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## Mauro Couceiro

### Integrated Researcher

ISTAR-IUL - Information Sciences, Technologies and Architecture Research Center (ISTA)  
[Digital Living Spaces]

### Contacts

#### E-mail

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### Curriculum

He is a researcher and academic with a strong focus on the intersection of architecture and industrial design, particularly in the context of human-machine-nature interactions and AI/XR technologies. Currently, he is an Integrated Researcher at ISTAR (Information Sciences, Technology and Architecture Research) ISCTE IUL. Also affiliated with ISTAR as the host institution, he achieved the top rank in the highest level (Principal Researcher) in the 6th CEECIND competition, organized by the Foundation for Science and Technology (FCT). He will be working on his research plan titled "Generative Architectural Design: Fostering Human-Biome Interaction through Traditional Approaches and Emerging Technologies". This project aims to explore the potential of generative design in creating adaptive architectural solutions that foster symbiosis between humans and the biome.

Recently, he served as a Co-PI at the University of Coimbra, where he coordinated the technological development for the Santa Cruz Research Project (competitive FCT project 30704). Prior to this, he lectured as an Assistant Professor at the same university, directing PhD and master's students from the Architecture and Computer Science departments. He holds a PhD in Architecture from UIC Barcelona, and two master's degrees, one in World History of Architecture, Urbanism, and Industrial Design, and the other in Bio-digital Architecture and Genetics.

His professional experience spans institutions worldwide, including Hongik University in Seoul, L'École Nationale Supérieure D'Architecture de Paris - La Villette, and the Faculty of Architecture and Design at the University of São Paulo. He has contributed to numerous publications and presented his research at international conferences. He has participated in and won international architectural design, artistic and performance-related competitions, exploring digital fabrication and computational design.

### Academic Qualifications

University/Institution	Type	Degree	Period
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ENEB - Business Shool	M.Sc.	MBA - Master of Business Administration	2024
ENEB - Business Shool	M.Sc.	MBA - Master of Business Administration	2024
ENEB - Business Shool	M.Sc.	Master in Project Management	2024
ENEB - Business Shool	M.Sc.	Master in Project Management	2024
Centre for Social Studies of the University of Coimbra	Post-Doc	SANTA CRUZ Research Project (POCI-01-0145-FEDER-030704)	2022
Escuela Superior de Arquitectura - Universitat Internacional de Catalunya	PhD	Doctoral Programme in Architecture; Barcelona School of Architecture - Research Group on Genetic Architectures (GENARQ) - Universitat Internacional de Catalunya	2009
Escuela Superior de Arquitectura - Universitat Internacional de Catalunya	PhD	Doctoral Programme in Architecture; Barcelona School of Architecture - Research Group on Genetic Architectures (GENARQ) - Universitat Internacional de Catalunya	2009
Universitat Internacional de Catalunya	PhD	Arquitectura Biodigital	2009
McNeel Europe	Licciante	Official Certified Rhino Trainer (ART) Rhino + Grasshopper	2009
McNeel Europe	Licciante	Official Certified Rhino Trainer (ART) Rhino + Grasshopper	2009
Universidade de Lisboa Instituto Superior Técnico	Licciante	Academic and Scientific Exchange - 'Doctor Europeus' Research - IST UTL	2005
Universidade de Lisboa Instituto Superior Técnico	Licciante	Academic and Scientific Exchange - 'Doctor Europeus' Research - IST UTL	2005
Escuela Superior de Arquitectura - Universitat Internacional de Catalunya	M.Sc.	Història, Arquitectura i Disseny / History, Architecture and Design	2004
Escuela Superior de Arquitectura - Universitat Internacional de Catalunya	M.Sc.	Història, Arquitectura i Disseny / History, Architecture and Design	2004
Escuela Superior de Arquitectura - Universitat Internacional de Catalunya	M.Sc.	Arquitectures Genètiques / Genetic Architectures; Barcelona School of Architecture - Research Group on Genetic Architectures (GENARQ) - Universitat Internacional de Catalunya	2001
Escuela Superior de Arquitectura - Universitat Internacional de Catalunya	M.Sc.	Arquitectures Genètiques / Genetic Architectures; Barcelona School of Architecture - Research Group on Genetic Architectures (GENARQ) - Universitat Internacional de Catalunya	2001
Ordem dos Arquitetos	Post-graduation	Projetar a eficiência: Organização e Gestão do Atelier de Arquitectura	1999
Ordem dos Arquitetos	Post-graduation	Projetar a eficiência: Organização e Gestão do Atelier de Arquitectura	1999
Universidade de Lisboa Faculdade de Arquitectura	Licciante	Arquitetura	1999

## Supervisions

### • Ph.D. Thesis

#### - Ongoing

	Student Name	Title/Topic	Language	Status	Institution
1	Catia C. S. Ramos	A afirmativa construção da cidade: A cidade da Guarda sob um novo instrumento de abordagem. (tr.: The affirmative construction of the city: The city of Guarda under a new approach instrument.) PhD Research Grant from the Foundation for Science and Technology SFRH / BD / 76848/2011	English	Developing	ISCTE-IUL

#### - Concluded

	Student Name	Title/Topic	Language	Institution	Concluding Year
1	Diego Navarro Mateu	Procesos naturales aplicados a la arquitectura mediante computación: ciencia Evo-Devo y modelado algorítmico a través de Grasshopper. Role: reviser.	English	ISCTE-IUL	2017

### • M.Sc. Dissertations

#### - Concluded

	Student Name	Title/Topic	Language	Institution	Concluding Year
1	Miguel Pedrosa Alberto	Contemporary Digital Tools in Architectural History Research: Digital Reconstruction of the Cloister of Manga and the Unbuilt Project of a Motel in Coimbra by Álvaro Siza / Ferramentas Digitais Contemporâneas na Investigação em História da Arquitetura: Reconstituição Digital do Desaparecido Claustro da Manga e do Projeto Não Realizado de Álvaro Siza para um Motel em Coimbra.	English	ISCTE-IUL	2020
2	Jorge Miguel RibeiroFerreira	Interacção em Realidade Virtual Àtravés de Tangíveis Passivos	English	ISCTE-IUL	2020
3	Machado, Rodrigo José Couceiro de Carvalho	Analysis of digital drawing processes _ Unité D'Habitation vs VM Houses	English	ISCTE-IUL	2018

4	Frank Pedrosa Santos	Futuras Tecnologias Aplicadas à Arquitetura: Do Digital para o Material. (tr.: Future Technologies Applied to Architecture: From Digital to Material).	English	ISCTE-IUL	2018
5	Ana Rita Rodrigues	A arquitetura das formas e dos polímeros: A reinterpretação do azulejo (tr.: the architecture of shapes and polymers: The reinterpretation of tile). Integrated Master of Architecture. Department of Architecture, Faculty of Sciences and Technology, University of Coimbra, Portugal	English	ISCTE-IUL	2018
6	João Fernandes Raíño	Uso da Realidade Virtual na Leitura da História: Recriação do Colégio das Artes na Alta de Coimbra na sua situação Pré Reforma Pombalina (1759-1772) / To read history through Virtual Reality: Recreation of Colégio das Artes in Coimbra in its Pre Pombaline Reform period (1759 - 1772)	English	ISCTE-IUL	2017
7	Afonso Ramos Portel	De desvão a água-furtada - aprovação de coberturas por métodos generativos.	English	ISCTE-IUL	2017
8	Raquel Travincas Pinto	The Rise of the Cloudworker. Work, Live and Play converging in Architecture. Integrated Master of Architecture. Department of Architecture, Faculty of Sciences and Technology, University of Coimbra, Portugal Role: Advisor	English	ISCTE-IUL	2017
9	Baptista, Miguel Adriano Fernandes	Animação Musical Aplicada à Arquitetura Cenográfica: Alfabetos, Escritas e Glifos.	English	ISCTE-IUL	2015
10	Utime, Julia Horiuchi	Design de Superfícies Complexas - exploração dos padrões tridimensionais (tr.: Design of Complex Surfaces - exploration of three-dimensional patterns).	English	ISCTE-IUL	2015
11	Passos, Rita Raquel de Vasconcelos Pereira	Futuras tradições no design sustentável - mobiliário de cortiça	English	ISCTE-IUL	2014
12	Santana, A. G. C. S.	Ritual da Amazónia.	English	ISCTE-IUL	2014
13	Luísa Barreira de Almeida	Coberturas Rígidas Adaptáveis na Arquitetura. Possibilidades de Transformação e Mobilidade. Mestrado. Faculdade de Arquitetura da Universidade do Porto	English	ISCTE-IUL	2014
14	Santos, Nuno Miguel Teixeira dos Reis	Integração de biónica em design do produto. Modelo de design generativo e paramétrico em estruturas efêmeras.	English	ISCTE-IUL	2013

15	André João Abrunhosa Barata Cruz	Arquitectura biológica : uma análise da obra de Frei Otto	English	ISCTE-IUL	2012
16	Aguilar Bueno, Ricardo	La transformación de la forma arquitectónica asociada a la evolución de las tecnologías de proyecto en Galicia a lo largo de los s. XIX, XX, XXI.	English	ISCTE-IUL	2012
17	Nunes, Rui Filipe Vieira da Cruz	DIY. Uma nova estratégia de 'design' de produto virado para o "faça você mesmo". Fundamentos, aplicabilidade e consequências num futuro social sustentável	English	ISCTE-IUL	2010

## Publications

- Books and Book Chapters

- Book author

1	Couceiro, M. (2022). DISEÑO BIÓNICO Y LA TERCERA CULTURA - ANALOGÍAS BIOLÓGICAS EN LA ARQUITECTURA Y EN EL DISEÑO . Seattle, Washington. BAB   Bionic Architecture Barcelona.
2	Rui Pedro Mexia Lobo & Couceiro, M. (2019). Caminhos Futuros do Património Desaparecido. Colóquio Internacional sobre reconstituições 3D de património arquitetónico desaparecido. Centro de Estudos Sociais.
3	Couceiro, M. & Rui Pedro Mexia Lobo (2019). Caminhos Futuros do Património Desaparecido. Colóquio Internacional sobre reconstituições 3D de património arquitetónico desaparecido. Coimbra. Centro de Estudos Sociais - UC (Ed.).
4	Rui Pedro Mexia Lobo & Couceiro, M. (2019). Caminhos Futuros do Património Desaparecido. Colóquio Internacional sobre reconstituições 3D de património arquitetónico desaparecido. Centro de Estudos Sociais.
5	Rui Pedro Mexia Lobo & Couceiro, M. (2019). Caminhos Futuros do Património Desaparecido. Colóquio Internacional sobre reconstituições 3D de património arquitetónico desaparecido. Centro de Estudos Sociais.
6	Roger Pitiot & Couceiro, M. (2010). Bio-Logic & Techno-Logic Convergence - Design Learning Lesson from Nature - IDAS International Design Workshop - Spring 2010 - Hongik University - International Design School for Advanced Studies - Seoul. Seoul. Figshare.

- Book chapter

1	Couceiro, M. (2023). Bionic Architecture and the Cyborg Culture - Human's Phenotypic and Cognitive Extensions. In Maria Rosa Cervera and Elena Codina Dusoiu and Tana Lascu (Ed.), Architecture Inspired by Nature - Experimenting Bionics. London: Springer.
2	Couceiro, M. (2021). Extended Realities (XR). Cognitive Evolution and Biological Analogies in Scientific Communication / Realidades Extendidas (XR). Evolución Cognitiva y Analogías Biológicas en la Comunicación Científica . In Cuaderno 149 - Diseño, Innovación y Transdisciplinariedad II Relaciones del Diseño con la Naturaleza, la Biología y la Tecnología. (pp. 75-90). Buenos Aires: Centro de Estudios en Diseño y Comunicación. Facultad de Diseño y Comunicación. Universidad de Palermo. Buenos Aires.

3	Couceiro, M. & Rui Pedro Mexia Lobo (2020). Fusion of VR and AR Strategies for Immersion in Lost Historical-Architectural Heritage. In Agustín Hernández L. and Vallespín Muniesa A. and Fernández-Morales A. (Ed.), Springer Series in Design and Innovation. (pp. 289-300). London: Springer International Publishing.
4	Couceiro, M., Rui Pedro Mexia Lobo, Monteiro, Antonio & Miguel Alberto (2019). O Mosteiro de Santa Cruz de Coimbra em 1834. In Costa Couceiro, Mauro and Rui Lobo (Ed.), Caminhos Futuros do Património Desaparecido: Colóquio Internacional sobre reconstituições 3D de património arquitetónico desaparecido. (pp. 37-40). Coimbra
5	Couceiro, M. (2017). Virtual Architectures - Coordinator: Mauro Costa Couceiro. In Jorge Figueira and Gonçalo Canto Moniz and Rui Lobo and Alice Geirinhas (Ed.), Cadernos DARQ 2010-2016. (pp. 134). Coimbra: e d arq.
6	Couceiro, M. (2017). Architecture and Digital Design II - Coordinator: Mauro Costa Couceiro. In Jorge Figueira and Gonçalo Canto Moniz and Rui Lobo and Alice Geirinhas (Ed.), Cadernos DARQ 2010-2016. (pp. 82-83). Coimbra: e d arq.
7	Couceiro, M. (2017). Artistic Expression and Multimedia - Coordinator: Mauro Costa Couceiro. In Jorge Figueira and Gonçalo Canto Moniz and Rui Lobo (Ed.), Cadernos DARQ 2010-2016. (pp. 138).: e d arq.
8	Couceiro, M. (2017). Architecture and Digital Design I - Coordinator: Mauro Costa Couceiro. In Jorge Figueira and Gonçalo Canto Moniz and Rui Lobo and Alice Geirinhas (Ed.), Cadernos DARQ 2010-2016. (pp. 70-71). Coimbra: e d arq.
9	Couceiro, M. (2016). Biomimética (101 Concepts of Architecture and Urbanism in the Digital Age). In Lima F. and Braida F. (Ed.), 101 Conceitos de Arquitetura e Urbanismo na era Digital. (pp. 31-37). São Paulo: ProBooks.
10	Couceiro, M. (2009). The "Bio-logic" and the paradigms of the digital age. In Alberto T. Estevez (Ed.), Genetic Architectures III - New Bio and Digital Techniques. (pp. 74-87). Santa Fé: Lumen, Inc. / SITES Books.

## • Other Publications

### - Master's Dissertation

1	Couceiro, M. (2004). Biónica en la Arquitectura Moderna - Estado de la Questión (Bionics in the Modern Architecture - State of the art).
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### - Doctoral Thesis

1	Couceiro, M. (2009). Analogías biológicas en la arquitectura - del acercamiento biónico hacia los paradigmas de lo biodigital (tr.: Biological analogies in architecture - from the bionic approach towards the bio-digital paradigms).
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### - Newspaper article

1	Couceiro, M. (2009). TESI DOCTORAL - MAURO COSTA - Las analogías biológicas en la arquitectura / Biological analogies in architecture. NEWSUIC RESERCA . 22, 11
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