

SHERIF M ABDELMOHSEN, PhD, Assoc. AIA

ASSOCIATE PROFESSOR OF DIGITAL MEDIA & DESIGN COMPUTING IN ARCHITECTURE
Department of Architecture, The American University in Cairo (AUC), Cairo, Egypt
CO-FOUNDER & MANAGING PARTNER, UDAAR

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**EDUCATION****PhD in Architecture (2011)**

School of Architecture, Georgia Institute of Technology, Atlanta, GA, USA

PhD Thesis: An Ethnographically Informed Analysis of Design Intent Communication in BIM-Enabled Architectural Practice

Recipient of Faculty Award of Merit for Best Doctoral Presentation (2010/2011)

MSc in Architecture (2004)

Department of Architecture, Ain Shams University, Cairo, Egypt

MSc Thesis: Towards a Conceptual Framework for Implementing Intelligent Mixed Reality in Architectural Education

BSc in Architecture (2000) (Honors)

Department of Architecture, Ain Shams University, Cairo, Egypt

BSc Graduation Project: Touristic Cultural Complex at Cairo Northern Wall

POSITION**Associate Professor (01/2017 – Present)**

Associate Professor of Digital Media and Design Computing in Architecture
Department of Architecture, American University in Cairo (AUC), Egypt

EMPLOYMENT**September 2020 – Present****Arab Society for Computer-Aided Architectural Design (ASCAAD)**

President

April 2017 – Present**UDAAR for Engineering Consultancy and Technology Solutions**

Co-Founder, Director of Research and Development

August 2014 – December 2016**Department of Architecture, American University in Cairo (AUC), Egypt**

Assistant Professor of Digital Media and Design Computing in Architecture

September 2015 – September 2016**UNii Engineering Consultancy, Abu Dhabi, United Arab Emirates**

R&D Developer and Team Leader, UNii Cairo

August 2012 – May 2014**Department of Construction and Architectural Engineering, American University in Cairo (AUC), Cairo, Egypt**

Adjunct Faculty

June 2013 – January 2015**KRAFT|Studio (Studio for Kinematic, Robotic, Architectronic and Fabrication Technologies), Cairo, Egypt**

Founder and Director

January 2013 – September 2014**FEDA CoRELAB (Faculty of Engineering Department of Architecture, Consultancy for Research Laboratory), Ain Shams University, Cairo, Egypt**

Research Manager

September 2012 – January 2013**Arab Academy for Science and Technology, Cairo, Egypt**

Part time lecturer

September 2011 – January 2012

Department of Architecture, British University in Egypt (BUE), Cairo, Egypt

Part time lecturer

September 2011 – January 2013, October 2014 – Present

Department of Architecture, Future University in Egypt (FUE), Cairo, Egypt

Part time lecturer

September 2011 – Present

Department of Architecture, Ain Shams University, Cairo, Egypt

Assistant Professor (09/2011 – 11/2016), Associate Professor (11/2016 – Present)

August 2010 – May 2011

School of Architecture, Georgia Institute of Technology, Atlanta, GA, USA

Teaching Assistant, Common First Year

June 2007 – September 2010

AEC Integration Laboratory (Prof. Charles Eastman), Atlanta, GA, USA

Researcher and Member of Georgia Tech Design Computing team

July 2004 – September 2004

Consultant Office (Cube Consultants), Cairo, Egypt

Architect

March 2004 – January 2005

Consultant Office (Prof. Yasser Mansour), Cairo, Egypt

Architect

January 2004 – April 2004

Consultant Office (Maged Fahmy, Emad Aziz), Cairo, Egypt

Architect

October 2003 – May 2005, September 2012 – Present

Arab Academy for Science and Technology, Cairo, Egypt

Teaching Assistant, Part time lecturer (Instructor to student ratio 1: 7)

March 2001 – May 2001

YAT Computer Center, Cairo, Egypt

AutoCAD Instructor (Instructor to student ratio 1: 4)

October 2000 – August 2005

Department of Architecture, Ain Shams University, Cairo, Egypt

Teaching Assistant, Assistant Lecturer (Instructor to student ratio 1: 40)

August 2000 – October 2000

Center for Developing Historic Cairo, Citadel, Cairo, Egypt

Architect

July 1998 – September 1998

Al-Shehab Computer Center, Cairo, Egypt

AutoCAD Instructor

October 1996 – August 2005

Consultant Office (Prof. Dr. Morad Abdelkader)

Architect

COMPUTER SKILLS

CAD and Visualization: AutoCAD, SketchUp, 3DMAX, Adobe Photoshop

Generative design and digital fabrication: Rhino, Grasshopper

Building Information Modeling: Revit, Digital Project, Solibri Model Checker

Programming: Python, Processing, Java

TEACHING EXPERIENCE

AS ASSOCIATE PROFESSOR
(2017 – Present)

Department of Architecture, American University in Cairo (AUC), Egypt

ARCH 473/3522 Digital Design Studio and Workshop
ARCH 455/4558 Architectural Design Studio VIII (High Tech)
ARCH 000/4562 Vertical Studio B
ARCH 000/4570 Senior Design Studio
ARCH 000/4939 Advanced Architectural Computing
ARCH 490/4980 Senior Project I
ARCH 491/4981 Senior Project II
ARCH 5221 Research Methods in Architecture
FEPD 003 Façade Sustainable Design: Parametric Design for Natural Ventilation
FEPD 004 Façade Production: Fire Protection in Building Façades

Department of Architecture, Ain Shams University, Cairo, Egypt

ARC 221 Theories of Architecture (2)
ARC 616 Interactive and Responsive Architecture

AS ASSISTANT PROFESSOR
(2011 – 2016)

Department of Architecture, Ain Shams University, Cairo, Egypt

ARC 212 Architectural Design (2)
ARC 221 Theories of Architecture (2)
ARC 341 Computer Applications in Architecture (2)
ARC 351 Working Drawings (1)
ARC 451 Working Drawings (2)
ARC 504 Computer Applications in Architecture
ARC 616 Interactive and Responsive Architecture

Department of Architecture, American University in Cairo (AUC), Egypt

ARCH 473/3522 Digital Design Studio and Workshop
ARCH 455/4558 Architectural Design Studio VIII (High Tech)
ARCH 456/4557 Architectural Design Studio VI (Contextual Design)
ARCH 491/4981 Senior Project II (*as advisor and course coordinator*)
ARCH 273/1521 Digital Representation Tools for Architects (*as coordinator*)

Department of Architecture, Future University in Egypt (FUE), Cairo, Egypt

UNV E09 Specific Computer Applications
ARC 231 Graphics and Visual Skills (2)
ARC 322 History and Theories (4)
ARC E10 Advanced Computer Applications in Architecture

Department of Architecture, British University in Egypt (BUE), Cairo, Egypt

Architectural Design (4)
Working Drawings (2)

Department of Architecture, Arab Academy for Science and Technology and Maritime Transport (AASTMT), Cairo, Egypt

AR 428 Computer Applications in Architecture
AR 414 Architectural Design (4)

AS TEACHING ASSISTANT
(2000 – 2011)

School of Architecture, Georgia Institute of Technology, USA

COA 1012 Fundamentals – Design and the Built Environment II
COA 1060 Introduction - Design and the Built Environment

Department of Architecture, Arab Academy for Science and Technology and Maritime Transport, Cairo (AASTMT), Egypt

AR 414 Architectural Design IV
Building Construction I

Department of Architecture, Ain Shams University, Cairo, Egypt

ARC 111 Building Construction (1)
ARC 150 Free Hand Drawing
ARC 151 Visual Design
ARC 161 Sciagraphy and Perspective
ARC 202 Architectural Design (2)
ARC 241 Computer Applications (1)
ARC 271 Computers in Architecture
ARC 311 Architectural Design (3)
ARC 351 Working Drawings (1)
ARC 499 Graduation Project

RESEARCH PROFILE

Web of Science Researcher ID: AAI-2131-2019

ORCID ID: 0000-0002-3580-3749

Number of publications (as of MAR 2022):

22 (Web of Science) / 23 (Scopus) / 70 (Google Scholar)

Number of citations (as of MAR 2022):

128 (Web of Science) / 233 (Scopus) / 591 (Google Scholar)

h-index (as of MAR 2022):

4 (Web of Science) / 6 (Scopus) / 11 (Google Scholar)

Publons Profile:

<https://publons.com/researcher/3303113/sherif-abdelmohsen/>

Scopus Profile:

<https://www.scopus.com/authid/detail.uri?authorId=54890702500>

Google Scholar Profile:

<https://scholar.google.com.eg/citations?user=r7AdywUAAAAJ&hl=en>

Research Gate Profile:

https://www.researchgate.net/profile/Sherif_Abdelmohsen

Academia.edu Profile:

<https://aucegypt.academia.edu/SHERIFMORADABDELMOHSEN>

RESEARCH INTERESTS

- Building Information Modeling (BIM) and pre-occupancy evaluation
- Space Layout Planning (SLP) and automated building review systems
- Generative, parametric and algorithmic design, and digital fabrication
- Ambient Intelligence, physical computing and tangible interfaces
- Interactive architecture and responsive systems in the built environment
- Shape shifting façade skins using hygroscopic properties of wood
- Smart building management and automated facility management systems
- Sketch understanding, problem solving, and analyzing design activity
- Qualitative methods in design research

PUBLICATIONS

2022

El-Dabaa, R. and Abdelmohsen, S. (2022), Deriving the Production Rules of Shape-Shifting Grammars for Adaptive Façades: The Case of Hygromorphic Thermo-bimetal Composites (H_MT_M), in Gero, J. (ed.), *Design Computing and Cognition DCC'20*, pp. 129-148, Springer, Cham. https://doi.org/10.1007/978-3-030-90625-2_8.

El-Dabaa, R., and Abdelmohsen, S. (2022), Integrating Performance Indicators in the Production Rules of Shape-Shifting Grammars for Architectural Adaptive Façade Systems, accepted for publication, *Architectural Engineering and Design Management (AEDM)*.

2021

El-Mahdy, D., Gabr, H., and Abdelmohsen, S. (2021), SaltBlock as a 3D Printed Sustainable Construction Material in Hot Arid Climates, *Journal of Building Engineering (JOBE)*, Vol. 43, 103134, <https://doi.org/10.1016/j.job.2021.103134>.

El-Khouly, T., Abdelmohsen, S., Riad, A., Abdelkhalek, J. and Abdelgawad, N. (2021), Heritage-inspired Interactivity: Traditional Geometric Patterns as an Inspiration for Interactive Architectural Prototypes, proceedings of the XXV Congreso de la Sociedad Iberoamericana de Grafica Digital (SIGraDi 2021), Ubiquitous Conference, pp. 617-628.

El-Khouly, T., Abdelmohsen, S. and Mallasi, Z. (2021), Guest Editorial, *Open House International (OHI)*, Vol. 46, No. 3, 342-347. <https://doi.org/10.1108/OHI-09-2021-191>.

Abdelmohsen, S. and Massoud, P. (2021), A Material-Based Computation Framework for Parametric Design Education, *Open House International (OHI)*, Vol. 46, No. 3, 459-475. <https://doi.org/10.1108/OHI-02-2021-0043>.

Ezzeldin, M., Assem, A., Abdelmohsen, S. (2021), Automated Assessment of Architectural Spatial Layout Configurations using Fuzzy Logic, *Archmet-IJAR: International Journal of Architectural Research*, Vol. 15, No. 2, pp. 328-343. <https://doi.org/10.1108/ARCH-07-2020-0135>.

El-Dabaa, R., Abdelmohsen, S. and Mansour, Y. (2021), Programmable Passive Actuation for Adaptive Building Façade Design using Hygroscopic Properties of Wood, *Wood Material Science & Engineering*, Vol. 16, No.4, pp. 246-259, DOI: 10.1080/17480272.2020.1713885.

El-Dabaa, R., Salem, I., and Abdelmohsen, S. (2021), Digitally Encoded Wood: 4D Printing of Hygroscopic Actuators for Architectural Responsive Skins, in S. Abdelmohsen. T. El-Khouly, Z. Mallasi, A. Bennadji (eds.), *Architecture in the Age of Disruptive Technologies: Transformation and Challenges*, proceedings of the 9th International Conference of the Arab Society for Computer Aided Architectural Design (ASCAAD 2021), American University in Cairo, Cairo, Egypt, pp. 241-252. ISBN 978-1-907349-20-1.

Abdelmohsen, S. and Massoud, P. (2021), Material-Based Parametric Form Finding: Learning Parametric Design through Computational Making, in S. Abdelmohsen. T. El-Khouly, Z. Mallasi, A. Bennadji (eds.), *Architecture in the Age of Disruptive Technologies: Transformation and Challenges*, proceedings of the 9th International Conference of the Arab Society for Computer Aided Architectural Design (ASCAAD 2021), American University in Cairo, Cairo, Egypt, pp. 521-535. ISBN 978-1-907349-20-1.

Bakir, R., Abdelmohsen, S. and Alsaadani, S. (2021), Student Experiences of Online Design Education Post COVID-19: A Mixed Methods Study, in S. Abdelmohsen. T. El-Khouly, Z. Mallasi, A. Bennadji (eds.), *Architecture in the*

Age of Disruptive Technologies: Transformation and Challenges, proceedings of the 9th International Conference of the Arab Society for Computer Aided Architectural Design (ASCAAD 2021), American University in Cairo, Cairo, Egypt, pp. 142-155. ISBN 978-1-907349-20-1.

Aly, Z., Ibrahim, A., and Abdelmohsen, S. (2021), Augmenting Passive Actuation of Hygromorphic Skins in Desert Climates: Learning from Thorny Devil Lizard Skins, in S. Abdelmohsen. T. El-Khouly, Z. Mallasi, A. Bennadji (eds.), *Architecture in the Age of Disruptive Technologies: Transformation and Challenges*, proceedings of the 9th International Conference of the Arab Society for Computer Aided Architectural Design (ASCAAD 2021), American University in Cairo, Cairo, Egypt, pp. 264-278. ISBN 978-1-907349-20-1.

Hassab, A., Abdelmohsen, S., and Abdallah, M. (2021), Generative Design Methodology for Double Curved Surfaces using AI, in S. Abdelmohsen. T. El-Khouly, Z. Mallasi, A. Bennadji (eds.), *Architecture in the Age of Disruptive Technologies: Transformation and Challenges*, proceedings of the 9th International Conference of the Arab Society for Computer Aided Architectural Design (ASCAAD 2021), American University in Cairo, Cairo, Egypt, pp. 622-635. ISBN 978-1-907349-20-1.

2020

Ibrahim, A., Abdelmohsen, S., Zayan, A. and Omar, W. (2020), Hygromorphs: Exploring Morphologies of Architectural Adaptive Systems using Hygroscopic Properties of Wood, in proceedings of the 3rd International Conference on Parallelism in Architecture, Engineering and Computing Techniques (PACT 2020), University of East London, London, UK.

Ibrahim, A., Abdelmohsen, S., Zayan, A. and Omar, W. (2020), Extending the Passive Actuation of Low-Tech Architectural Adaptive Systems by Integrating Hygroscopic and Thermal Properties of Wood, in Werner, L. and Koering, D. (eds.), *Anthropologic: Architecture and Fabrication in the Cognitive Age*, Proceedings of the 38th eCAADe International Conference, Volume 2, TU Berlin, Berlin, Germany, pp. 641-650.

Mansour, Y., Iscandar, M., Abdelmohsen, S., Yassa, N. (2020), Studies on the Workplace Creativity between Theory and Practice, in: S.H. Adnan (ed.), *Recent Advances in Science and Technology*, Vol. 4, Chapter 9, pp. 93-99, Book Publisher International, DOI: <https://doi.org/10.9734/bpi/rastr/v4>, ISBN: 978-93-90206-20-9.

Nagy, M., Mansour, Y. and Abdelmohsen, S. (2020), Multi-Objective Optimization Methods as a Decision Making Strategy, *International Journal of Engineering Research and Technology (IJERT)*, Vol. 9, Issue 3, pp. 516-522, ISSN: 2278-0181, DOI: <http://dx.doi.org/10.17577/IJERTV9IS030480>.

Esmael, N., Hosny, S., Sabry, H. & Abdelmohsen, S. (2020), Biophilic Approach for Optimizing Daylighting Performance and Views-Out in Intensive Care Units Using Combined Light Shelf, *Engineering Research Journal (ERJ)*, Faculty of Engineering, Helwan University, Vol. 165.

Abdelmohsen, S. and Hassab, A. (2020), A Computational Approach for the Mass Customization of Materially Informed Double Curved Façade Panels, In: Holzer D., Nakapan W., Globa A. and Koh I. (eds.). "RE: Anthropocene, Design in the Age of Humans". Proceedings of the 25th International Conference of the Association for Computer-Aided Architectural Design Research in Asia (CAADRIA), Chulalongkorn University, Bangkok, Thailand, Vol. 1, pp. 163-172.

2019

Assem, A., Abdelmohsen, S. and Ezzeldin, M. (2019), Smart Management of the Reconstruction Process of Post-Conflict Cities, *Archnet-IJAR: International*

Journal of Architectural Research, Vol. 14, No. 2, 325-343, DOI: <https://doi.org/10.1108/ARCH-04-2019-0099>.

Abdelmohsen, S., Adriaenssens, S., El-Dabaa, R., Gabriele, S., Olivieri, L. and Teresi, L. (2019), A Multi-Physics Modeling Approach for Modeling Hygroscopic Behavior in Wood Low-Tech Architectural Adaptive Systems, *Computer-Aided Design (CAD)*, Vol. 106, 43-53. DOI: 10.1016/j.cad.2018.07.005.

Abdelmohsen, S., Adriaenssens, S., Gabriele, S., Olivieri, L., El-Dabaa, R. (2019), Hygroscapes: Innovative Shape Shifting Facades, in 'Digital Wood Design: Innovative techniques of representation in Architectural Design', 1st ed. F. Bianconi, M. Filippucci, Springer International Publishing, ISBN 978-3-030-03676-8, DOI: 10.1007/978-3-030-03676-8_26.

Abdelmohsen, S., Massoud, P., El-Dabaa, R., Ibrahim, A., and Mokbel, T. (2019), The Effect of Hygroscopic Design Parameters on the Programmability of Laminated Wood Composites for Adaptive Facades, in: Lee J.H. (eds) *Computer-Aided Architectural Design. "Hello Culture"*. CAAD Futures 2019. Communications in Computer and Information Science (CCIS), Vol. 1028, Springer, Singapore. Chapter 26, pp. 372-383, DOI:10.1007/978-981-13-8410-3_26.

Abdelmohsen, S. and El-Dabaa, R. (2019), H_MT_M: Hygromorphic-Thermobimetal Composites as a Novel Approach to Enhance Passive Actuation of Adaptive Facades, in proceedings of the *18th CAAD Futures 2019 International Conference*, Daejeon, Korea, pp. 290 - 300.

Abdelmohsen, S., Tarabieh, K., Salem, I., El-Ghazi, Y., El-Dabaa, R. Hassan, A. (2019), Coupling Parametric Design and Robotic Assembly Simulation to Generate Thermally Responsive Brick Walls, in proceedings of the *16th IBPSA International Conference (BS 2019)*, Rome, Italy, p. 3006-3013, <https://doi.org/10.26868/25222708.2019.210904>.

Abdelmohsen, S., Assem, A. and Ezzeldin, M. (2019), A Fuzzy-Based Approach for Generating Spatial Layout Configurations, in Sousa, JP, Xavier, JP and Castro Henriques, G (eds.), "Architecture in the Age of the 4th Industrial Revolution" - Proceedings of the 37th eCAADe and 23rd SIGraDi Conference - Volume 2, University of Porto, Porto, Portugal, 11-13 September 2019, pp. 35-44.

Hosny, S., Abdelmohsen, S. and Mansour, S. (2019), A Conceptual Framework for Enriching Architectural Classroom with Mobile Augmented Reality, *Journal of Al-Azhar University Engineering Sector (JAUES)*, Vol. 14, No. 50, pp. 158-175.

Abdelmohsen, S., Assem, A. and Ezzeldin, M. (2019), School2Share (S2S): A Computational Approach for the Efficient Management of Shared School Facilities in Egypt, in proceedings of *AR-UP 2019: Architecture & Urbanism... A Smart Outlook*, Cairo, Egypt, pp. 24-33, ISBN: 978-977-237-415-1.

Omar, M., Kamel, S., Abdelmohsen, S., Kamel, D. (2019), Biomimetic Approaches in Architectural Design Education, in proceedings of *AR-UP 2019: Architecture & Urbanism... A Smart Outlook*, Cairo, Egypt, pp. 622-631, ISBN: 978-977-237-415-1.

El-Baz, N., Kamel, S., Abdelmohsen, S. (2019), Architectural Heritage between Visualization and H-BIM, in proceedings of *AR-UP 2019: Architecture & Urbanism... A Smart Outlook*, Cairo, Egypt, pp. 44-51, ISBN: 978-977-237-415-1.

El-Baz, N., Kamel, S., Abdelmohsen, S. (2019), H-BIM: Towards a New Era of Interoperability, in proceedings of *AR-UP 2019: Architecture & Urbanism... A Smart Outlook*, Cairo, Egypt, pp. 52-59, ISBN: 978-977-237-415-1.

2018

Abdelmohsen, S. El-Dabaa, R. and Mansour, Y. (2019), Encoding Latent Properties of Hygromorphic-Thermobimetal Composites (HMTM) as a Passive Mechanism for Adaptive Building Skins, in proceedings of *AR-UP 2019: Architecture & Urbanism... A Smart Outlook*, Cairo, Egypt, pp. 70-79, ISBN: 978-977-237-415-1.

Abdelmohsen, S., Assem, A. and Ezzeldin, M. (2018), A Computational Approach for the Smart City Management of the Reconstruction Process in Baghdad, in proceedings of the *International Conference on Post-Terrorist Reconstruction and Heritage Restoration in Iraq and Syria*, Baghdad, Iraq.

Abdelmohsen, S., El-Dabaa, R., Ibrahim, A., Massoud, P. and Mokbel, T. (2018), A Computational Approach for Soft Adaptive Building Skins using Hygromorphic and Thermobimetal Composites, *Proceedings of the International Conference on Cross-Disciplinary Research in Architecture (RCA 2018)*, pp. 64-67, TU Kaiserslautern, Kaiserslautern, Germany.

Tarabieh, K., Abdelmohsen, S., El-Ghazi, Y., El-Dabaa, R. and Hassan, A. (2018), Parametric Investigation of Brick Extrusion Pattern using Thermal Simulation, *Proceedings of the 4th Building Simulation and Optimization Conference (BSO 2018)*, Cambridge, UK, pp. 597 - 604.

Abdelmohsen, S., Massoud, P., El-Dabaa, R., Ibrahim, A., and Mokbel, T. (2018), A Computational Method for Tracking the Hygroscopic Motion of Wood to develop Adaptive Architectural Skins, *Proceedings of the 36th eCAADe International Conference*, Lodz, Poland, Volume 2, pp. 253 - 262.

Abdelmohsen, S. and Eldabaa, R. (2018), A Methodology for Evaluating the Hygroscopic Behavior of Wood in Adaptive Building Skins using Motion Grammar, *IOP Conference Series: Materials Science and Engineering* **362** (2018) 012011, doi:10.1088/1757-899X/362/1/012011.

El-Halawany, N., El-Daly, H. and Abdelmohsen, S. (2018), A User-centric Approach to optimize Visitors' Experience in Exhibition Spaces using Parametric Spatial Analysis, *Academic Research Community (ARChive)*, Vol. 2, No. 3, pp. 1-10, DOI: <http://dx.doi.org/10.21625/archive.v2i3>.

2017

Abdelmohsen, S. and Tarabishy, S. (2017), Optimized Design to Robotic Production: Integrating Multipoint Forming and Free Form Material Deposition in the Mass Customization of Double Curved Facades, *International Journal of Parallel, Emergent and Distributed Systems (IJPEDS)*, Vol. 32, 180-189, DOI: 10.1080/17445760.2017.1390097.

Abdelmohsen, S., Massoud, P., Tarabishy, S. and Hassab, A. (2017), Rule-based vs. Intuition-based Generative Design: An Inquiry into the Digital Chain Concept in Undergraduate Architectural Education, *International Journal of Parallel, Emergent and Distributed Systems (IJPEDS)*, Vol. 32, 199-209, DOI: 10.1080/17445760.2017.1390102.

Tarabieh, K., Abdelmohsen, S., El-Ghazi, Y., El-Dabaa, R., Hassan, A. and Amer, M. (2017), Parametric Investigation of Three Types of Brick Bonds for Thermal Performance in a Hot Arid Climate Zone, in *Proceedings of Passive Low Energy Architecture International Conference (PLEA 2017)*, Edinburgh, UK, pp. 3699 - 3706.

El-Zanfaly, D. and Abdelmohsen, S. (2017), Imitation in Action: A Pedagogical Approach for Making Kinetic Structures, in G. Çağdaş, M. Özkar, L.F. Gül and E. Gürer (Eds.): *Future Trajectories of Computation in Design: proceedings of the 17th CAAD Futures 2017 International Conference*, Cenkler Matbaa, Istanbul, Turkey, pp. 533 - 545. ISBN: 978-975-561-482-3.

2016

Abdelmohsen S., Assem A., Tarabishy S., Ibrahim A. (2017), A Heuristic Approach for the Automated Generation of Furniture Layout Schemes in Residential Spaces, In: Gero J. (eds) Design Computing and Cognition '16. Springer, Cham, pp 459-475. DOI: 10.1007/978-3-319-44989-0_25.

Mansour, Y., Iscandar, M., Abdelmohsen, S. and Yassa, N. (2016), Workplace Creativity between Theory and Practice, *Middle East Journal of Applied Sciences*, Vol. 6, No. 4, 878-883, ISSN 2077-4613.

Yassa, N., Abdelmohsen, S., Mansour, Y. and Iscandar, M. (2016), "This Office makes me more Creative": Creative Class Workers' Experiences in Innovative Office Spaces, *BUE International Conference on Sustainable Vital Technologies in Engineering and Informatics (BUE ACE1 SVT2016)*.

Abdelmohsen, S. and Tarabishy, S. (2016), Optimized Design to Robotic Production: Integrating Multipoint Forming and Free Form Material Deposition in the Mass Customization of Double Curved Facades, in H. Abdalla, S. Abdelmohsen, A. Barracco, G. Retsin and M. Amer (eds.), proceedings of the *International Conference of Parallelism in Architecture, Environment and Computing (PACT)*, pp. 109-116.

Abdelmohsen, S., Massoud, P., Tarabishy, S. and Hassab, A. (2016), Rule-based versus Intuition-based Generative Design: An Inquiry into the Digital Chain Concept in Undergraduate Architectural Education, in H. Abdalla, S. Abdelmohsen, A. Barracco, G. Retsin and M. Amer (eds.): proceedings of the *International Conference of Parallelism in Architecture, Environment and Computing (PACT)*, pp. 269-281.

Abdelmohsen, S., Massoud, P. and Elshafei, A. (2016), Using Tensegrity and Folding to Generate Soft Responsive Architectural Skins, proceedings of the 34th *eCAADe International Conference*, Oulu, Finland, Vol. 1, pp. 529-536.

Bakir, R. and Abdelmohsen, S. (2016), Integrating Nanotechnology in the Design Process: An Ethnographic Study in Architectural Practice in Egypt, in P. Lloyd and E. Bohemia (Eds.): *Future-Focused Thinking: proceedings of the Design Research Society (DRS 2016) 50th International Conference*, Brighton, UK, Vol. 5, pp. 1971-1986.

Mansour, Y., Abdelmohsen, S., Mostafa, A., and Bakir, R. (2016), The Injection of Nanotechnology in the Architectural Design Process, in proceedings of the 8th *International Conference on Nanotechnology in Construction (NTC 2016)*, Sharm El-Sheikh, Egypt.

2015

Fathy, F., Mansour, Y., Sabry, H., Abdelmohsen, S. and Wagdy, A. (2015), Cellular Automata for Efficient Daylighting Performance: Optimized Façade Treatment, in proceedings *BS2015: 14th Conference of the International Building Performance Simulation Association (IBPSA)*, Hyderabad, India, pp. 2705-2711.

Abdelmohsen, S. and Massoud, P. (2015), Making Sense of those Batteries and Wires: Parametric Modeling between Emergence and Autonomy, in G. Celani, D.M. Sperling and J.M.S. Franco (Eds.): *The Next City: proceedings of the 16th CAAD Futures 2015 International Conference*, © Biblioteca Central Cesar Lattes 2015, Sao Paulo, Brazil, pp. 279-296.

Abdelmohsen, S. and Massoud, P. (2015), Integrating Responsive and Kinetic Systems in the Design Studio: A Pedagogical Framework, in B. Martens, G. Wurzer, T. Grasl, W.E. Lorenz, and R. Schaffranek, (Eds.): *Real Time: proceedings of the 33rd eCAADe Conference*, Volume 2, Vienna University of Technology, Vienna, Austria, pp. 71-80.

2014

Abdelmohsen, S. (2014), An Inquiry into Designing in Context using Generative Systems, *International Journal of Architectural Computing (IJAC)*, Vol. 12, No. 4, 477-494.

Abdelmohsen, S. (2014), A BIM-based Framework for Assessing Architectural Competition Entries, in E.M. Thompson (ed.), *Fusion*, proceedings of the 32nd eCAADe International Conference (eCAADe 2014), Department of Architecture and Built Environment, Newcastle upon Tyne, UK, Volume 2, pp. 473-483.

Abdelmohsen, S. (2014), A BIM-based Framework for Outdoor Circulation Rule Checking, in *Revista DeArquitectura*, Académico Departamento de Urbanismo, Facultad de Arquitectura y Urbanismo, Universidad de Chile, Chile, No. 26, pp. 20-28.

2013

Abdelmohsen, S. (2013), Reconfiguring Architectural Space using Generative Design and Digital Fabrication: A Project Based Course, in proceedings of XVII Congreso de la Sociedad Iberoamericana de Grafica Digital (SIGRADI 2013), Universidad Tecnica Federico Santa Maria, Valparaiso, Chile, pp. 391-395.

Hosny, S., Elkholy, G., Abdelmohsen, S. and Mazen, M. (2013), Enhancing BIM Workflow Using the Auto-Finish Macro (AFM), *Journal of Al Azhar University Engineering Sector (JAUES)*, Vol. 8, No. 26, 214-223.

2012

Lee, J.-K., Lee, J., Jeong, Y.-S., Sheward, H., Sanguinetti, P., Abdelmohsen, S. & Eastman, C. (2012), Development of Space Database for Automated Building Design Review Systems, *Automation in Construction*, Vol. 24, 203-212, <http://dx.doi.org/10.1016/j.autcon.2012.03.002>.

Abdelmohsen, S. (2012), Communication of Design Intent in BIM-Enabled Architectural Practice: An Ethnographically Informed Analysis, Lambert Academic Publishing (LAP) GmbH & Co. KG, Saarbrücken, Germany, ISBN: 978-3-8473-7859-4.

Sanguinetti, P., Abdelmohsen, S., Lee, J.M., Lee, J.K., Sheward, H. & Eastman, C. (2012), General System Architecture for BIM: An Integrated Approach for Design and Analysis, *Advanced Engineering Informatics*, Vol. 26, Issue 2, 317-333, <http://dx.doi.org/10.1016/j.aei.2011.12.001>.

Abdelmohsen, S. (2012), Genres of Communication Interfaces in BIM-Enabled Architectural Practice, in proceedings of the 6th International Conference of the Arab Society for Computer Aided Architectural Design (ASCAAD 2012), The Kingdom University, Manama, Bahrain, pp. 81-91.

2011

Abdelmohsen, S., Lee, J.-K. & Eastman, C. (2011), Automated Cost Analysis of Concept Design BIM Models, in P. Leclercq, A. Heylighen, and G. Martin (eds.), *Designing Together: CAAD Futures 2011*, PUL, pp. 403-418.

2009

Abdelmohsen, S. & El-Khouly, T. (2009), Representing Reflective Practice in a Remote Design Collaboration Process, in digital proceedings of the 3rd Conference of the International Association of Societies of Design Research (IASDR 2009), COEX, Seoul, Korea, pp. 1317 - 1326.

Abdelmohsen, S. & Do, E. (2009), Analyzing the Significance of Problem Solving Expertise and Computational Tool Proficiency in Design Ideation, in T. Tidafi and T. Dorta (eds.), *Joining Languages, Cultures and Visions: CAAD Futures 2009*, PUM, pp. 273 - 287.

2008

Eastman, C., Lee, J.-K., Sheward, H., Sanguinetti, P., Jeong, Y.-S., Lee, J. & Abdelmohsen, S. (2009), Automated Assessment of Early Concept Designs, in *Architectural Design*, Vol. 79 No. 2: 52-57, DOI: 10.1002/ad.851.

Abdelmohsen, S. & Do, E. (2008), Energy Puppet: An Ambient Awareness Interface for Home Energy Consumption, in digital proceedings of the 7th *International Workshop on Social Intelligence Design (SID 2008)*, School of Architecture, Universidad de Puerto Rico, San Juan, Puerto Rico.

Abdelmohsen, S. (2008), Building Information Modeling and Architectural Practice: On the Verge of a New Culture, in proceedings of the 1st *International Conference on Critical Digital*, Harvard University Graduate School of Design, Cambridge, MA, USA, pp. 85-89.

Abdelmohsen, S., Eastman, C. et al. (2008), Making the Water Cube, in *Architecture Week online*, Article excerpted from BIM Handbook by Chuck Eastman et al., Copyright © 2008, with permission of the publisher, John Wiley & Sons.

Abdelmohsen, S. (2008), Beijing National Aquatics Center, in C Eastman, P Teicholz, R Sacks and K Liston, *BIM Handbook: A Guide to Building Information Modeling for Owners, Managers, Designers, Engineers and Contractors*, Wiley, pp. 375 – 388.

2007

Abdelmohsen, S. & Do, E. (2007), Tracking Design Development through Decomposing Sketching Processes, in Proceedings of the *International Association of Societies of Design Research (IASDR 2007)*, Hong Kong Polytechnic University School of Design, Hong Kong.

Sanguinetti, P. & Abdelmohsen, S. (2007), On the Strategic Integration of Sketching and Parametric Modeling in Conceptual Design, in Proceedings of the 27th *Annual Conference of the Association for Computer Aided Design in Architecture (ACADIA 2007)*, Halifax, Nova Scotia, Canada, pp. 242-249.

Abdelmohsen, S. & Do, E. (2007), TangiCAD: Tangible Interface for Manipulating Architectural 3D Models, in proceedings of the 12th *International Conference on Computer Aided Architectural Design Research in Asia (CAADRIA 2007)*, Nanjing, China, pp. 29-36.

2004

Hosny, S. & Abdelmohsen, S. (2004), Integrating Intelligent Mixed Reality in Architectural Education: A Theoretical Model, in *Al Azhar University Engineering Journal*, Cairo, Egypt, Vol. 7 No. 3, pp. 557-568.

SCIENTIFIC REVIEWS

Number of reviewed articles: 102

Number of verified reviewed articles on Publons: 61

<https://publons.com/dashboard/records/review/>

Member, Scientific Committee, *Arab Society for Computer Aided Architectural Design (ASCAAD 2022)* 10th International Conference, Debbieh, Lebanon.

Reviewer, XXV Congreso de la Sociedad Iberoamericana de Grafica Digital (SIGraDi 2021), Ubiquitous Conference.

Reviewer, *Arab Society for Computer Aided Architectural Design (ASCAAD 2021)* 9th International Conference, Cairo, Egypt.

Reviewer, *PLOS ONE (Public Library of Science)* open access international journal (since 2020).

Reviewer, Congreso de la Sociedad Iberoamericana de Grafica Digital (SIGraDi 2020).

Member of Editorial Board, *Creative Sustainable Development*, Faculty of Architecture, Design & Built Environment, Beirut Arab University, Lebanon (since 2019).

Reviewer, *Archmet-IJAR: International Journal of Architectural Research* (since 2019).

Reviewer, *Education and Research in Computer Aided Architectural Design in Europe* (eCAADe/SiGraDi 2019) International Conference, Porto, Portugal.

Member of Editorial Board, *Architecture and Planning Journal* (APJ), Faculty of Architecture, Design & Built Environment, Beirut Arab University, Lebanon (since 2018).

Reviewer, *Journal of Engineering and Applied Science* (JEAS), Faculty of Engineering, Cairo University, Egypt (since 2018).

Reviewer, *International Conference for Sustainable Design of the Built Environment* (SDBE 2018), London, UK.

Reviewer, Promotion documents for Associate Professor, Faculty of Architecture - Design & Built Environment, Beirut Arab University, Beirut, Lebanon.

Reviewer, *Education and Research in Computer Aided Architectural Design in Europe* (eCAADe 2018) International Conference, Lodz, Poland.

Reviewer, *Qatar National Research Fund* (QNRF), since May 2016.

Reviewer and Guest Editor, *International Journal of Parallel, Emergent and Distributed Systems*, since December 2016.

Reviewer, *CAADence in Architecture* International Conference, Budapest University of Technology and Economics, Hungary, 2016.

Reviewer, *Education and Research in Computer Aided Architectural Design in Europe* (eCAADe 2016) International Conference, Oulu, Finland.

Reviewer, *The International Conference of the Association of Collegiate Schools of Architecture* (ACSA), 2016.

Member of Editorial Board, *Environmental Sciences and Sustainable Development* (ESSD) Journal, since January 2016.

Reviewer, *International Journal of Architectural Computing* (IJAC), since September 2015.

Guest Editor and Reviewer, *Parallelism in Architecture and Computing Techniques* (PACT) International Conference, University of East London (UEL), London, UK, since January 2015.

Reviewer, *Education and Research in Computer Aided Architectural Design in Europe* (eCAADe 2015) International Conference, Vienna, Austria.

Reviewer, *Computer Aided Architectural Design Futures* (CAAD Futures 2015) Conference, Sao Paulo, Brazil.

Reviewer, *Ain Shams Engineering Journal* (ASEJ), since July 2014.

Reviewer, *Education and Research in Computer Aided Architectural Design in Europe* (eCAADe 2014) International Conference, NewCastle, UK.

Reviewer, *Automation in Construction* (AUTCON) journal, since August 2013.

Reviewer, *Arab Society for Computer Aided Architectural Design* (ASCAAD 2013) Conference, Effat University, Jeddah, Kingdom of Saudi Arabia.

Reviewer, *Education and Research in Computer Aided Architectural Design in Europe* (eCAADe 2013) International Conference, TU Delft, Netherlands.

Reviewer, *Computer Aided Architectural Design Futures* (CAAD Futures 2013) International Conference, Shanghai, China.

Reviewer, *XVII Congreso de la Sociedad Iberoamericana de Grafica Digital* (SIGraDi 2013), Universidad Tecnica Federico Santa Maria, Valparaiso, Chile.

Reviewer, *Education and Research in Computer Aided Architectural Design in Europe* (eCAADe 2012) International Conference, Prague, Czech Republic.

Reviewer, *Association for Computer Aided Design in Architecture* (ACADIA 2011) Conference, Calgary/Banff, Canada.

Reviewer, *Education and Research in Computer Aided Architectural Design in Europe* (eCAADe 2011) International Conference, Ljubljana, Slovenia.

Reviewer, *Association for Computer Aided Design in Architecture* (ACADIA 2010) Conference, The Cooper Union, New York City, NY, USA.

Reviewer, *Education and Research in Computer Aided Architectural Design in Europe* (eCAADe 2010) International Conference, Zurich, Switzerland.

DESIGN REVIEWS

Member of Jury Panel, "Light upon Light" Student Lighting Design Competition, Egypt (2022).

External reviewer, Graduation Project, Architecture Engineering Program, Faculty of Engineering, Cairo University, Cairo, Egypt (2021).

External reviewer, Interdisciplinary Graduation Project (iGP): Smart Remote Neighborhood, Department of Architecture, Faculty of Engineering Ain Shams University, Cairo, Egypt (2020).

External reviewer, Graduation Project, Architecture Engineering Program, Faculty of Engineering and Materials Science, German University in Cairo (GUC), Cairo, Egypt (2019).

External reviewer, Graduation Project, Department of Architectural Engineering and Environmental Design, Arab Academy for Science, Technology and Maritime Transport, Cairo Sheraton Campus, Cairo, Egypt (2019).

External reviewer, Graduation Project, Department of Architectural Engineering and Environmental Design, Arab Academy for Science, Technology and Maritime Transport, Abu Qir Campus, Alexandria, Egypt (2019).

Chair of Jury Panel, "Egypt on Mars" International Competition, Egypt (2019).

External reviewer, Building Construction IV, Faculty of Architecture, Design and Built Environment, Beirut Arab University (BAU) (2017).

External reviewer, Graduation Project, Department of Architectural Engineering and Environmental Design, Arab Academy for Science, Technology and Maritime Transport, Alexandria Campus, Cairo, Egypt (2017).

External reviewer, ARCH 1511, ARCH 2512, ARCH 2551, ARCH 3553, ARCH 3554, ARCH 4555, ARCH 4557, ARCH 4561, ARCH 4801, ARCH 4980, Department of Architecture, the American University in Cairo (AUC), Egypt (2012-Present).

External reviewer, Design II and Design V studio, Department of Architectural Engineering and Environmental Design, Arab Academy for Science, Technology and Maritime Transport, Sheraton Campus, Cairo, Egypt (2016).

Jury member, UN-USUAL-IT Workshop and Competition, organized by NIIT Studio, Alexandria, Egypt (2015).

External reviewer, Design II and Design III studios, Department of Architectural Engineering and Environmental Design, Arab Academy for Science, Technology and Maritime Transport, Smart Village Campus, Cairo, Egypt (2014-2015).

Jury member, RobArch (01) Kinetic Architecture Workshop and Competition, organized by Algorithm and Algorithmic Visual Lab (AVL), Cairo, Egypt (2014).

Jury member, Green and Sustainable Multi-Use Building Project, University to Work (UTW) Initiative, Engineering Consultants Group (ECG), Egypt (2014).

Member of Jury Panel, "Fanoos Ramadan" Competition, Fablab Egypt (2012).

External reviewer, Common First Year (CFY) design studio, School of Architecture, Georgia Institute of Technology, Atlanta, GA, USA (2010-2011).

External reviewer, design studio project, School of Architecture, Design and Planning, University of Kansas, Online Review (2010).

RESEARCH PROJECTS AND GRANTS

June 2021 – July 2021

Robotic 3D Metal Printing Workshop (WAAM) for Architects

[Funded by the American University in Cairo: \$1,502]

Role: **Co-Principal Investigator (co-PI)**, Department of Architecture, The American University in Cairo, Cairo, Egypt

Scope: Organizing an interdisciplinary workshop between the Department of Architecture and the Department of Mechanical Engineering at the American University in Cairo (AUC) for robotic 3D metal printing for the DigitalFUTURES World 2021 InclusiveFUTURES Workshop (<https://www.digitalfutures.world/workshops/84.html>).

[AUC MENG Team: Hanadi Salem, Ahmed Elsokaty; AUC ARCH Team: Sherif Abdelmohsen, Omar Geneidy]

December 2020 – Present

Climate Resilience of Micro, Small & Medium Industrial Workplaces in Egypt: A future-fit approach to retrofit

[Funded by the British Council: \$46,800]

Role: **Team member**, Department of Architecture, The American University in Cairo, Cairo, Egypt

Scope: Developing the awareness, skills, and technical know-how to identify, assess, and mitigate energy and indoor environment-related challenges in Egyptian small and medium industrial workplaces (MSMs), in collaboration with University College London (UCL).

[AUC Team: Khaled Tarabieh, Sherif Goubran; UCL Team: Rokia Raslan]

December 2020 – Present

Activating an Inter-disciplinary Immersive Learning Space for 21st Century Engineering Students

[Funded by the American University in Cairo: EGP 224,600]

Role: **Co-Principal Investigator (co-PI)**, Department of Architecture, The American University in Cairo, Cairo, Egypt

Scope: A Teaching and Learning Enhancement Grant aimed at integrating virtual environments in the undergraduate curricula of MENG, ARCH, and ECNG curricula for 3 years.

[AUC MENG Team: Khalil El-Khodary; AUC ARCH Team: Sherif Abdelmohsen, Tamer El-Khouly, AUC ECNG Team: Karim Seddik]

February 2019 – October 2019

Measuring and Monitoring the Future ‘Greening’ of the Middle East

[Funded by the Arab-American Frontiers Fellowship, The National Academies of Sciences, Engineering and Medicine: \$3,400]

Role: **Co-Principal Investigator (co-PI)** and visiting researcher, Department of Architecture, the American University in Cairo, Cairo, Egypt

Host Institution: Gaia Energy Research Institute LLC, Washington, DC, USA

Scope: Developing a preliminary time-dependent energy and emissions database for Egypt’s current building stock and estimating the change in greenhouse gas and air pollution emissions with a ‘greening’ of Egypt’s current building stock.

Team: Whitney Colella (PI), Sherif Abdelmohsen (co-PI), Christine Wiedinmyer, Katherine Emma Knowland

December 2018 – Present

EVE: Educational Virtual Environment

[Funded by the American University in Cairo: \$450,000]

Role: **Team Member**, Department of Architecture, The American University in Cairo, Cairo, Egypt

Scope: Introducing collaborative virtual environments to the School of Sciences and Engineering undergraduate curriculum (Mechanical Engineering and Architectural Engineering programs as a pilot project for 3 years).

[AUC MENG Team: Lotfi Gaafar, Khalil El-Khodary; AUC ARCH Team: Sherif Abdelmohsen, Tamer El-Khouly]

August 2017 – July 2019

Sponsored Research/Design Studio Program

[Funded by the Dr. Ezz Eldin Fahmy Fund: \$30,850]

Role: **Principal Investigator (PI)**, Department of Architecture, The American University in Cairo, Cairo, Egypt

Scope: Promoting new trends in architecture and exploring boundaries of architectural research, design and innovation through a sponsored research/design studio program.

[AUC Team: Sherif Abdelmohsen (PI), Basil Kamel]

July 2017 – June 2018

Integrating Robotic Material Deposition and Multipoint Forming in the Mass Customization of Double Curved Facades

[Funded by the American University in Cairo: \$23,360]

Role: **Principal Investigator (PI)**, Department of Architecture, The American University in Cairo, Cairo, Egypt

Scope: Developing an optimized design-to-robotic production process for the mass customization of double curved façade panels, through an interdisciplinary collaboration between the Department of Architecture and the Department of Mechanical Engineering at The American University in Cairo.

[AUC Team: Sherif Abdelmohsen (PI), Maki Habib, Basil Kamel]

February 2017 – February 2019

Soft Adaptive Building Skins for Energy Efficient Architecture

[Funded by the Bartlett Family Fund: \$50,000]

Role: **Co-Principal Investigator (co-PI)**, Department of Architecture, American University in Cairo, Egypt

Scope: Exploring material and structural behavior of soft adaptive skins based on the hygroscopic properties of laminated timber.

[Princeton Team: Sigrid Adriaenssens (PI); AUC Team: Sherif Abdelmohsen (co-PI), Passaint Massoud, Rana Bahaa, Aly Magdy, Tasbeh Mokbel; Roma Tre Team: Stefano Gabriele, Luciano Teresi, Luigi Olivieri]

August 2016 – Present

Responsive Brick Walls

[Not Funded, Conducted at The American University in Cairo]

Role: Research Investigator, Department of Architecture, The American University in Cairo, Cairo, Egypt

Scope: Developing thermally responsive walls through parametric brick configurations.

[AUC Team: Khaled Tarabieh, Sherif Abdelmohsen, Yomna El-Ghazi, Rana Eldabaa, Asmaa Gamal, Mariam Amer]

September 2015 – October 2016

Intelligent Facility Management (iFM)

[Funded by UNii Engineering Consultancy]

Role: **R&D Developer and Team Leader**, UNii Cairo, Cairo, Egypt

Scope: Developing automated systems for space layout planning, and facility, asset and property management using heuristic methods.

[UNii R&D Core Team: Sherif Abdelmohsen, Ayman Assem, Mohammed Ezzeldin, Ahmed Ibrahim]

July 2015 – June 2016

Soft Responsive Architectural Skins: Integrating Parametric Modeling, Physical Computing and Lightweight Structures to design Kinetic Façade Systems

[Funded by the American University in Cairo: \$6600]

Role: **Principal Investigator (PI)**, Department of Architecture, AUC, Cairo, Egypt

Scope: Developing low-cost and energy-saving kinetic façade skins using soft responsive systems.

[AUC Team: Sherif Abdelmohsen (PI), Passaint Massoud, Ahmed Elshafei]

January 2013 – September 2014

Planning and Project Management of E-JUST New Campus

[Funded by the Egyptian Ministry of Higher Education]

Role: **Research Manager** and member of FEDA CORELAB team, Faculty of Engineering, Ain Shams University, Cairo, Egypt

Scope: Developing interface for automated assessment, planning and management of E-JUST new campus project using BIM/GIS platform.

[FEDA CORELAB Team: Yasser Mansour (Head), Ashraf Nessim, Sherif Abdelmohsen, Hazem ElDaly, Ayman Assem, Hossam Massoud, Manar Mohammad, Mohammad Mekawy, Fatma Fathy, Aya Elsisy]

June 2007 – September 2010

GSA Project: BIM Enabled Design Guide Automation

[Funded by the United States General Services Administration (GSA)]

Role: **Team Member**, AEC Integration Laboratory, College of Architecture, Georgia Institute of Technology, Atlanta, GA, USA

Scope: Developing interface for cost estimation from preliminary concept design BIM models for U.S. courthouse buildings using Solibri Model Checker (SMC) and Parametric Cost Engineering System (PACES).

[Georgia Tech Team: Charles Eastman (PI), Yeon-Suk Jeong, Jaemin Lee, Jin-Kook Lee, Paola Sanguinetti, Hugo Sheward, Sherif Abdelmohsen]

THESIS SUPERVISION

Masters Students

- 1- Fatma Fathy, Department of Architecture, Faculty of Engineering, Ain Shams University (Thesis Defense Date: 01/2016)
Thesis: Utilizing Genetic Algorithms and Parametric Design for Efficient Daylighting Performance in Educational Spaces
- 2- Engy Habib, Department of Architecture, Faculty of Engineering, Ain Shams University (Thesis Defense Date: 03/2014)
Thesis: Towards Biogenesis in Architecture
- 3- Mohamed Mazen Mohamed, Department of Architecture, Faculty of Engineering, Ain Shams University (Thesis Defense Date: 09/2013)
Thesis: Using BIM Technology in Developing the Building Process
- 4- Noran El-Abd, Department of Architecture, Faculty of Engineering, Ain Shams University (Thesis Defense Date: 09/2016)
Thesis: Enhancing the Implementation of BIM in the Egyptian AEC Industry
- 5- Ahmed Khalid, Department of Architecture, Faculty of Engineering, Cairo University (Thesis Defense Date: 05/2018)
Thesis: Enhancing the Façade Performance of Existing Buildings through the Integration between Smart Materials and Parametric Geometries in Architecture
- 6- Nourhan Bassam, Department of Architecture, Faculty of Engineering, Ain Shams University (Thesis Defense Date: 06/2018)
Thesis: A Framework for Enhancing User Experience in Existing Exhibit Spaces using Evolutionary Algorithms
- 7- Ibrahim Fateen, Department of Architecture, Faculty of Engineering, Ain Shams University (Thesis Defense Date: 04/2019)
Thesis: Healthcare Facility Design Utilizing Digital Simulation and Evidence Based Method: A Study of Different Topologies of Emergency Departments
- 8- Shereen Alsharkawy, Department of Architecture, Faculty of Engineering, Ain Shams University (Thesis Defense Date: 09/2019)
Thesis: Using Mobile Augmented Reality Techniques in Architectural Education
- 9- Aly Ibrahim, Faculty of Fine Arts, Alexandria University (Thesis Defense Date: 04/2020)
Thesis: Using Programmable Materials Techniques to Improve the Building Skin Efficiency
- 10- Nada El Dohol, Department of Architecture, Faculty of Engineering, Ain Shams University (Thesis Defense Date: 05/2020)
Thesis: Biophilic Design as an Approach for Enhancing the Quality of the Views Out and Indoor Daylighting in Intensive Care Units
- 11- Meral Gaber, Department of Architecture, Faculty of Engineering, Ain Shams University (Thesis Defense Date: 11/2020)
Thesis: Integrating Biomimetic Design Approaches in Architectural Education
- 12- Muhammad Nagy, Department of Architecture, Faculty of Engineering, Ain Shams University (Thesis Defense Date: 11/2020)
Thesis: Multi-Objective Optimization Methods as a Decision Making Strategy
- 13- Mirna Raafat, Department of Architecture, School of Sciences and Engineering, American University in Cairo (AUC)
Thesis: Workplaces Disrupted: Exploring the Sense of Belonging in Egyptian Office Spaces Post-COVID

14- Ayman Adel, Department of Architecture, Faculty of Engineering, Ain Shams University

Thesis: Impact of Interior Wall Configurations on Daylighting Performance using Shape Grammars

15- Yasser Salama, Department of Architecture, Faculty of Engineering, Ain Shams University

Thesis: Influence of Evidence-based Design on Hospitals' Operational Efficiency: Case Study – Space Design of the Intensive Care Unit

Doctoral Students

1- Ramy Bakir, Department of Architecture, Faculty of Engineering, Ain Shams University (Thesis Defense Date: 04/2016)

Thesis: The Impact of Nanotechnology on the Environmental Design Process in Egypt

2- Ahmed Eliraqi, Department of Architecture, Faculty of Engineering, Ain Shams University (Thesis Defense Date: 04/2017)

Thesis: The Impact of Parametric Modeling on Creative Outcomes in Design Studio

3- Nancy Maged Yassa, Department of Architecture, Faculty of Engineering, Ain Shams University (Thesis Defense Date: 06/2017)

Thesis: Analysis of Experiences of Creative Class Workers in the Innovative Workplace

4- Deena El-Mahdy, Department of Architecture, Faculty of Engineering, Cairo University (Thesis Defense Date: 05/2018)

Thesis: Salt as a Sustainable Building Material using Additive Manufacturing Methods

5- Rana El-Dabaa, Department of Architecture, Faculty of Engineering, Ain Shams University (Thesis Defense Date: 07/2020)

Thesis: Programming the Motion of Building Façade Materials by Controlling their Latent Passive Response

6- Islam Salem, Department of Architecture, Faculty of Engineering, Ain Shams University

Thesis: Tailoring of Free-Form External Envelopes in Architecture: Design to Production of Mass Customized Double Curved Façade Units Using Multipoint Forming Technology with Robotic Material Deposition

THESIS EXAMINATION

1- Haneen Almohammad, Department of Architecture, Faculty of Engineering, Cairo University (Thesis Defense Date: 01/2017)

MSc Thesis: Biomimetic Architectural Applications in Rebuilding Post-Conflict Communities: A New Age of Sustainability

2- Hanan Hafiz, Department of Architecture, Faculty of Engineering, Cairo University (Thesis Defense Date: 06/2017)

MSc Thesis: Digital Fabrication Integration in Architectural Education: Student Experience with the Design and Fabrication Process

3- Mohamed Elsayed, Department of Architectural Engineering and Environmental Design, College of Engineering and Technology, Arab Academy for Science, Technology and Maritime Transport (Thesis Defense Date: 08/2017)

MSc Thesis: Architectural Space Planning using Interactive Parametric Modeling: Application on the Egyptian National Housing Project

4- Ahmed Hassab, Department of Architecture, Faculty of Engineering, Cairo University (Thesis Defense Date: 05/2018)

MSc Thesis: Digital Fabrication Technologies and Techniques in Architecture

5- Montasser Hamid, Department of Architectural Engineering and Environmental Design, College of Engineering and Technology, Arab Academy for Science, Technology and Maritime Transport (Thesis Defense Date: 05/2018)
MSc Thesis: Semantics of Building Information Modeling (BIM) for Digital Fabrication: A Knowledge-based Approach

6- Ghada Mourad, Department of Architecture, Faculty of Engineering, Cairo University (Comprehensive Exam Date: 01/2019)
PhD Proposal Title: Inclusive Governance: Harnessing Digitally Networked Communities

7- Marwa Fahmy, Department of Architecture, Helwan University (Thesis Defense Date: 09/2019)
PhD Thesis: Applying Parametric Urban Design of Dynamic Neighborhoods

8- Maha El Gewely, Department of Architecture, German University in Cairo (GUC) (Thesis Defense Date: 08/2020)
PhD Thesis: BIM-based Immersive VR Environment for Construction Detailing Education (BIM – VRConDet)

9- Sara Fouad, Department of Architecture, Helwan University (Thesis Defense Date: 10/2021)
PhD Thesis: A Methodology for the Evolution of Modern Islamic Architecture using Parametric Algorithms

10- Aya El-Bahrawy, Department of Architecture, Helwan University (Thesis Defense Date: 10/2021)
PhD Thesis: Methodological Application of Mathematics as a Mean of Promoting Efficiency of Architecture Performance

11- Yomna El-Taweel, Department of Psychology, The American University in Cairo (AUC) (Thesis Defense Date: 12/2021)
MA Thesis: Older Adults Home-Based Care in Cairo: Asset Mapping Towards Community Development

12- Sobhy Mohammed, Department of Architecture, Helwan University (Thesis Defense Date: 2/2022)
PhD Thesis: Generative Design as a Methodology to Develop Creative Thinking Skills for the Architectural Design Process

13- Hala Hossam Eldin Wagih, Department of Architectural Engineering and Environmental Design, College of Engineering and Technology, Arab Academy for Science, Technology and Maritime Transport (Thesis Defense Date: 3/2022)
MSc Thesis: Towards a Framework for Tacit Knowledge Communication in Architectural Computational Design

PUBLIC TALKS

Building Information Modeling, Invited talk at the Department of Architecture, Ain Shams University, Egypt, Online talk, December 2021.

Building Information Modeling: between the Artifact-centered and Human-centered, Invited talk at the Arab Academy for Science, Technology and Maritime Transport (Smart Village Campus), Online talk, November 2021.

The Emerging Role of Computational Design in the MENA Region: Opportunities and Challenges, AIA Middle East Webinar Series, July 2021.

[<http://www.aiamiddleeast.org/aia-events/2021/7/10/the-emerging-role-of-computational-design-in-the-mena-region-opportunities-and-challenges>]

[<https://www.youtube.com/watch?v=3a03o5INS5c>]

Natural Computing as a Driver for Innovative Architectural Assemblies, Invited public talk at the Faculty of Architecture, Istanbul Technical University (ITU), Istanbul, Turkey (Online talk), May 2021.
[<https://mbl.itu.edu.tr/seminar-sherif-abdelmohsen/>]

The Architecture of Natural Computing: Bio-Inspired Algorithms as a Generator of Innovative Architectural Assemblies, ARCH-Verse Talk Series, American University in Cairo, February 2021. [<https://fb.watch/b6zJK9YzhW/>]

Architecture of the Post-Digital: Between Emergence and Autonomy, Nile University (NU), Cairo, Egypt, "You Know Nothing About Architecture", November 2019.

Architecture and Programmable Matter, Architectural Systems Engineering Department, Faculty of Engineering, October University for Modern Sciences and Arts (MSA), Cairo, Egypt, May 2019.

Performative and Generative Façade Investigations (Khaled Tarabieh and Sherif Abdelmohsen), ZAK - World of Façades Egypt, "Immersing Local Architectural Influence with Modernism in Façade Designs", Nile Ritz-Carlton, Cairo, Egypt, April 2019.

Architecture and the Power of the Invisible Digital, "Visions in the Future of Egyptian Architecture" Plenary Session, ARCHCAIRO 8th International Conference (Building the Future Now: Rights to Better Living, Architecture and Contexts), Department of Architecture, Faculty of Engineering, Cairo University, Cairo, Egypt, April 2019.

Programmable Skins, "Hygroscapes: Innovative Shape-Shifting Façades" International Workshop, University Roma Tre, Rome, Italy, January 2019.

Programmable Skins: A Hygromorphic Approach for Low-Cost Adaptive Building Façades, Keynote speech, *Next Generation Buildings and Infrastructure* panel session, 6th Arab-American Frontiers of Science, Engineering, and Medicine Symposium, Kuwait City, Kuwait, November 2018.

BIMMUNITY Smart Building Management Solution, Open Mic talk, GITEX Future Stars Dubai, Dubai, UAE, October 2018.

Computational Design: Perpetual or Ephemeral? Invited public talk at the Faculty of Architecture, Istanbul Technical University (ITU), Istanbul, Turkey, April 2018.

TimberMorphs: Designing with Shape Shifting Surfaces, in CEE 546: Form Finding of Structural Surfaces, Department of Civil and Environmental Engineering, Princeton University, Princeton, NJ, USA, April 2017.

Programmable(s) Matter: Designing with Low-cost Shape Changing Materials, in *MakerFaire Cairo (MFC '17)*, Smart Village, Cairo, Egypt, April 2017 (<http://makerfairecairo.com/speakers/sherif-abdelmohsen/>)

Computational Design: Perpetual or Ephemeral? in *Beyond Form: Emerging Trends in Computational Design*, public talk at the Supreme Council of Culture (SCC), Architectural Committee, Cairo, Egypt, December 2016.

GreenBIM Thinking: Strategies for Sustainable Design using Building Information Modeling, in *BIM and Environmental Simulation Mini Symposium*, Lincoln School of Architecture International Summer School, University of Lincoln, Brayford Pool, Lincoln, UK, July 2012.

BIM Expertise and Education (Paola Sanguinetti and Sherif Abdelmohsen), Panel Session (BIM and Beginning Education), in *We Have Never Been Pre-*

Disciplinary (24th National Conference on the Beginning Design Student), College of Architecture, Georgia Institute of Technology, Atlanta, GA, USA, March 2008

PANEL SESSIONS

Architecture in the Age of Artificial Intelligence, DigitalFUTURES (in Arabic) Online Talk by Neil Leach, hosted by the Department of Architecture at the American University in Cairo (AUC), February 2022.

(<https://www.youtube.com/watch?v=UJMAekYkQnU>)

Session Moderator

Computational Design through the Eyes of Arab Expats, DigitalFUTURES (in Arabic) Online Session, December 2021.

(<https://www.youtube.com/watch?v=PqkdQFaLVk0>)

Session Moderator

SIGraDi 2021 International Conference Parallel Session, Ubiquitous Conference, Georgia Tech, Atlanta, GA, USA.

Parallel Session Moderator

Smart City Management using BIM and GIS, Panel session (Session 10: AI and BIM), *Eastman Symposium*, Georgia Tech Digital Building Lab (DBL), Atlanta, GA, USA (virtual session), May 2021.

(<https://dbi.gatech.edu/eastman-symposium/sessions/ai-and-bim>)

Speaker and member of panel session

New Spaces for a New Era, Panel session, *Techne Summit Alexandria 2020*, Bibliotheca Alexandrina, Alexandria, Egypt, November 2020.

(<https://technesummitalexandria2020.sched.com/event/flmc/new-spaces-for-a-new-era>)

Speaker and member of panel session

Technology in Facility Management, Panel session, *Techne Summit Alexandria 2020*, Bibliotheca Alexandrina, Alexandria, Egypt, November 2020.

(<https://technesummitalexandria2020.sched.com/event/fOZa/technology-in-facility-management>)

Speaker and member of panel session

Educational Virtual Environment (EVE): Virtual Reality as a Tool for Experiential Learning, community roundtable session (Bringing Life to Learning: Experiential Learning at AUC), *Center for Learning and Teaching (CLT) Symposium*, American University in Cairo, March 2020.

Presenter

Architecture in the Age of the 4th Industrial Revolution, Roundtable session, 37th eCAADe/23rd SIGraDi International Conference, Teatro do Campo Alegre, Faculty of Architecture, University of Porto, Porto, Portugal, September 2019.

Member of roundtable session

ARC|FAB, Panel session, *San3aHub, Fablab Cairo*, Egypt, June 2018.

Session Moderator

ARC|FAB: Revisiting Architecture in the Age of Digital Fabrication, Panel session, *MakerFaire Cairo (MFC '18)*, Smart Village, Cairo, Egypt, March 2018.

Session Moderator

Building Dynamics: Exploring Architecture of Change, Public Talk & Panel Discussion by Prof. Branko Kolarevic, hosted by the American University in Cairo (AUC), February 2018.

Session Moderator

Role of ICT in Urban Planning and Urban Service Delivery, Special UNDP session, Egypt Urban Forum (EUF), Cairo, Egypt, June 2015.

Session Moderator

eCAADe 2015 International Conference Parallel Session, Vienna, Austria.

Parallel Session Moderator

SIGraDi 2013 International Conference Parallel Session, Universidad Tecnica Federico Santa Maria, Valparaiso, Chile.

Parallel Session Moderator

EXHIBITIONS

BIMMUNITY Smart Building Management Solution, in *2018 Annual Digital Building Lab Symposium*, Tech Showcase and Mixer, The Historic Academy of Medicine, Georgia Institute of Technology, Atlanta, GA, USA, October 2018.

TimberMorphs: Low-cost Soft Adaptive Skins, in *MakerFaire Cairo (MFC '17)*, Smart Village, Cairo, Egypt, April 2017.

Creased Casts, in *Synthetic 2015 Exhibition* on Robotics and Additive Manufacturing, Le Mans, France, November 2015.

Responsive and Kinetic Architecture, in *Synthetic 2015 Exhibition* on Robotics and Additive Manufacturing, Le Mans, France, November 2015.

Flora Electronica Installation

(Xmedia Group at Georgia Tech: Ali Mazalek and graduate students

Remote Collaborators at NYU - Ken Perlin and graduate students)

Presented at *Listening Machines 2007*, Eye Drum, Atlanta, GA, USA, April 2007

TangiCAD: Tangible Interface for Manipulating Architectural 3D Models

Open House, Computational Design Laboratory (CoDeLAB), School of Architecture, Carnegie Mellon University, Pittsburgh, PA, USA, March 2006

POSTER**PRESENTATIONS****The Generalized Model of Expertise: Defining Strategies in Building Information Modeling** (Paola Sanguinetti and Sherif Abdelmohsen)

- The Georgia Tech Research and Innovation Conference (gtRIC 2010), Georgia Institute of Technology, Atlanta, GA, February 8, 2010.

- The *Third International Conference on Design Computing and Cognition (DCC'08)*, Georgia Institute of Technology, Atlanta, GA, June 23-25, 2008.

Energy Puppet: Providing Ambient Awareness for Home Energy Consumption (Sherif Abdelmohsen and Ellen Yi-Luen Do)

- Sustainability Poster Session, Institute for Sustainable Technology and Development, Atlanta, GA, USA, April 18, 2007.

- Graduate Student Symposium (GSS2007), Georgia Institute of Technology, Atlanta, GA, USA, March 9, 2007.

- Graphics, Visualization and Usability (GVU) Spring Research Showcase, TSRB, Georgia Institute of Technology, Atlanta, GA, USA, March 1, 2007.

WORKSHOPS**2nd World CAAD PhD Workshop (2021)**

Co-Organizer on behalf of the Arab Society for Computer Aided Architectural Design (ASCAAD), 3-day online workshop co-organized by CAAD sister organizations (ACADIA, ASCAAD, CAADRIA, eCAADe, SIGraDi), Faculty of Architecture and Urbanism, Federal University of Juiz de Fora (UFJF), Brazil, December 6-8, 2021 (<https://www.worldcaadphdworkshop2021.sigradi.org/>)

Robotic 3D Metal Printing (WAAM)

Co-organizer and Instructor on behalf of the Department of Architecture, American University in Cairo (AUC), interdisciplinary online workshop co-organized with the Mechanical Engineering Department, AUC,

DigitalFUTURES (InclusiveFUTURES Workshops), June 21 - July 3, 2021 (<https://www.digitalfutures.world/workshops/84.html>)

CRESMI: Climate Resilience of Micro, Small and Medium Industrial Workplaces in Egypt: A future-fit approach to retrofit

Facilitator on behalf of the Department of Architecture, American University in Cairo (AUC), 3-day online workshop co-organized with UCL Institute for Environmental Design and Engineering, June 1-3, 2021 (<http://cresmi.org/>)

1st World CAAD PhD Workshop (2020)

Co-Organizer and moderator on behalf of the Arab Society for Computer Aided Architectural Design (ASCAAD), 3-day online workshop co-organized by CAAD sister organizations (ACADIA, ASCAAD, CAADRIA, eCAADe, SIGraDi), Istanbul Technical University (ITU), Istanbul, Turkey, December 7-9, 2020 (<https://worldcadphdworkshops.itu.edu.tr/>)

Hygroscapes: Innovative Shape Shifting Facades (2019)

Co-Organizer and Instructor, 1-week workshop on scalable programmable soft adaptive building skins using hygroscopic properties of wood, Department of Architecture, University Roma Tre, Rome, Italy

AUC-HSA Summer School (Summer 2017)

Co-Organizer, 1-week summer school on "Robotic Transformations in Architecture" in partnership with Prof. Christian Bauriedel, Augsburg School of Applied Sciences (Hochschule Augsburg), Germany

Hygroscapes: Innovative Shape Shifting Facades (2017)

Co-Organizer and Instructor, 1-week workshop on soft adaptive building skins using hygroscopic properties of laminated timber, Department of Architecture, American University in Cairo (AUC), Cairo, Egypt

Shape Shifting Surfaces (2017)

Co-Organizer and Instructor, 2-week workshop on soft adaptive building skins using hygroscopic properties of laminated timber, Department of Civil and Environmental Engineering, Princeton University, Princeton, NJ, USA.

AUC-HSA Summer School (Summer 2015 / Summer 2016)

Organizer, 2-week summer school on "Parametric Design and Innovative Building Facades" in partnership with the Augsburg School of Applied Sciences (Hochschule Augsburg), Technical University of Munich (TUM), University of Stuttgart, and Technical University of Berlin, Germany

SANDWORKS Workshop (2015)

Host/organizer, 5-day workshop at AUC in partnership with Ecole Nationale Supérieure d'Architecture Paris-Malaquais/Faculty of Fine Arts Alexandria

Ain Shams University Neighborhood Initiative Workshop - Phase I (2013)

Co-organizer, 1-day workshop in partnership with Megawra, hosted by Department of Architecture, Ain Shams University, funded by IIE

XOTech EMotion Workshop (2013)

Co-organizer and main tutor, performative skin and digital fabrication workshop, in partnership with MAGLAB Syria, hosted by Department of Architecture, Ain Shams University, Feb 2-9, 2013

CFB Inter-University Workshop (2012)

Co-organizer and moderator, 1-day workshop in partnership with Megawra, Cairo From Below, hosted by Department of Architecture, Ain Shams University, funded by IIE-Ford foundation

KRAFT 2012 (Kinematic and Responsive Architecture and Fabrication Technology) workshop and competition

Workshop organizer, in partnership with FabLab Egypt and Megawra

Union of Mediterranean Architects (UMAR) Workshop, Cairo, Egypt (1999)

Workshop Participation: Replanning master plan & villas of Dreamland Project, 6th October City

Design Computing Workshop, Georgia Institute of Technology, Atlanta, GA, USA (2006)

Workshop Participation

AWARDS/RECOGNITION

Nomination, InclusiveFUTURES 2021 Award

Shortlisted by DigitalFUTURES.World for the InclusiveFUTURES 2021 Award. Nominees for this category included prominent figures (Marina Tabassum, Rasim Badran, Neri Oxman, Kunle Adeyemi, Farshid Moussavi), July 2021

Honors Diploma, Knowledge Application and Notion for Society (KANS) Scientific Competition, Mustafa Science and Technology Foundation (MSTF), Tehran, Iran

*Recipient of Honors Diploma (1 of 5 recipients out of 20 awarded recipients, total of 1045 participants from 15 countries), November 2018
<https://kans.mustafaprize.org/page/en/news#41>*

Certificate of Appreciation, ECG Academy, Cairo, Egypt

For effective role in University to Work (UTW) Program, (Class 2013/2014), November 2014

Young Active Researcher Award, Faculty of Engineering, Ain Shams University, Cairo, Egypt

For outstanding research activity and effort (AY 2012/2013), June 2013

Certificate of Appreciation and Attendance, University of Lincoln, UK

For attending and actively participating in the University of Lincoln Summer School in Architecture: Conservation and Sustainability, July 2012

Faculty Award of Merit for Best Doctoral Presentation

Recipient of award, School of Architecture, Georgia Institute of Technology, April 2012

Member Invitation, Golden Key International Honor Society

Invited Member from Georgia Institute of Technology, December 2009

ARCC/ KING Student Medal for Excellence in Architectural + Environmental Design Research (<http://www.arccweb.org/kingawd.htm>)

Georgia Institute of Technology Recipient for AY 2008/2009, April 2009

Egyptian Cultural and Educational Bureau (ECEB) Program Scholarship

Recipient of GM scholarship to pursue PhD degree at Georgia Tech, May 2006

Certificate of Achievement, Department of Architecture, Faculty of Engineering, Ain Shams University

April 2005

The Binational Fulbright Commission in Egypt (BFCE) Egyptian Student Program Grant

Recipient of non-degree grant to conduct research at Carnegie Mellon University February 2005

Ain Shams University Annual Science Fair Honorary Award

Recipient of AY 2003/2004 distinguished graduate students award, 2004

MEDIA

Arch Talk: On Parametric Design Curriculum and Managing a Digital Fabrication Lab Online

Online interview with Sara Kolata (Arch Talk: Tank#24), November 2020

<https://www.youtube.com/watch?v=nmMyGFYN278&t=48s>

Business Monthly, Journal of the American Chamber of Commerce in Egypt
 Featured interview in "3D Printing Establishes Foothold in Egyptian Manufacturing",
 Business Monthly, p. 14-18, July 2019
http://www.amcham-egypt.org/BM_Issues/July2019Issue.pdf

Archipreneur Magazine

Featured interview and article titled "Beyond BIM: Architects Create a Wider Building Management Tool", in Archipreneur Magazine, Report 02, p. 78 – 90, March 2019
https://archipreneur.com/report/?utm_source=blog&utm_medium=link&utm_campaign=launch02

Archipreneur Magazine

Online article titled "The Future of Managing the Building Community", Dec 2018
<https://archipreneur.com/bimmunity-future-building-community/>

Georgia Tech Digital Building Lab Channel

Online video featuring participation in the DBL 2018 symposium showcase, Nov 2018
<https://vimeo.com/channels/gtdbl/305639874>

GITEX Future Stars Dubai

Online link to participation in GITEX Future Stars Dubai, Oct 2018
<https://www.gitexfuturestars.com/exhibitor-products/bimmunity>

AUC Today

Online article titled "Building Skins, Tearing Boundaries", Fall 2017
<https://auctoday.com/2018/01/30/building-skins-tearing-boundaries/>

AUC News

Online article titled "Designing with a Purpose: Architecture Students Propose Acoustic Solutions for AUC Library", Dec 2017
<https://www.aucegypt.edu/news/stories/designing-purpose-architecture-students-propose-acoustic-solutions-auc-library>

Hochschule Augsburg

Online Article at the Faculty of Architecture and Construction, the University of Applied Sciences at Augsburg (Hochschule Augsburg), Aug 2017
<https://www.hs-augsburg.de/Architektur-und-Bauwesen/StudentInnen-aus-Kairo-starten-Robotikprojekt.html>

Princeton University School of Architecture

Online article describing the research collaboration between AUC and Princeton through the Bartlett Family Fund grant, Jan 2017
<https://soa.princeton.edu/content/international-research-collaboration%3A-soft-adaptive-building-skins-energy-efficient-architecture>

CNN International

Interview at CNN Atlanta Headquarters, "Egypt in Crisis", Jan 2011
<http://edition.cnn.com/TRANSCRIPTS/1101/29/se.02.html>
<https://www.youtube.com/watch?reload=9&v=GcfvIidjkU>

PROFESSIONAL WORK

New Salheya University Campus (2019 – 2021)

Description: New university campus (111,342 m² plot area, including faculty of dentistry, faculty of pharmaceuticals, and faculty of physiotherapy, faculty of science, faculty of engineering, faculty of business)

Client: Private owner

Location: Salheya, Sharkeya Governorate, Egypt

Scope: Design development and construction documents for new university campus buildings

Design Team: UDAAR Studio

Qiba Square Development (2019)

Description: Tourist attraction and entertainment square
Client: Madinah Region Development Authority (MDA)
Location: Qiba Square, Al-Madinah Al-Munawwarah, Saudi Arabia
Scope: Concept and schematic design proposal for square development
Design Team: UDAAR Studio

CAPSTONE Cliff Residence (2018 – 2019)

Description: Residential compound (81,840 m² plot area)
Client: Paragon Developments
Location: Sheikh Zayed City, Cairo, Egypt
Scope: Masterplan, concept design and schematic design of residential units and landscape design
Design Team: UDAAR Studio

“Architecture of Al-Masjid Al-Nabawi” Book Project (2018 – 2019)

Description: Documentation of the architecture of Al-Masjid Al-Nabawi and its evolution since the era of the Prophet (622 AD) till Ottoman extension (1860 AD)
Client: Al-Madinah Al-Munawwarah Research and Studies Center
Location: Al-Madinah Al-Munawwarah, Saudi Arabia
Scope: 3D Modeling and graphical illustrations and documentation of the architecture of Al-Masjid Al-Nabawi
Design Team: UDAAR Studio

‘City of the Sun’ Gates & Streetscape (2018 – 2019)

Description: Design of ‘City of the Sun’ compound gates, including landscape and street furniture of main street between gates (total of 1,500m)
Client: ARABIA Holding
Location: 6th of October City, Giza, Egypt
Scope: Concept/schematic design, design development of gates and landscape
Design Team: UDAAR Studio

ENTRADA Commercial Strip (2018)

Description: Commercial strip building (10,000 m² footprint, BUA 31,000 m²)
Client: SOROUH Developments
Location: Cairo Administrative Capital, Egypt
Scope: Proposal for architectural design concept
Design Team: UDAAR Studio

Campeiro Sheikh Zayed (2018)

Description: Residential compound, clubhouse and horse stables (40,125 m² plot area, total footprint 6,018 m², total BUA 20,827 m²)
Client: Private Owner
Location: Sheikh Zayed City, Cairo
Scope: Masterplan, concept and schematic design proposal for residential units
Design Team: UDAAR Studio

Breeze Compound (2017 – 2018)

Description: Residential compound (302,400 m² plot area)
Client: SOROUH Developments
Location: Cairo Administrative Capital, Egypt
Scope: Masterplan, landscape and architectural design proposal
Design Team: UDAAR Studio

King Marriott University Campus (2017 – 2018)

Description: New university campus (42,503 m² plot area, including Faculty of Dentistry, faculty of pharmaceuticals, and faculty of physiotherapy)
Client: King Marriott University (Dr. Youssef Darwish)

Location: King Marriott, Burj El-Arab, off Cairo-Alexandria Desert Road, Egypt
Scope: Masterplan and schematic design of new university campus buildings including 3 faculties and administration building
Design Team: UDAAR Studio

‘City of the Sun’ Sales Center and Headquarters (2017 – 2018)

Description: Sales Center and Headquarters office building (3,000 m² total footprint area + 6-story panoramic observatory tower)
Client: ARABIA Holding
Location: 6th of October City, Giza, Egypt
Scope: Concept design proposal
Design Team: UDAAR Studio

‘City of the Sun’ Residential Apartments (2017)

Description: 26 residential apartment plots (average footprint 773 m²)
Client: ARABIA Holding
Location: 6th of October City, Giza, Egypt
Scope: Concept design proposal of residential apartments (5 prototypes)
Design Team: Consortium (UDAAR Studio, Beyond Vision, Centroid, Spaces Designs, Design & Build Studio)

Government Institutions Pension Fund (GIPF) Offices (2017)

Description: Office building for Namibian government (3,174 m² plot area)
Client: Government of Namibia (joint-venture with local office)
Location: Ondangwa, Oshana Region, Namibia
Scope: Concept design proposal – limited competition (2nd place winner)
Design Team: UDAAR Studio

Chamber of Commerce Office Building (2017)

Description: Office building and Headquarters (14,384 m² total BUA)
Client: Saudi Chamber of Commerce
Location: Jizan, Saudi Arabia
Scope: Façade redesign and landscape design proposal
Design Team: UDAAR Studio

Private Residence (2017)

Description: Private villa with swimming pool (2,205 m² plot area)
Client: Private Owner
Location: Beirut, Lebanon
Scope: Concept design for villa
Design Team: UDAAR Studio

MyHome Furniture Showroom (2017)

Description: Furniture showroom and gallery (720 m² plot area)
Client: Private Owner
Location: Suez, Egypt
Scope: Interior design and façade concept and schematic proposal
Design Team: UDAAR Studio

Oasis of Culture (2013 – 2014)

Description: Culture and Arts Center
Client: Egyptian Ministry of Culture
Location: 6th of October City, Egypt
Scope: Theater façade and detailing, outdoor landscape features detailing
Design Team: Morad Abdelkader Consultancy Office

E-JUST New Campus Project Management (2012 – 2013)

Description: Planning and project management of Egypt-Japan University for Science and Technology (E-JUST) New Campus (356,583 m² plot area)

Client: Egyptian Ministry of Higher Education

Location: Borg El-Arab, Egypt

Scope: Design review and project management of masterplan by Arata Isozaki

Design Team: CoReLAB (Project Management Unit), Department of Architecture, Faculty of Engineering, Ain Shams University

New Connection Office Building (2012 – 2013)

Description: 6-story office building (4317 m² plot area)

Client: El-Raowda for Real Estate Development

Location: Fifth settlement, Cairo, Egypt

Scope: BIM consultancy and management (Architectural, structural, MEP)

Design Team: YMCA Consultants / KRAFT Studio

Interior Design, Cairo International Bookfair (2004 – 2005)

Description: Cairo International Bookfair interior design proposal

Client: General Authority for Investment & Free Zones, Ministry of Investment

Location: Nasr City Fairground, Cairo, Egypt

Scope: Cairo International Bookfair interior design proposal, Nasr City Fairground design development

Design Team: YMCA Consultants

Egyptian and Arab World Pavilion, Frankfurter Buchmesse (2004)

Description: Frankfurt Bookfair (Arab World Guest of Honor)

Client: Frankfurter Buchmesse

Location: Frankfurt, Germany

Scope: Interior design of main hall (Forum), exterior tent (Agora), and interior halls (Vias), Egyptian pavilion, and Arab pavilion

Design Team: YMCA Consultants

Horus Residential and Commercial Complex (2002)

Description: Residential and mixed-use complex

Client: Private owner

Location: Giza, Egypt

Scope: Concept and schematic design and design development

Design Team: Morad Abdelkader Consultancy Office

San El-Hagar Museum (2001 – 2003)

Description: Museum for antiquities in Sharkeya region

Client: Egyptian Ministry of Culture

Location: Sharkeya Governorate, Egypt

Scope: Concept and schematic design and design development for museum

Design Team: Morad Abdelkader Consultancy Office

Fardos Gardens (2000 – 2003)

Description: Residential compound

Client: Public Security Sector, Egyptian Ministry of Interior

Location: El-Zohor Grouping, El-Wahat Road, Egypt

Scope: Masterplan, schematic design and design development for a group of private villas (Villa El-Refaie, Sabry, Saleh, Hisham, Shehata and Yassin)

Design Team: Morad Abdelkader Consultancy Office

COMPETITIONS

Programmable Zero-Energy Interactive Façades, 2020 [Shortlisted & Funded (30,000 EGP): SMART FACADES startup with NilePreneurs, Egypt]

Organizer: Technology for the Masses (TFM), IMPAQT Research and Development Competition and Workshop, co-funded by the Erasmus+ Programme of the European Union

Location: Bibliotheca Alexandrina, Alexandria, Egypt

Design Team: Rana El-Dabaa, Islam Salem, Aly Magdy, Sherif Abdelmohsen

Thermally Responsive Brick Walls for Residential Building Façade Envelopes using Parametric and Robotic Simulation, 2020 [Shortlisted]

Organizer: Technology for the Masses (TFM), IMPAQT Research and Development Competition and Workshop, co-funded by the Erasmus+ Programme of the European Union

Location: Bibliotheca Alexandrina, Alexandria, Egypt

Design Team: Sherif Abdelmohsen, Khaled Tarabieh, Rana El-Dabaa, Asmaa Hassan, Islam Salem, Yomna El-Ghazi

School2Share (S2S): A Computational Approach for the Efficient Management of Shared School Facilities in Developing Countries using BIM and GIS, 2020 [Shortlisted]

Organizer: Technology for the Masses (TFM), IMPAQT Research and Development Competition and Workshop, co-funded by the Erasmus+ Programme of the European Union

Location: Bibliotheca Alexandrina, Alexandria, Egypt

Design Team: Sherif Abdelmohsen, Ayman Assem, Mohamed Ezzeldin

The Quest of Light: Hadith Narrators Museum Architectural Ideas Competition, 2019

Organizer: Madinah Region Development Authority (MDA)

Location: Madinah, Saudi Arabia

Design Team: UDAAR Studio

Istiqama Mosque: Dubai Creek Harbour Iconic Mosque Competition, 2018

Organizer: EMAAR Development

Location: Dubai Creek Harbour, Dubai, United Arab Emirates

Design Team: UDAAR Studio

KnowledgeFields: Dar Al-Uloom Public Library Redesign Competition, 2018

Organizer: Abdulrahman Al Sudairy Cultural Centre (AACC), KSA

Location: Sakaka, Al Jouf Region, Saudi Arabia

Design Team: UDAAR Studio

Folium Trilaterum: Art Prison International Architecture Competition, 2018

Organizer: Young Architects Competitions and the Municipality of Favignana

Location: Favignana, Italy

Design Team: UDAAR Studio

Flocks in Flux: Dubai Feather Skyscraper, 2017 [Honorary Mention]

Organizer: Bee Breeders (SkyHive Skyscraper Challenge)

Location: Dubai, United Arab Emirates

Design Team: UDAAR Studio

Hong Kong Pixel Homes International Architecture Competition, 2017

Organizer: Bee Breeders Architecture Competition Organizers

Location: Hong Kong

Design Team: UDAAR Studio

Science City International Architectural Competition, 2016

Organizer: Bibliotheca Alexandrina, under the auspices of the Union of International Architects (UIA)

Location: 6th of October City, Cairo, Egypt

Design Team: UNii Engineering Consultancy

PENDO MOTUS +: eVolo Skyscraper Competition, 2016

Organizer: eVolo Magazine

Design Team: Khaled Tarabieh, Sherif Abdelmohsen, Passaint Massoud, Islam Mashaly, Ahmed Elshafei

Next7 Architectural Competition, 2015

Organizer: Arch2O

Design Team: KRAFT | Studio

Winter Stations Design Competition, 2014

Organizer: Architect Magazine

Location: Toronto, Canada

Design Team: KRAFT | Studio

Parametric Mafroka: Design + Industry Competition, 2013 [Winning Entry]

Organizer: Egyptian Furniture Export Council

Location: FURNEX Exhibition, Cairo, Egypt

Design Team: KRAFT | Studio

Building for Bouwkunde Ideas Competition, 2008

Organizer: University of Delft (Design of the Faculty of Architecture Campus)

Location, Delft, Netherlands

Design Team: Tamer El-Khouly, Sherif Abdelmohsen

Residential Commercial Complex, 2001

Location: Al-Madina, Saudi Arabia

Design Team: Hany Abdullah, Sherif Abdelmohsen

Office Building Complex, 2001

Location: 6th of October City, Cairo, Egypt

Design Team: Mohammad Gabr, Tamer El-Khouly, Waleed Hosny, Sherif Abdelmohsen

Pharmaceuticals' Syndicate Club, 2001

Organizer: Egyptian Pharmaceuticals Syndicate

Location: Giza, Egypt

Design Team: Mohammad Gabr, Tamer El-Khouly, Waleed Hosny, Sherif Abdelmohsen

Graphics Poster [Honorary Prize]

Organizer: CurrentCE company

Designer: Sherif Abdelmohsen

UNIVERSITY SERVICE

- Member, Steering Committee, Educational Virtual Environment (EVE), The American University in Cairo (since 2021)
- Member, Steering Committee, Bachelor of Design Computing Program, International Credit Hours Engineering Program, Faculty of Engineering, Ain Shams University (since 2021)
- Co-Director, Architecture Graduate Program, The American University in Cairo (since AY 2020/2021)
- Chair, Grants and Research Committee, Department of Architecture, The American University in Cairo (since AY 2020/2021)

- Member, Student Affairs Committee, Department of Architecture, The American University in Cairo (since AY 2020/2021)
- Member, Graduate Committee, Department of Architecture, The American University in Cairo (since AY 2020/2021)
- Member, Program Review Committee, Department of Architecture, The American University in Cairo (since AY 2020/2021)
- Department of Architecture Representative, University Senate, American University in Cairo (since AY 2018/2019)
- Member and Secretary, Senate Curriculum Committee, American University in Cairo (since AY 2018/2019)
- Member, Academic Affairs Committee, School of Sciences and Engineering, American University in Cairo (since AY 2018/2019)
- Chair, Academic Affairs Committee, Department of Architecture, The American University in Cairo (since AY 2018/2019)
- Co-Chair, Accreditation Committee, Department of Architecture, The American University in Cairo (since AY 2016/2017)
- Co-Chair, Strategic Planning and Academic Assessment Committee, Department of Architecture, The American University in Cairo (AY 2016/2017 – AY 2019/2020), Committee Member (since AY 2020/2021)
- Member, Strategic Planning Committee, School of Sciences and Engineering (SSE), The American University in Cairo (AY 2016/2017)
- Member, Staff Committee, School of Sciences and Engineering (SSE), The American University in Cairo (AY 2016/2017)
- Director, Design Computing and Fabrication Laboratory, Department of Architecture, The American University in Cairo
- Member, Safety and Security Committee, Department of Architecture, The American University in Cairo (AY 2016/2017)
- Member, Studios and Labs Logistics Committee, Department of Architecture, The American University in Cairo (AY 2016/2017)

PROFESSIONAL AFFILIATIONS

- President, Arab Society for Computer Aided Architectural Design (ASCAAD) [2020-2022]
- Associate Member, American Institute of Architects (AIA)
- Member, International Experts for Research Enrichment and Knowledge Exchange (IEREK)
- Member, Golden Key International Honor Society
- Member, Digital Building Laboratory, Georgia Tech
- Member, Student Construction Association (SCA), Georgia Tech
- Member, Board of Directors, Arab Society for Computer Aided Architectural Design (ASCAAD) (2012-2015)
- Member, Cultural Affairs Committee, Faculty of Engineering, Ain Shams University
- Member, International Accord Committee, Faculty of Engineering, Ain Shams University
- Alumnus, The Binational Fulbright Commission in Egypt (BFCE)
- Alumnus, CoDeLab, Carnegie Mellon University
- Member, Egyptian Engineering Syndicate

SOCIAL ACTIVITIES

- Member, Scientific Committee, Eco-House Competition, Department of Architecture, Ain Shams University (February 2014)
- Design Computing Representative for PhD newsletter, School of Architecture, Georgia Institute of Technology (Fall 2008)

- Participation in organizing Ain Shams architectural competition "FUTURE ARCHITECTURE 2100" (January 2005 – June 2005)
- Participation in Rotterdam Biennale (May 2003 – July 2003) titled: "Mobility: Room with a View"
- Participation in Preparing Architectural Symposia (Feb. 2000 – June 2001) [Architecture & Art, Architecture & Technology, Architecture & Environment, Airports] symposia, Supreme Council of Culture, Cairo

ATTENDED CONFERENCES

- The XIX World Congress of the Union of International Architects (UIA '96), Barcelona, Spain, 1996.
- The XX World Congress of the Union of International Architects (UIA '99), Beijing, China, 1999.
- The 1st Annual Conference on Architectural Heritage, Library of Alexandria, Alexandria, Egypt, March 2002.
- The XXI World Congress of the Union of International Architects (UIA '02), Berlin, Germany, 2002.
- "New York: City in Motion" Conference, New York Institute of Technology, New York, NY, USA, March 2006.
- The 12th Annual Conference of the Association of Computer Aided Architectural Design Research in Asia (CAADRIA 2007), Southeast University, Nanjing, China, April 2007.
- 2nd International Association of Societies of Design Research (IASDR 2007) International Conference, Hong Kong Polytechnic University, Hong Kong, Nov 2007.
- "We Have Never Been Pre-Disciplinary", the 24th National Conference on the Beginning Design Student, Georgia Institute of Technology, Atlanta, GA, USA, March 2008.
- The 3rd International Conference on Design Computing and Cognition (DCC 08), Georgia Institute of Technology, Atlanta, GA, USA, June 2008.
- The 7th International Workshop on Social Intelligence Design (SID 2008), Universidad de Puerto Rico, San Juan, Puerto Rico, Dec 2008.
- The 13th International Conference of Computer Aided Architectural Design Research Futures (CAADFutures 2009), Universite de Montreal, Montreal, Quebec, Canada, June 2009.
- Digital Building Laboratory Symposium, Manufacturing Research Center, Georgia Institute of Technology, Atlanta, GA, USA, June 2010.
- Digital Building Laboratory Symposium, Klaus Advanced Computing Building, Georgia Institute of Technology, Atlanta, GA, USA, May 2011.
- The 6th International Conference of the Arab Society for Computer Aided Architectural Design (ASCAAD 2012), College of Architectural Engineering and Design, The Kingdom University, Manama, Bahrain, February 2012.
- XVII Congreso de la Sociedad Iberoamericana de Grafica Digital (SIGRADI 2013), Universidad Tecnica Federico Santa Maria, Valparaiso, Chile, November 2013.
- The 32nd Education and Research in Computer Aided Architectural Design in Europe International Conference (eCAADe 2014), Northumbria University, Newcastle, UK, September 2014.
- The 16th International Conference of Computer Aided Architectural Design Futures (CAADFutures 2015), Sao Paulo, Brazil, July 2015.
- The 33rd Education and Research in Computer Aided Architectural Design in Europe International Conference (eCAADe 2015), TU Wien, Vienna, Austria, September 2015.
- The 7th International Conference on Design Computing and Cognition (DCC 16), Northwestern University, Evanston, Illinois, USA, June 2016.

- The American Institute of Architects (AIA) Middle East Annual Conference, The American University in Cairo (AUC), Tahrir Campus, Cairo, Egypt, November 2016.
- The 2nd European Conference on Materials, Mechatronics and Manufacturing (ECMMM 2018), Krakow, Poland.
- The 36th Education and Research in Computer Aided Architectural Design in Europe International Conference (eCAADe 2018), Lodz, Poland, September 2018.
- GITEX Future Stars Startup Conference and Expo 2018, Dubai World Trade Center, Dubai, United Arab Emirates, October 2018.
- Digital Building Lab Annual Symposium, The Historic Academy of Medicine, Georgia Institute of Technology, Atlanta, GA, USA, October 2018.
- 6th Arab-American Frontiers of Science, Engineering, and Medicine Symposium, Kuwait City, Kuwait, November 2018.
- ARCHCAIRO 8th International Conference, Building the Future Now: Rights to Better Living, Architecture and Contexts, Department of Architecture, Faculty of Engineering, Cairo University, Egypt, April 2019.
- ZAK - World of Façades Egypt, "Immersing Local Architectural Influence with Modernism in Façade Designs", Cairo, Egypt, April 2019.
- The 18th International Conference of Computer Aided Architectural Design Futures (CAADFutures 2019), Daejeon, South Korea, June 2019.
- 37th eCAADe Conference / XVIII SIGraDi Conference, Faculty of Architecture, University of Porto, Porto, Portugal, September 2019.
- 25th International Conference of the Association for Computer-Aided Architectural Design Research in Asia (CAADRIA 2020), Chulalongkorn University, Bangkok, Thailand (Virtual Conference), August 2020.
- The 38th eCAADe Conference, TU Berlin, Berlin, Germany (Virtual Conference), September 2020.
- The 3rd International Conference on Parallelism in Architecture, Engineering and Computing Techniques (PACT 2020), University of East London, London, UK (Virtual Conference), October 2020.
- The 9th International Conference on Design Computing and Cognition (DCC '20), Georgia Institute of Technology, Atlanta, GA, USA (Virtual Conference), December 2020.
- The 9th International Conference of the Arab Society of Computer Aided Architectural Design (ASCAAD), American University in Cairo (AUC), Cairo, Egypt (Virtual Conference), March 2021 (Conference Host and Organizer).
- XXV Congreso de la Sociedad Iberoamericana de Grafica Digital (SIGraDi 2021), Ubiquitous Conference, Georgia Tech, Atlanta, GA, November 2021.