

Abdulrahman Alymani

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EDUCATION

Cardiff University

Oct 18 – Dec 22

PhD Researcher in Architecture (Computational Architectural Methods)

Dissertation Title: Graph Machine Learning Approaches to Classifying the Building and Ground Relationship; Architectural 3D Topological Model to Retrieve Similar Architectural Precedents

Supervisor: Wassim Jabi

Synopsis: Uncover the building/ground relationship using graph Machine Learning (ML) through producing a 3D topological model to classify the building/ground relationship. This resulted in an (ML) workflow that can classify the building/ground relationship and enable architects to make informed design decisions in the early design stages.

Southern California Institute of Architecture (SCI-Arc)

July 13 – Sep 16

Master's degree in Architecture design (M. Arch.)

King Abdul-Aziz University

Sep 06 – July 11

Bachelor of Landscape Architecture

TEACHING/ACADEMIC EXPERIENCE

Al Faisal University

Aug 23 – Now

Assistant professor of Architectural engineering department in the College of Engineering,

Riyadh, SA

Al Faisal University

Aug 22 – Aug 23

Lecturer of Architectural engineering department in the College of Engineering,

Riyadh, SA

Cardiff University

Oct 18 – Oct 22

Teaching Assistant in Architectural at Wells School of Architecture

Cardiff, UK

- *Teaching Assistant, MArch studio (Thesis Primer).*
- *Teaching Assistant, Computational Methods in Architecture (MSc).*
- *Teaching Assistant Undergraduate Architecture.*

Al Faisal University

Oct 17 – Oct 18

Lecturer of Architectural engineering department in the College of Engineering,

Riyadh, SA

- *Coordinator of Summer internship at Architectural engineering department,*
- *Coordinator of Scheduling Committee at Architectural engineering,*
- *Member of Scientific & Curriculum Committee at Architectural engineering department,*
- *Member of Quality Assurance and Accreditation Committee at Architectural engineering department,*
- *Member of Library and Professional Development Committee at Architectural engineering department,*

Southern California Institute of Architecture (SCI-Arc)

May 15 – Sep 15

Teaching Assistant, Southern California Institute of Architecture, California,

Los Angeles, USA

PUBLICATION

- Alymani, A. (2019) 'Building and Ground Relationship', in Speaking of Science 2019 Conference, Cardiff University.
- Jabi, W, Alymani, A. (2020) 'Graph Machine Learning using 3D Topological Models', in SimAUD Conference.
- Alymani, A, Jabi, W, Corcoran, P. (2020) 'Machine Learning Methods for Clustering Architectural Precedents Classifying the relationship between building and ground' in eCAADe 2020 Anthropologic - Architecture and Fabrication in the cognitive age.
- Alymani, A, Jabi, W, Corcoran, P. (2022) 'Graph Machine Learning Classification Using Architectural 3D Topological Models' in *SIMULATION journal*.
- Alymani, A, Mujica, A, Jabi, W, Corcoran, P. (2022) 'Unsupervised Machine Learning to Clustering Building and Ground relationships Using Whole Graph Embedding' in Design Computing and Cognition'22 Conference. (*Full paper under review*)
- Alymani, Jabi, W, Corcoran, P. (2022) 'A Formal Method of Architectural Design Automation to generating large 3D Graphs Topological Embedded Semantic Information Models' in 6th international symposium formal Methods in Architectural. (*Full paper under review*)

TEACHING COURSES

MArch Studio (Thesis Primer), AR 802 (Form Finding), AR 2006 (Design Principles and Methods 2), ARE 120 (Architectural and Drifting). 2017, ARE 201 (Architectural design I). 2017, ARE 202 (Architectural design II). 2017, ARE 220 (Construction Drawing). 2017, ARE 303 (Interior design). 2017, and ARE 490 (Architectural engineering Capstone Projects). ARE 412

WORK EXPERIENCE

Computational Methods and Intelligent Technology in Architecture and Design (CM-iTAD)

Feb 20 – Now

CEO *Riyadh, SA*

- Founder and coordinator of (CM-iTAD) research lab.

Mansour Al-Sabaan Partner (MSP)

Sep 16 – July 17

Head of Architecture department

Riyadh, SA

- Led the design project team, which were eight architects and draftsmen.
- Provide and develop where required, drawings, models, images, and other documents relating to the design.

Flag Architects

July 10 – Dec 10

Landscape Architect Internship

Jeddah, SA

Al Hejaz Garden

Aug 09 - Mar 10

Landscape Architect Internship

Jeddah, SA

CERTIFICATES AND AWARDS

- Honorable Mention Awards in international competition Architecture at Zero, EZB House 2022.
 - Certificate of Attendance the Course Report Step by Step Workshop, Alfaisal University, College of Engineering, January 2018.
 - Certificate of Attendance the Course Specification Step by Step Workshop, Alfaisal University, College of Engineering, November 2017.
 - Certificate of Attendance the Train the Trainer Workshop, Alfaisal University, College of Engineering, November 2017.
 - Certificate of Attendance the Course Learning Outcomes (CLOs) Workshop, Alfaisal University, College of Engineering, November 2017.
 - Certificate of Attendance the Management of Intended Learning Outcomes (ILOs) Workshop, Alfaisal University, College of Engineering, December 2017.
 - Master of Architecture Scholarship from King Abdullah, Saudi Arabia 2012.
 - Second place awarded in logo competition with \$ 5000 in 2010.
 - Certificate of Appreciation from the Department of Landscape Architecture in the Faculty of Environmental Design, King Abdulaziz University in Jeddah for the best quarterly project between the students of the third year in 2009.
 - Certificate of Appreciation from the Department of Landscape Architecture in the Faculty of Environmental Design, King Abdulaziz University in Jeddah for the highest jump rate between the third-year students in 2009.
 - Certificate of Appreciation from the Department of Landscape Architecture in the Faculty of Environmental Design, King Abdulaziz University in Jeddah to work with the Jeddah Municipality and show the department's supervisor in 2009.
 - Certificate of Appreciation from the Faculty of Environmental Design, King Abdulaziz University to participate in the course of college during the closing ceremony of the activities of student activities at the university in 2008.
 - Certificate of Appreciation from the Department of Landscape Architecture in the Faculty of Environmental Design, King Abdulaziz University in Jeddah for supremacy in the first Semester of 2008-2009.
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