

# Sara Alsaadani

*B.Sc. (Hons), M.Sc., Ph.D.*

Tel: (+20) 1227331319

Email Address: [sara.alsaadani@aast.edu](mailto:sara.alsaadani@aast.edu)

## EDUCATION

- PhD, Architectural Science**, Welsh School of Architecture, Cardiff University, UK.
- 2009-2013 Thesis: *A mixed-methods exploration of non-technical barriers in collaboration, for building performance simulation use in architectural decision-making.*
- Supervisors: Dr. Clarice Bleil De Souza, Dr. Wouter Poortinga.  
Examiners: Prof. Ardeshir Mahdavi, Prof. Christopher Tweed.
- MSc, Architectural Engineering and Environmental Design**, Arab Academy for Science, Technology and Maritime Transport (AASTMT), Alexandria, EGYPT.
- 2006-2009 Thesis: *An approach towards ecological transformation in downtown areas; with reference to Alexandria, Egypt.*
- Supervisors: Prof. Hatem El-Tawil, Dr. Amira Elnokaly.  
Examiners: Prof. Mohamed Hanafy, Dr. Alaa Eldin Sarhan.
- 2001-2006 **BSc, Architectural Engineering and Environmental Design**, Arab Academy for Science, Technology and Maritime Transport (AASTMT), Alexandria, EGYPT.

## RESEARCH AND TEACHING INTERESTS

I have a genuine interest in sustainable and energy-efficient building design; which is the underpinning motivation for the following teaching and research initiatives:

- Embedding passive and active environmental design strategies in building design.
- Methods used to arrive at optimised building performance and integrating building performance simulation in design decision-making.
- Problem-solving methods in architectural design thinking, and how these align with problem-solving methods when reaching energy-efficiency targets are the primary goal for the design.
- Collaborations between architects and building scientists for the achievement of optimised energy-performance in buildings.
- Estimated energy performance targets versus actual energy usage in post-occupancy evaluations.
- Dissemination of research about energy-efficient building design in architectural practice.
- Using research methods from diverse backgrounds to inform energy-related research in building design and expand knowledge in this field (e.g. methods from psychology, social sciences, statistical models).

## MEMBERSHIPS, HONOURS AND AWARDS

- 2013 Passed the PhD viva with **no corrections to the written manuscript**. This was the first time any student at the Welsh School of Architecture, Cardiff University, was able to attain this rare result.
- 2009 Was a member of the design team awarded the **second prize on a national scale** in Egypt for the design proposal of re-designing and retrofitting President Gamal Abdul Nasser's residence; and transformation into a museum.
- 2008 Awarded by the Arab Academy for Science, Technology and Maritime Transport for '**Best Teaching Assistant.**'
- 2008 Royal Institute of British Architects (RIBA part I and part II) member.
- 2006 Graduation project was nominated for the RIBA Presidents Medals Student Award.

- 2006 Awarded a full scholarship to complete my MSc by AASTMT, for the two-and-a-half year course of study.
- 2006 Working member of the Egyptian Engineers Syndicate since 2006.
- 2006 Honoured by the Architectural Engineering and Environmental Design Department for achieving a cumulative role of appreciation: **First class honour.**
- 2001 Awarded a full scholarship to complete my BSc by AASTMT, for the five year course.

## **TEACHING AND RESEARCH EXPERIENCE**

### **Assistant Professor, Arab Academy for Science, Technology and Maritime Transport, Smart Village Campus, Giza, Egypt.**

- 2016-Current
- Delivering the following undergraduate courses: (AR210) Architectural Drawing, (AR516) Architectural Design 6, (AR362) Environmental Studies and (AR423) Topics in Sustainability.
  - Part of the RIBA setting committee.
  - Acts as a student advisor for 20 undergraduate students.
  - Currently supervising one MSc research student.

### **Post-doctoral Research Fellow, Department of Architectural Science, Ryerson University, and Consultant for The City of Toronto, Toronto, Canada.**

- 2015
- Responded to the City of Toronto's Request For Proposals (RFP) for the Eco-Roof Incentive Program Review; with a research proposal on behalf of Ryerson University's team. Currently awaiting review and response from the City of Toronto regarding contract award.
  - Main role on the project team during the RFP stage was to serve as the team project manager; ensuring that the research project is kept on track with respect to budget and time. Also served as the main contact person for the project; responsible for communication with key staff members, advisory team members, the City of Toronto Project Manager and key research informants.
  - Research responsibilities include performing background literature reviews, analysis, report writing on incentive programs, designing and distributing surveys and analysing results.

### **Ryerson University, Department of Architectural Science, Toronto, ON, Canada. Adjunct Assistant Professor / Sessional Instructor.**

- 2014-2015.
- Taught the course BL8210: Building Science and Architectural Research Methods to graduate students enrolled in the building science program.
  - Instructed students on basic components of academic research; including literature reviews, research design (research questions, aims and hypotheses), quantitative research methods, qualitative research methods and referencing.
  - Assisted students in the preparation of a research proposal for their Masters' dissertations, for the fulfilment of the research requirement of their degrees.

### **Post-doctoral Research Fellow, Department of Architectural Science, Ryerson University, Toronto, Canada.**

- 2014-2015
- Leading a group of researchers in a project which aims to lower energy consumption in a Multi-Unit Residential Building (MURB) in downtown Toronto.
  - Responsible for the design of a Tenant Engagement Program (TEP) to cultivate energy efficient behaviours amongst the tenants of the building, and to therefore reduce energy consumption.
  - Monitoring the whole building energy usage before, during and after the TEP to determine whether the TEP has succeeded in cultivating energy-efficient behaviours.
  - Responsible to data analysis through using statistical analysis software such as SPSS and 'R' Statistical packages.
  - Funded by Mitacs and the Canadian Mortgage and Housing Corporation (CMHC).

- 2009-2013 **Doctoral candidate,** Architectural Science Research Group (ASG), Welsh School of

Architecture, Cardiff University, Wales, UK.

- Aimed at answering the research question 'do non-technical barriers arising during collaboration between architects and BPS specialists, reduce the potential for BPS to inform architectural decision-making?'
- Designed a pragmatic mixed-methods empirical investigation to answer the research question consisting of two research stages; a qualitative stage and a quantitative one. In the qualitative stage, semi-structured interviews were used for data-collection, and the data were analysed using a thematic content analysis. In the subsequent quantitative follow-up, self-completion questionnaires were designed and distributed, and the results were analysed statistically.
- Thesis available online at:  
[http://orca.cf.ac.uk/48197/1/SARA\\_ALSAADANI\\_THESIS\\_COMPLETE.pdf](http://orca.cf.ac.uk/48197/1/SARA_ALSAADANI_THESIS_COMPLETE.pdf)

**Assistant Lecturer;** Architectural Engineering & Environmental Design Dept., Arab Academy for Science, Technology and Maritime Transport (AASTMT), Alexandria, EGYPT.

- 2009
- Tutored in design studio courses.
  - Courses taught included 3Ds Max, Visual Studies, Urban Design and Architectural Design (Design Studio).
  - Acted as a student advisor for 20 students.

**Graduate Teaching Assistant (GTA);** Architectural Engineering & Environmental Design Dept., Arab Academy for Science, Technology and Maritime Transport (AASTMT), Alexandria, EGYPT.

- 2006-2009
- Tutored in design studio courses.
  - Assisted in the delivery of lectures in a number of undergraduate courses including visual studies, CAAD, 3Ds Max, Architectural Design, Urban design, Environmental design and Execution Design.
  - Responsible for the preparation of course materials and hand-outs.
  - Worked with different teams to gain as much experience as possible; had to quickly adapt and work under pressure to meet deadlines.
  - Acted as a student advisor for 20 students.

## **PROFESSIONAL EXPERIENCE**

- 2009
- Participated in the Gamal Abdel Nasser Museum Competition, a nationwide competition in Egypt. My team won second prize.

**Architectural and landscape designer;** MIG Architects Firm, Alexandria, EGYPT - Part-time post.

- Jan. 2007-  
Aug. 2007
- Architectural designer working on the technical detailing of Pharos University Buildings and urban landscape design.
  - Was responsible for production information of the Pharos University project.

## **PUBLICATIONS**

### **Publications in refereed journals**

- **Alsaadani, S.** and Bleil De Souza, C., 2016. Of collaboration or condemnation? Exploring the promise and pitfalls of architect-consultant collaborations for building performance simulation. *Energy research and social science* 19, pp. 21-36.
- Elnokaly, A., Elseragy, A. and **Alsaadani, S.**, 2008, Creativity-Function Nexus; Creativity and functional attentiveness in design-studio teaching, *ArchNet-IJAR: International Journal of Architectural Research*, Volume 4 Issue 2/3, pp.467-470.

### **Papers submitted for publication in refereed journals**

- **Alsaadani, S.** and Bleil De Souza, C., 2016 (*Expected*). Architect-BPS consultant collaborations; Opportunity or Dilemma? *Submitted to Building Research and Information*.

### **Publications in refereed conference proceedings**

- **Alsaadani, S.**, Fung, A., Straka, V. and Roque, M. 2016. Understanding tenants' behavioural energy consumption in a multi-unit residential building in Downtown Toronto, Canada. BEHAVE 2016; 4<sup>th</sup> European Conference on Behaviour and Energy Efficiency, Coimbra, Portugal, 8-9 September, 2016.
- **Alsaadani, S.**, Roque, M., Trinh, K., Fung, A., Straka, V., 2016. An overview of research projects investigating energy consumption in Multi-Unit Residential Buildings in Toronto. The Sixth Asian Conference on Sustainability, Energy and the Environment 2016 Official Conference Proceedings 2016, Kobe, Japan, 9-12 June 2016.
- **Alsaadani, S.** and Bleil De Souza, C., 2012, The social component of building performance simulation; Understanding Architects, Building Simulation and Optimization (BS012), Loughborough, UK: 10-11 September, 2012.
- Bleil De Souza, C. and **Alsaadani, S.**, 2012, Thermal zoning in speculative office buildings: Discussing the connections between space layout and inside thermal control, Building Simulation and Optimization (BS012), Loughborough, UK: 10-11 September.
- **Alsaadani, S.** and Zapata Poveda, M. G., 2011, Deciphering Design Process: Using qualitative methods to inform collaborative built environment research, RICS Construction and Property Conference, COBRA 2011, Salford, UK: 12-13 September.
- Elnokaly, A., Elseragy, A. and **Alsaadani, S.**, 2009, Sustaining historical city centres through urban regeneration, The proceedings of International IAPSE-CSBE & Housing Network, Istanbul, Turkey: October 12-16.
- Elnokaly, A., Elseragy, A. and **Alsaadani, S.**, 2009, Integrating sustainable design into architectural curricula: Exploring the strategies. The proceedings of Sustainability Conference; Fifth International Conference on Environmental, Cultural, Economic and Social Sustainability, Mauritius: January 5-7.
- Elnokaly, A. and **Alsaadani, S.**, 2007, The reflection of Euro-Mediterranean historical culture on contemporary architecture in Alexandria, Euro-Mediterranean Regional Conference Traditional Mediterranean Architecture, Present and Future, Barcelona, Spain: 12-15 July.

#### External invitations and presentations

- **Alsaadani, S.**, 2016. SustainED. From a sustainable discourse to a discourse of sustainability. Presentation delivered at Arab Academy for Science, Technology and Maritime Transport, Alexandria Campus, March 22<sup>nd</sup>, 2016.
- **Alsaadani, S.**, 2015. "*We speak the language of drawing.*" From a sustainable discourse to a discourse of sustainability. 1<sup>st</sup> International Workshop on: Rebuilding communities for resilient and sustainable development: Eco-cities. Aswan, Egypt, December 13-16, 2015.
- **Alsaadani, S.**, 2014. Architect-Engineer collaboration; Opportunity or Dilemma? Presentation delivered at Carleton University, Ottawa, Canada, January 22<sup>nd</sup> 2014.
- **Alsaadani, S.**, 2013, Non-technical barriers to integrating building performance simulation in design decision-making; presentation delivered at the ARUP headquarters in London.
- **Alsaadani, S.**, 2012, Non-technical barriers to building performance simulation, Welsh School of Architecture Research Student Conference, Cardiff, UK: 30 May.
- **Alsaadani, S.**, 2010, Deciphering the 'code,' Understanding the languages of architects and simulationists, Spotlight on Social Sciences Student Conference, Cardiff, UK: May 2010.

#### TECHNICAL SKILLS

- **Architectural software:** AutoCAD, ArchiCAD, 3Ds Max, Photoshop.
- **Building performance simulation software and energy calculations:** Ecotect Analysis, ESP-r, EnergyPlus, DesignBuilder
- **Statistical analysis software:** SPSS and 'R' Statistical Analysis.
- **Qualitative research software:** NVivo and Atlas.ti
- **Bibliographic database software:** EndNote and ProCite.
- **Virtual Learning Environments:** Blackboard Learn.

#### REFERENCES

References available upon request.