

Curriculum Vitae

Michael Lynn Garrison,

Professor of Architecture, 2005-2018

Cass Gilbert Centennial Teaching Fellowship in Architecture

SBSE: Society of Building Science Educators

IALD: International Institute of Lighting Designers

FTI: Façade Tectonics Institute-Academic

Teaching Fall 2017-2 Spring 018

			Course score	Instructor score
Arc 520F	Fall 2017	Intermediate Studio III	4.0	4.2
Arc 327G	Fall 2017	Regenerative Architecture	4.4	4.4
Arc 386M	Fall 2017	Regenerative Architecture	4.4	4.4
Arc 334L	Spr 2018	Environmental Controls II	3.2	3.4
Arc 561C	Spr 2018	Comprehensive Studio	4.7	4.7

Advising

Sara Motamedi, PhD Sustainable Design, the University of Texas at Austin, Summer 2017

Asmita Dahl, Candidate for MS in Sustainable Design: thesis committee 2018-

Yasser El Masri, Candidate for MS in Sustainable Design, Fulbright Scholar: independent study 2018-

Research/Scholarship/Critical Practice

Monograph:

NCARB 07 *Building Envelopes Monograph*, by Michael Garrison, 390 pages

National Council of Architectural Registration Boards

Washington, D.C. Draft 2017, Final Draft Approval 2018, Graphics Approval 2019

Research Grant Submitted:

"The design and analysis of a prefabricated modular fiber reinforced polymer composite housing prototype,"

ExxonMobil Upstream Company and UTEI, \$200,000 for two years, Michael Garrison, School of Architecture, Principal Investigator, Dr. Wei Li, Professor of Mechanical and Manufacturing Systems Engineering, Co-Investigator, Billie Faircloth, Partner and Research Director, Kieran Timberlake Architects, Sept. 2018-Sept. 2020. ExxonMobil request another proposal from Garrison and Li for a \$40,000 grant, "Life Cycle Assessment of FRP Polymer Building Materials," In association with The University of Texas at Austin Solar Decathlon (Design Challenge) Competition (Formerly known as the Race to Zero Student Design Competition, U.S. Department of Energy), approval is pending.

Research Grant being developed

1. SOLTex Rowhouses, Urban Attached Zero Net Energy Design, U.S. Solar Decathlon House (Design Challenge) Competition, U.S. Department of Energy and the National Renewable Energy Lab. 2018.
2. TEXSun Techo, ZNE Accessory Dwelling Unit Design, U.S. Solar Decathlon (Design Challenge), U.S. Department of Energy and the National Renewable Energy Lab. 2018.
3. Smile Africa School Classrooms, with Asmita Dahl, Hope4Kids, Tororo, Uganda, 2018

Service

Awards Program

Jury Members: Brigham Keehiner AIA, New York, NY. Michael Garrison and Robert Golde, ASLA , New Haven CT: *2018 Tucker Design Awards*, National Stone Institute, Presentation of the Awards and the Bybee Award, Tobin Center, February 2018.

School Committees

UTSOA Executive Committee 2017-2018 (Sevilla teaching review, Lara service review)
UTSOA Graduate Studies Committee 2017-2018
MSSD Reviews, Graduate Portfolio Reviews, Undergraduate Portfolio Reviews, 2017-2018
UTSOA ACSA Faculty Councilor, 2017-2018

University Committees

University Capital Committee, 2017-2018
Campus Master Planning Committee, 2017-2018
East Campus Graduate Housing Building Committee, 2017-2018
Faculty Building Advisory Committee, 2017-2018
Faculty Affiliate, University of Texas at Austin Energy Institute, 2017-2018
Flag Committee, Independent Studies, Undergraduate Studies 2017

Academic Committees and International Conference Committees

1. Advanced Building Skins: Conference Committee, (Review papers, Session chair), 13th Conference on Advanced Building Skins, European Energy Forum, Bern, Switzerland, October 2017.
2. International Scientific Committee, Eco-Architecture, 2018, 7th International Conference on Harmonization between Architecture and Nature, (Review papers, Session Chair), WIT: Wessex Institute of Technology, New Forest, UK, 2018.
3. Paper Review, Jeana D'Agostino Ripple, *Performance Based Simulations for Membrane based Enclosures*, Measured, TAD: Technology Architecture + Design, Volume 2, Spring 2017.
4. International Advisory Committee, (Review papers), Grand Renewable Energy International Conference and Exhibition, Yokohama, Japan, 2018.

External Service

At the request of Dean Deborah Berke, Yale School of Architecture, the review, evaluation and a letter in support of Professor Anna Dyson, Hines Professor of Sustainable Architectural Design and the Yale School of Forestry and Environmental Studies, in consideration for promotion with tenure.

Public Service

Advisory board member, Community Renewal International, Washington D.C
National Stone Council NSC Building Code Development Committee

Contributions

TEACHING

My most significant contributions to the School and the Academy are in the realm of teaching architectural design as a process that describes the confluence between architectural technology and architectural design. My design studio emphasizes how the performance and the integration of environmental control systems, envelope systems, spatial and building systems effects and informs architectural design. The value of my emphasis on design/technology integration is supported by strong student interest in my studio and the high-level of studio project achievement.

My design practice and my student advising with MS Sustainable Design thesis students, search grants, publications and collaborations in Green Building insure that my teaching remains at the cutting edge.

I teach a Regenerative Architecture lecture course that unites graduate sustainable architecture, landscape and planning students, engineering students, business students that support the topics of our graduate program in Sustainable Design. I also teach the Environmental Controls II required undergraduate course to 67 students. The course evaluations are below my other courses as I continue to try to improve this course to the interior architecture students who desire a more focused interiors study in Environmental Controls Technology.

SCHOLARSHIP

Although I have published basic research papers on Mean Radiant Cooling and was an early investigator in double box building configurations my significant scholarship is in the area of applied science in green building design. I have consistently over my tenure at the UTSOA published papers at national and regional conferences, Plea, ACSA, AIA, SBSE, WIT, ISES, ABS, etc. I have an accomplished record of design build studios at: Big Bend National Park, McDonald Observatory, Four Solar Decathlon Projects, Tororo, Uganda, and the Rio Grande Valley. My students have won national design competitions and I have a lengthy record of funded grants and research in green building design.

During this past academic year my contribution in scholarship has been in finishing the graphics for the publication of the NCARB 07 Building Envelopes, including the preparation of the exam questions for the National Council of Architectural Accreditation Board. In 2005, I co-authored with the late Randal Stout, NCARB Monograph exploring building envelope architectural technology. Because of the positive review of that monograph NCARB asked me to write another one and it has occupied my research interest for most of the past three years.

SERVICE

Because of my community service as past chair of the City of Austin's Resource Management Commission at a time when we were just starting to envision the Austin Green Building Program and as a founding member of the Austin Downtown Commission I have always been involved in building community consensus. I been this past year involved in several University Planning and Building Committee. The most time consuming continues to be the East Campus Student Housing Project. No doubt my service on these committee came from my long-time service on The University Committee on Energy Conservation and Management. And my service as an Advisory Committee member on several international energy and green building conferences. I continue to network with the top environmental design researchers around the world.

TRANSFORMATIVE CONTRBUTIONS

1. SOLTex Rowhouses, Urban Attached Zero Net Energy Design, U.S. Solar Decathlon House (Design Challenge) Competition, U.S. Department of Energy and the National Renewable Energy Lab. 2018. This project which developed from my Regenerative Architecture interactive lecture class, has been the result of a joint collaboration from our graduate MS students in Sustainable Design, engineering students and business students. The *SOLTex* rowhouse design combines the principles of design shape geometry and form, microclimate configuration and the integration of energy-efficiency, energy and water-collecting surfaces, lower-cost prefab modular construction and low embodied energy-use materials to demonstrate transformative architectural technologies in green building design and operation. This work also demonstrates new ideas in middle density, affordability, social cohesion and spatial equality questions that have generated sustainable design thesis topics for our students.
2. TEXSun Techo, ZNE Accessory Dwelling Unit Design, U.S. Solar Decathlon (Design Challenge), U.S. Department of Energy and the National Renewable Energy Lab. 2018. Another student design project that evolved from investigations in my Regenerative Architecture interactive lecture class is the *TEXSun-Techo* (*Techo is the Spanish word for roof canopy*) house design demonstrates an Accessory Dwelling Unit (ADU) home that combines Zero Net Energy (ZNE), water harvesting, and low embodied energy building materials, with affordability and neighborhood gentrification mitigation. Building off of the past UTSOA "Alley Flats," students have built a network with other schools at UT and are competing with 81 other U.S. universities in the design competition. This work has unified the MS in Sustainable Design graduate students.
3. I submitted a grant proposal in the fall to ExxonMobil Upstream Company and UTEI with Mechanical Engineering Professor Wei Li, as a co-Investigator, with Billie Faircloth, Partner and Research Director, Kieran Timberlake Architects, as a consultant. ExxonMobil has requested another proposal from us on a, "Life Cycle Assessment of FRP Polymer Building Materials." The grant is pending and if successful the grant will support a graduate research assistant who wants to concentrate on comparing Life Cycle assessments of new exterior building materials. Funded graduate research positions are critical to attract the best students for our graduate program in Sustainable Design and I will continue to investigate opportunities for research.