



Lisbon, Portugal

sofia.feist@mail.telepac.pt

(+351) 967 058 366

sofia_feist

linkedin.com/in/sofia-feist

https://sofia-feist.github.io

LANGUAGES

PORTUGUESE | Native Speaker

ENGLISH | Proficient User - C1
IELTS Score - 7.0

FRENCH | Proficient User - C1

SPANISH | Basic User - A2

GERMAN | Basic User - A1

DIGITAL SKILLS

OFFICE
Microsoft Office ●●●●●

ARCHITECTURE

AutoCAD ●●●●●

Sketch Up ●●●●●

Rhinoceros ●●●●●

3DS Max ●●●●●

Revit ●●●●●

Unity ●●●●●

GRAPHIC DESIGN

Photoshop ●●●●●

InDesign ●●●●●

Illustrator ●●●●●

PROGRAMMING

Racket ●●●●●

Grasshopper ●●●●●

Python ●●●●●

C# ●●●●●

HTML/CSS ●●●●●

STRENGTHS

Motivation & Commitment

Hard Worker Multitasker

Fast Learner Perfectionist

Good Interpersonal Skills

SOFIA FEIST

Portuguese architect, designer and researcher with a multi-linguistic background. Interested in Architecture grounded in research and innovation using Algorithmic Design, Computation and Building Information Modelling.

WORK EXPERIENCE

ALGORITHMIC DESIGN SPECIALIST | OCTOBER 2020 - PRESENT

BUILT CoLAB - Collaborative Laboratory for the Built Environment, Lisbon, Portugal

- Research and Development in the areas of Algorithmic Design, Modular Architecture, Building Information Modelling, and Semi-supervised Learning techniques.
- Development of custom software solutions for the AEC industries, including functional and user-friendly User Interfaces using WPF.

3D DESIGNER | FEBRUARY 2018 - SEPTEMBER 2019

Simultan - Serviços Multimédia, Unipessoal, Lda; Lisbon, Portugal

- Provision of services including 3D Modelling, Interior and Product Design, Rendering and Image Editing of architectural projects;
- Worked on several international architectural projects for Hugo Boss, Coty, and Breuninger.

TRAINEE RESEARCHER | JANUARY 2017 - JANUARY 2019

INESC-ID, Lisbon, Portugal

- Research work on several topics related to Algorithmic Design for Architecture, including algorithmic-based Building Information Modelling, algorithmic analysis and optimization, design collaboration, and integration of algorithmic design processes in architectural practices;
- Collaboration and consultancy work with architectural studios for the development of projects using custom software solutions.

AWARDS

PTBIM DISSERTATION AWARD - ARCHITECTURE | NOVEMBER 2016

Awarded by PTBIM - 1st Portuguese congress of Building Information Modelling (BIM)

- Best Dissertation Award developed on the topic of BIM, in the field of Architecture.

EDUCATION

MSC IN ARCHITECTURAL COMPUTATION | 2019 - 2020

EQF LEVEL 7

Bartlett School of Architecture, United Kingdom

- Postgraduate degree in Architectural Computation
- Classification: Distinction (70.00/100)
- Dissertation addresses the requirements of structurally-driven self-reconfigurable robots and proposes a control strategy based on the structural analysis and performance of assemblies of modular robots. Thesis Score: 70.00/100

MASTER DEGREE IN ARCHITECTURE | 2013 - 2016

EQF LEVEL 7

Instituto Superior Técnico (Technical University of Lisbon), Portugal

- Second cycle of an Integrated Master Degree in Architecture
- Final Score: 16/20
- Dissertation explores the use, benefits and drawbacks of an Algorithmic Design approach to BIM, in the context of architectural design, comparing it to an algorithmic geometry-based CAD approach and a traditional manual approach. Thesis Score: 19/20


BACHELOR DEGREE IN ARCHITECTURE | 2010 - 2013

EQF LEVEL 6

Instituto Superior Técnico (Technical University of Lisbon), Portugal

- First cycle of an Integrated Master Degree in Architecture
- Final Score: 14/20


SEMI-SUPERVISED CLUSTERING FOR ARCHITECTURAL MODULARIZATION | MARCH 2022

 Feist, S., Sanhudo, L., Esteves, V., Pires, M., Aguiar Costa, A.

 In Buildings 2022, 12, 303. <https://doi.org/10.3390/buildings12030303>

- Paper proposes a semi-supervised clustering methodology for the modularization of non-modular BIM projects, to identify groups of modules that can replace individual rooms. The proposed methodology is applied in a case study, showcasing a 99.6% reduction in the modularisation process' duration, while maintaining an accuracy of 96.4% of Normalised Mutual Information Score and 93.3% of Adjusted Mutual Information Score.

INTEGRATED ALGORITHMIC DESIGN IN PRACTICE: A RENOVATION CASE STUDY | SEPTEMBER 2020


 Martinho, H., Pereira, I., Feist, S., Leitão, A.

 In Proceedings of the 38th International Conference of Education and research in Computer Aided Architectural Design in Europe (eCAADe 2020 Conference), Berlin (Germany), 16 - 18 September 2020, pp. 429-438.

- Paper explores the application of an integrated Algorithmic Design workflow in a classroom renovation case study, encompassing the design, analysis, visualization, and fabrication stages of the project. The resulting workflow culminates in a fluid and efficient design process, from conceptual design to fabrication.

CASE STUDIES ON THE INTEGRATION OF ALGORITHMIC DESIGN PROCESSES IN TRADITIONAL DESIGN WORKFLOWS | MAY 2018


 Caetano, I., Ilunga, G., Belém, C., Aguiar, R., Feist, S., Bastos, F., Leitão, A.

 In Proceedings of the 23rd International Conference on Computer Aided Architectural Design Research in Asia (CAADRIA 2018 Conference), Beijing (China), 17 - 19 May 2018, pp. 111-120.

- Paper explores the integration of Algorithmic Design processes in the workflow of a small-scale traditional architectural studio. The paper presents a series of projects where a collaborative design process between the architects and the algorithmic design experts was undertaken to solve common architectural problems.


COLLABORATIVE ALGORITHMIC-BASED BUILDING INFORMATION MODELLING | APRIL 2017


 Feist, S., Ferreira, B., Leitão, A.

 In Proceedings of the 22nd International Conference on Computer Aided Architectural Design Research in Asia (CAADRIA 2017 Conference), Suzhou (China), 5 - 8 April 2017, pp. 613-622.

- This paper explores the use of programming-based Version Control for project management and concurrent development of architectural projects, specifically regarding projects with a strong algorithmic and BIM component.


A-BIM: ALGORITHMIC-BASED BUILDING INFORMATION MODELLING | NOVEMBER 2016


 Feist, S., Leitão, A.

 In Proceedings of the 1st Portuguese congress of Building Information Modelling (PTBIM Congress), Guimarães (Portugal), 24 - 25 November 2016, pp. 285-295.

- (Paper in Portuguese) This paper was written following the work of my Master Thesis. It explores the use, benefits and drawbacks of an Algorithmic Design approach to BIM, in the context of architectural design, comparing it to an algorithmic geometry-based CAD approach and a traditional manual approach.

PORTABLE GENERATIVE DESIGN FOR BUILDING INFORMATION MODELLING | MARCH 2016

 Feist, S., Barreto, G., Ferreira, B., Leitão, A.

 In Proceedings of the 21st International Conference on Computer Aided Architectural Design Research in Asia (CAADRIA 2016 Conference), Melbourne (Australia), 30 March - 2 April 2016, pp. 147-156.

- This paper proposes a portable Generative Design (GD) solution for Building Information Modelling, i.e. a solution that allows the same GD program to generate equivalent 3D models in different BIM applications. The paper also proposes a series of guidelines for a programming methodology adapted to the BIM paradigm. In the end, the portable solution and programming methodology are evaluated using a practical example.


PRESENTATIONS & LECTURES

A-BIM: ALGORITHMIC-BASED BUILDING INFORMATION MODELLING | 15 FEBRUARY 2017

 ISCTE-IUL University, Lisbon, Portugal

- Lecture on the use of algorithmic approaches with Building Information Modelling, given in the context of a series of lectures which took place the 15th February 2017 at ISCTE-IUL University.

ALGORITHMIC DESIGN FOR ARCHITECTURE | 5 FEBRUARY 2018

 NOZ Architecture Studio, Lisbon, Portugal

- Presentation explaining the work and potential that can be achieved using algorithmic approaches in the design and development of architectural projects. This presentation showed several of the research projects being developed by the ADA research group.