão, L. (2012). Technic Praxis learning: A design studio embedding digital and physical knowledge. In Cardoso, D. R., Celani, M. G. C., Freitas, C. S., and Tosello, M. E. (Ed.), SIGraDi 2012 Proceedings of the 16th Iberoamerican Congress of Digital Graphics. (pp. 607-610). Fortaleza: Sociedade Ibero-americana de Gráfica Digital .</p>

15	Paio, A., Oliveira, M. J., Carvão, L. & Silva, B. (2012). Living system design Studio: From digital to fabrication process. In Farias, P. L., Calvera, A., Braga, M. da C., and Schincariol, Z. (Ed.), Design Frontiers: Territories, concepts, technologies. ICDHS 2012 - 8th Conference of the International Committee for Design History & Design Studies . (pp. 335-339). São Paulo : Blucher.
16	Oliveira, M. J. de., Paio, A., Rato, V. M. & Carvão, L. M. (2012). A living system - Discursive wall. In Gudnason, D., and Scherer, R. (Ed.), eWork and eBusiness in Architecture, Engineering and Construction ECPPM 2012. (pp. 617-623). Reykjavik: CRC Press. - Times Cited Scopus: 1

- Conference proceedings editor

1	Eloy, S., Ferreira, M. A. M. & Oliveira, M.J. (2018). Book of abstracts: ISTAR-IUL Winter School 2018 Applied Transdisciplinary Research. Information Sciences, Technologies and Architecture Research Center (ISTAR-IUL).
2	Oliveira, M.J. & Osório, F. C. (2017). KINESISTEM'17_From Nature to Architectural Matter. Lisboa. DINÂMIA'CET - IUL.
3	Guimarães, N., Paio, A., Oliveira, S., Osório, F. C. & Oliveira, M.J. (2016). Architecture in-play International Conferences Proceedings. Lisboa. ISCTE-IUL.

- Talk

1	Oliveira, M.J. (2024). KINE[SIS]TEM'17 Bridging Biomimetic Design and Environmental Analysis in Architecture. What's around Design?.
2	Oliveira, M.J. (2024). FROM BIOMIMICRY TO ARCHITECTURE: THE FUTURE OF RESPONSIVE SHADING. Advanced Functional Materials & Biomaterials & Biodevices.
3	Oliveira, M.J. (2020). Nature Pleated Surfaces. 5th Formal Methods in Architecture.
4	Oliveira, M.J. (2019). Nature Pleated Surfaces – Workshop Results. Oporto, eCAADe 2019.
5	Oliveira, M.J. (2018). KINE[SIS]TEM'17 A methodological process for a Nature-Based Design. eCAADe2018 Computing for a better tomorrow.
6	Oliveira, M.J. (2018). KINE[SIS]TEM'17 Passive Shading Systems. Encontro Ciência 2018.
7	Oliveira, M.J. (2018). Passive Shading Systems. Semana Cultural da Universidade de Coimbra / dARQ - "Casa do Património Digital".
8	Oliveira, M.J. (2018). Towards A Bio-Shading System - A Concept Design Methodology. ENIA 3º Encontro Nacional de Investigação em Arquitectura.
9	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.
10	Oliveira, M.J. (2017). Musical morphogenesis - a self-organizing system. KINESISTEM'17_From Nature to Architectural Matter International Conference .

11	Oliveira, M.J. (2017). From Natur(E) To Architectural Matter - Responsive Shading System. 3rd International Conference on Biodigital Architecture and Genetics. Barcelona, Espanha.
12	Oliveira, M.J. & Rato, V. (2016). Passive Shading System - Towards Parametric Definition and Virtual Simulation. Architecture InPlay Conferences 2016. 108-114
13	Oliveira, M.J. (2016). Towards Self Organization and Material Constructions A Shading Control System. Colóquio "Arquitectura dos Territórios Metropolitanos Contemporâneos".
14	Oliveira, M.J. (2014). CORKEWS: From microstructural composition into macrostructural performance. 2nd International Conference Proceedings on Biodigital Architecture and Genetics, Barcelona, Spain.

Research Projects

Project Title	Role in Project	Partners	Period
Musical Morphogenesis	Researcher	ISTAR-Iscte (DLS), DINAMIA'CET-Iscte (CT), Calouste Gulbenkian Foundation - (Portugal), FABLAB-IUL - (Portugal), Gulbenkian Science Institute - (Portugal)	2014 - 2017
Experiment the Interdisciplinary Fabrication of Everyday Objects	Researcher	ISTAR-Iscte (DLS), DINAMIA'CET-Iscte, CIES-Iscte	2014
Living System (2012)	Researcher	ISTAR-Iscte (DLS), DINAMIA'CET-Iscte, Vitruvius FABLAB-IUL - (Portugal), FabLab EDP - (Portugal), Rhino 3D Portugal - (Portugal)	2014 - 2018
Avaliação e diagnóstico das necessidades de intervenção em edifícios nos bairros do Condado e dos Lóios em Marvila	Research Assistant	DINAMIA'CET-Iscte (CT)	2010 - 2011

Awards

ISCTE-IUL Scientific Awards for Scientific Publications, for the publication of the "Sustainable Technologies and Transdisciplinary Futures: From Collaborative Design to Digital Fabrication. Science as Culture." (2017)

B Green Stand Award - VitruviusFabLab-IUL / Digital Fabrication Laboratory, ISCTE- IUL / University Institute of Lisbon. Co-autorship: De OLIVEIRA Maria João, SOUSA João and NEVES Susana. (2015)

B Green Stand Award - VitruviusFabLab-IUL / Digital Fabrication Laboratory, ISCTE- IUL / University Institute of Lisbon. Co-autorship: SOUSA João, DE OLIVEIRA Maria João and VARELA Bárbara. (2014)

Honorable Mention. Urban Park of Valdebebas, Madrid, Espanha. Co-autorship: FERRÃO João, Ribeiro João, De OLIVEIRA Maria João, COSTA Tiago, ATOUGUIA Madalena, OLIVEIRA Sónia, FREIRE Daniela, BETINA Evelina, SANCHEZ-VERA Manuel, VAGGIONE Pablo. (2009)

3rd Prize. Competition for Plans of Fuseta Ria beach, Fuseta Sea and Access Dock. Fuzeta and Armona island, Algarve. Co-autorship: FERRÃO João, Ribeiro João, De OLIVEIRA Maria João, COSTA Tiago. (2009)

2nd Prize. Competition for the Headquarters S. Jacinto Dunes. São Jacinto, Aveiro. Co-autorship: FERRÃO João, Ribeiro João, De OLIVEIRA Maria João, COSTA Tiago, ATOUGUIA Madalena. (2009)

2nd Prize. Pinhal Novo School competition. Palmela, Portugal. Co-autorship: FERRÃO João, RIBEIRO João, ATOUGUIA Madalena, OLIVEIRA Sónia, De OLIVEIRA Maria João. (2007)

1st Prize. Praia da Légua Tender competition. Légua, Alcobaca, Portugal. Co-autoria FERRÃO João, Ribeiro João, ATOUGUIA Madalena, De OLIVEIRA Maria João, TEIXEIRA Andreia, FERREIRA Filipa, COSTA Tiago. (2007)

1st Prize. Invitation competition. Romeira, Santarém, Portugal- Co-autorship: FERRÃO João, RIBEIRO João, ATOUGUIA Madalena, OLIVEIRA Sónia, De OLIVEIRA Maria João, TEIXEIRA Andreia, FERREIRA Filipa, COSTA Tiago. (2007)

Professional Associations

APROGED - Associação dos Professores de Desenho e de Geometria Descritiva (Since 2013)

OA - Portuguese Association of Architects (Since 2009)

Organization/Coordination of Events

Type of Organization/Coordination	Event Title	Organizer	Year
Coordination of scientific event (with scientific committee) at ISCTE-IUL	5th FMA Symposium (5th Formal Methods in Architecture 2020)	ISTAR-IUL	2019 - 2020
Member of scientific event's organizing committee	ISTAR-IUL WINTER SCHOOL'18	ISTAR-IUL	2017 - 2018
Coordination of scientific event (with scientific committee) at ISCTE-IUL	KINE[SIS]TEM'17 From Nature to Architectural Matter International Summer School	DINAMIA'CET-IUL	2016 - 2017
Coordination of scientific event (with scientific committee) at ISCTE-IUL	Architecture In-Play - Surfaces In-Play International Summer School	ISTAR-IUL	2015 - 2016
Coordination of non-scientific event	Cork Furniture Summer School	Lisbon School of Design	2015
Member of scientific event's organizing committee	CORK: New uses in Architecture - Natural Cork International workshop	CIAUD - FAUL	2014
Coordination of non-scientific event	Experimentar a Fabricação Interdisciplinar de Objectos Quotidianos - 2nd Workshop	ISTAR-IUL	2014
Member of scientific event's organizing committee	PNUM - Portuguese Language Network of Urban Morphology International Conference	DINAMIA'CET-IUL	2012
Member of non-scientific event's organizing committee	Tributo à Habitação – Cidade, Bairro, Casa (Pantera Cor-de-Rosa / Lote 232 / Chelas) Conference	DINAMIA'CET-IUL	2011
Member of scientific event's organizing committee	Symposium Digital Fabrication – a state of art	ISTA - DAU	2011
Member of free course/summer school's organizing committee	Living System - a discursive wall International Workshop	ISTAR-IUL	--