

# MAGED S. GUERGUIS

## CURRICULUM VITAE

1400 KENESAW AVENUE. 13M KNOXVILLE, TENNESSEE 37919 | TEL: 812.259.4292 | MAGED.GUERGUIS@UTK.EDU

### EDUCATION

May 2013  
Chicago, IL

#### **Masters of Architecture** (Advanced Standing)

University of Illinois at Chicago  
School of Architecture

August 2001  
Cairo, Egypt

#### **Bachelor of Architecture** (Five-Year Professional degree)

Helwan University  
School of Fine Arts

### EXPERIENCE

August 2017 - Present  
Knoxville, TN

#### **ACADEMIC EXPERIENCE**

##### **University of Tennessee, Knoxville**

##### **Assistant Professor of Architecture and Structural Technology**

Courses Taught

ARCH 583 - Architectural Design: Urbanism

ARCH 571 - Design IV: Building in the Urban Context

ARCH 547 - Structural Principles in Architecture

ARCH 496 - Advanced Architectural Design: Thematic Studio

ARCH 372 - Architectural Design IV

ARCH 363 - Design Implementation III: Building in Concrete and Hybrid Systems

ARCH 361 - Design Research in Technology

ARCH 321 - Representation IV: Information Modeling

September 2017 - Present

Services

Graduate Curriculum Committee

August 2015 – July 2017

##### **University of Tennessee, Knoxville | College of Architecture and Design**

##### **Professor of Practice**

As a part of The Governor's Chair Integrated Design Studio

February 2015, 2016

##### **Iowa State University | College of Design**

##### **Invited Speaker**

Lecture Topic:

- Soft Boundaries: The Emergence of Material Energies

September 2013

##### **University of Illinois at Chicago | School of Architecture**

##### **Visiting Lecturer**

Lecture series topic:

- Generative Algorithms and Mathematical Associative Modeling

November 2013 - July 2017  
Chicago, IL

#### **PROFESSIONAL EXPERIENCE**

##### **Skidmore Owings & Merrill LLP**

##### **Senior Designer**

Duties, Accomplishments and Related Skills:

- Prepared conceptual, schematic design, diagrams, design development, construction documents and executed distinct portions of projects..
- Sought creative and innovative solutions to assigned tasks and developed research and documentation to execute these solutions.
- Led the detailed preparation of design documents and contributed to the preparation of construction documents during all project phases.
- Collaborated with and coordinated work of consultants to ensure that project deliverable are coordinated.
- Assisted with checking and coordinating project documents including drawing set organization, details, dimensions, interdisciplinary coordination.

**Selected Projects:**

- Lujiazui World Trade Center Urban Design (Shanghai, China)
- 447 Collins (Melbourne, Australia )
- Greenland Zhengzhou Expo City (Zhengzhou, China)
- Pazhou Star River Headquarters (Pazhou, China)
- Ayala Triangle Gardens (Makati, Philippine)
- Sanlin Riverfront Eco-District (Shanghai, China)
- China World Trade Center (Beijing, China)
- AMIE 1.0 (Knoxville, TN)
- Mount Street Tower (Sidney, Australia)
- Guangzhou Chamber of Commerce Tower (Guangzhou, China)
- Downtown Fargo Block 9 ( Fargo, ND)

August 2013 - June 2017  
Chicago, IL

**SOM Foundation****Design Research Fellow**

The recipient of the prestigious 2013 SOM Research and Travel Fellowship, a \$20,000 award to travel to scientific research institutions in Europe and North America, to carry out the research topic, "Soft Boundaries: The Emergence of Material Energies". A trans-disciplinary research investigating areas where architectural design overlaps with other sciences, such as Biology, Biochemistry, Particle physics, Discrete Mathematics and Differential Geometry.

August 2015 – Present  
Knoxville, TN

**Governor's Chair Energy + Urbanism****Partnership with Oak Ridge National Labs (ORNL) and University of Tennessee**

Interdisciplinary research for both design and execution of experimental building envelope to be the first 3D printed energy-efficient structure using additive manufacturing. Funded by the Department of Energy, the research goal is to use cutting-edge technology in both design and fabrication, such as advanced algorithmic modeling and rapid prototyping in residential housing applications to find optimal and innovative solutions for energy independence.

May 2013 - October 2013  
Evanston, IL

**Morgante Wilson Architects Ltd.****Project Manager**

Duties, Accomplishments and Related Skills:

- Prepared and reviewed construction documents and contracts.
- Coordinated Electrical, plumbing and structural drawings.
- Prepared budget, cost estimate and calculation spreadsheets for materials and finishes.

**Selected Projects:**

- Halbower Residence (Wilmette, IL)
- Blazo Residence (Evansville, IN)
- Ricketts Residence (Chicago, IL)

April 2003 - September 2010  
Abu Dhabi, UAE

**Architectural & Engineering Consultants****Architect**

Duties, Accomplishments and Related Skills:

Assisted in developing architectural drawings, schematic design, construction documents, and computer renderings of a wide range of projects.

**Selected Projects:**

- Danet Abu Dhabi Development (Abu Dhabi, UAE)
- Diwan for Sheikh Bin Zayed (Abu Dhabi, UAE)
- Holiday Inn Hotel (Abu Dhabi, UAE)
- Ice Hockey Arena (Minsk, Belarus)

September 2001 - March 2003  
Cairo, Egypt

**Dar Al-Handasah | Dar Group****Jr. Designer**

- Assisted Architects in the preparation of architectural drawings.
- Prepared 2D and 3D presentation, models and renderings.

**Selected Projects:**

- Dubai International Airport Terminal 2 (Dubai, UAE)
- Adapazari Hospital (Adapazari, Turkey)
- Abraj Al Bait (Mecca, Saudi Arabia)
- Housing Bank (Amman, Jordan)

**HONORS & AWARDS****2017 AIA Chicago Award For Excellence in Architecture | Divine Detail Award**

The Additive Manufacturing Integrated Energy (AMIE 1.0)

**2017 HIVE 50 | Top Design Innovator**

The Additive Manufacturing Integrated Energy (AMIE 1.0)

**2017 Architect Magazine | R + D Award**

The Additive Manufacturing Integrated Energy (AMIE 1.0)

**2017 Fast Company | World Changing Ideas Award: Finalist**

The Additive Manufacturing Integrated Energy (AMIE 1.0)

**2016 Emerald Awards**

United States Green Building Council – Illinois Chapter (USGBC-Illinois)

The Additive Manufacturing Integrated Energy (AMIE 1.0)

**2016 Architizer A+ Awards**

The Additive Manufacturing Integrated Energy (AMIE 1.0)

**2016 Fast Company | Innovation by Design (IBD) Award**

The Additive Manufacturing Integrated Energy (AMIE 1.0)

**2013 SOM Foundation**

Recipient of the SOM Foundation's Travel & Research Fellowship

**2013 Board of Trustees Full Tuition Waiver**

UIC School of Architecture & The Art

For Excellence in Academic Achievements

**2013 Alumni Choice Award**

Design Portfolio Award (First Place)

**2013 The Image of Research Award**

UIC Graduate College (Honorable Mention)

**2012 Student Choice Award**

Design Portfolio Award (First Place)

**2012 College Benefit Scholarship**

For Exceptional Academic Achievements

**2003 Museum Design Competition**

Abd El Wahab Museum Design Competition (First Place)

Design Team: Hamdy El Setohy and Shady Albert

**2002 Society of Egyptian Architects Award**

For Excellence in Architectural Design (Thesis Project)

**EXHIBITIONS**

October 2015

**BOLD: Alternative Scenarios for Chicago****The Chicago Architecture Biennial**

SOM collaboration with CAMESgibson

October 2015

**Second Sun**

### **The Chicago Architecture Biennial**

In Collaboration with Sean Lally (*WEATHERS LLC*)

February 2013

#### **Proof 001**

#### **Chicago Museum of Contemporary Art**

Installation proposal with Sean Lally (*WEATHERS LLC*)

April 2014 - January 2015

#### **Energy Fields**

#### **Art Institute of Chicago**

Installation as a part of 'Chicagoisms' exhibition

With Sean Lally (*WEATHERS LLC*)

### **PUBLICATIONS**

#### **High performance 3D printed façade with integrated energy: built works and advancements in computational simulation**

#### **Advanced Building Skins 2017 Conference Proceedings**

Maged Guerguis<sup>1, 3</sup>, Leif Eikevik<sup>1</sup>, Lucas Tryggestad<sup>1</sup>, Andrew Obendorf<sup>1</sup>, Philip Enquist<sup>1, 3</sup>, Brian Lee<sup>1</sup>, Arathi Gowda<sup>1</sup>, Brian Post<sup>2</sup>, Kaushik Biswas<sup>2</sup>, Justin Shultz<sup>4</sup>

<sup>1</sup> (Skidmore, Owings & Merrill LLC, Chicago, IL, USA)

<sup>2</sup> (Energy & Transportation Science Division, Oak Ridge National Laboratory, Knoxville, TN, USA)

<sup>3</sup> (College of Architecture and Design, University of Tennessee, Knoxville, TN, USA)

<sup>4</sup> (Rensselaer Polytechnic Institute, Troy, NY, USA)

#### **Additive Manufacturing Integrated Energy - Enabling Innovative Solutions for Buildings of The Future**

#### **Journal of Solar Energy Engineering 2017 by ASME**

Kaushik Biswas, James Rose, Leif Eikevik, Maged Guerguis, Philip Enquist, Brian Lee, Lonnie Love, Johny Green and Roderick Jackson

J. Sol. Energy Eng 139(1), 015001 (Nov 10, 2016) (10 pages)

Paper No: SOL-16-1196; doi: 10.1115/1.4034980

#### **Big Area Additive Manufacturing Applied To Buildings Buildings XIII Conference**

Kaushik Biswas, Randall Lind, Brian Post, Roderick Jackson, Lonnie Love, Johny Green Jr., Lucas Tryggestad, Andrew Obendorf, Leif Eikevik, Maged Guerguis

#### **Interdisciplinary Education in Architectural Design, Building Engineering And Technology National Science Foundation**

Enhancing Interdisciplinary Education and Diversity in Education

#### **Algorithmic Design for 3D printing at Building Scale**

#### **International Journal of Modern Research in Engineering and Technology (IJMRET)**

Maged Guerguis, Leif Eikevik, Andrew Obendorf, Lucas Tryggestad,

Philip Enquist, Brian Lee, Benton Johnson, Brian Post, Kaushik Biswas

### **PRESENTATIONS**

October 2017

#### **Advanced Building Skins 2017 Conference | Invited Speaker**

High-performance 3D printed façade with integrated energy

October 2017

#### **Soft Boundaries ; The Emergence of Integrated Energies**

University of Tennessee, Knoxville | Department of Civil and Environmental Engineering

November 2015

#### **The State of 3D Printing**

Northwestern University

November 2015

#### **The Role of Integrated Energy and Additive Manufacturing in Our Energy Future**

Facades+ Chicago, IL

October 2015

#### **Architect as Analyst**

Field Notes Chicago, IL

April 2015

**The Realities of 3D Printing**

Builtworlds

**ACADEMIC SERVICE**

July 2014

**UIC Accreditation Advisory Board Member**

AIA Chicago, NCARB

February 2015

**Invited Critic**

Iowa State University College of Design

February 2015

**SOM Career Fair Representative**

University of Tennessee Knoxville College of Architecture and Design  
Iowa State University College of Design

March 2015

**PhD Thesis Committee Member**

Cornell University Department Mechanical & Aerospace Engineering

Thesis Topic:

- Urban Wind: Impact of Building Geometry on Wind Energy Yield Potential

January 2014

**Invited Portfolio Day Juror**

University of Illinois at Chicago School of Architecture

**SOFTWARE SKILLS**

**Autodesk**

AutoCAD | Revit (Architecture + Structure) | 3D Studio Max | Maya

**Adobe**

Photoshop | After Effects | Illustrator | InDesign

**McNeel**

Rhinoceros | Grasshopper | Firefly | Paneling Tools | Evolute | RhinoCAM | Karamba  
Kangaroo

**Mathematical Computation**

Wolfram | Mathematica

**Electronic Prototyping**

Arduino

**Renderers**

Vray | Maxwell | Octane | Lightscape

**MODELING SKILLS**

3D Printing | Additive Manufacturing | Laser cutting | CNC Milling

**CONFERENCES/  
WORKSHOPS**

**ACADIA 2010 Conference New York, NY**

Workshop: Advanced Parametric Modeling with Revit Architecture.

February 2018

**2018 McNeel Europe S.L.**

Workshop: Karamba 3D | parametric structural engineering for analysis of spatial trusses, frames, and shells

**LICENSES / PROFESSIONAL  
ACCREDITATIONS**

**Egyptian Syndicate of Engineers**

Licensed Architect #16/4027 Cairo, Egypt

**LANGUAGE SKILLS**

English and Arabic (Bilingual), French (A2)

**REFERENCES**

Furnished upon request