

Sara Alsaadani

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

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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

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; 4th 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 22nd, 2016.
- **Alsaadani, S.**, 2015. "*We speak the language of drawing.*" From a sustainable discourse to a discourse of sustainability. 1st 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 22nd 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.