



DETAILED CURRICULUM VITAE

Michael D. Gibson, AIA, LEED A.P.

Licensed Architect, Kansas and Missouri

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www.netpositivestudio.org

www.helia.studio

[i] EDUCATION

2006 Harvard Graduate School of Design, Cambridge, Massachusetts: Master in Architecture

2002 Miami University, Oxford, Ohio: Bachelor of Art in Architecture, *magna cum laude* with Department and University Honors

[ii] PROFESSIONAL ACTIVITY

2017- Associate Professor of Architecture (Tenured): Kansas State Univ.: Manhattan, KS

2018- Faculty Lead, the Net Positive Studio, Kansas State University: Manhattan, KS; www.netpositivestudio.org

2018- Architectural Licensure (Kansas and Missouri) with NCARB Certificate

2022- Co-Owner, Helia LLC: Topeka, KS; www.helia.studio

2011-17 Assistant Professor of Architecture, Tenure-Track: Kansas State Univ.: Manhattan, KS

2010-11 Assistant Professor of Architecture: Ball State University: Muncie, IN

2007-10 Instructor of Architecture: Ball State University: Muncie, IN

2006-7 Project Manager: Paul Lukez Architecture / Transform X: Somerville, MA

2002-3 Intern Architect: ArchPlan, Inc.: Baltimore, MD

[iii] AWARDS AND FUNDED RESEARCH

2023 **Hemp Casita. \$10,000** sponsored by Right Coast Hemp to build a portable structure exhibiting hempcrete made from Kansas-grown hemp and other hemp products in construction; exhibited at 2023 Kansas State Fair in Hutchinson, Kansas.

2023 **Gateway Decathlon** (co-PI). **\$100,000** awarded to K-State faculty group to develop a manufactured prototype home.

2022 **Honorable Mention, 2022 AIA Kansas Design Excellence Awards**, Architectural Project Awards Category for "St. John Prototype Home" designed and built by the K-State Net Positive Studio.

2021 **Best in Innovative Design Solutions** from Habitat for Humanity International. Awarded to Manhattan Area Habitat for Humanity, recognizing the Net Positive Studio's collaborative prefab research on local builds.

2018- **Net Positive Studio** (faculty lead). Over \$3M awarded to non-profit community developers to build affordable, net zero prototype homes in Kansas and Missouri.

2018 **Solar Decathlon Build Challenge Award. P.I., \$130,000** funded project, sponsored by the DOE, to construct a solar demonstration home in St. John, KS.

2018 **Alternative Textbook Initiative Award** (co-P.I. with Prof. R. Todd Gabbard). Awarded **\$4,000** from the KSU Libraries to develop an alternative teaching and activity resource for environmental systems teaching to replace textbooks.

2018 **Kansas City Design Center Faculty Fellows Teaching Grant**. Awarded **\$10,000** to fund studio to develop affordable, net-zero infill housing prototypes in collaboration with urban Kansas City non-profit developers.

2018 **Center for Engagement and Community Development Award**. Awarded **\$10,000** for "Stewards in the Classroom" project, a 2-year study involving LEED educational facilities, architects, and user populations to develop new tactics to encourage sustainability through user controls and decisions.

2015 **Treanor Award**. Received **\$5,000** teaching award sponsored by Treanor Architects and "recognizing the tie between practice and academy and who, in the last year, leveraged the relationship with his or her professional organizations and/or practices to advance students' knowledge, opportunities and research."

2013 **National Council of Architectural Registration Boards Award for the Integration of Practice and Education**. Awarded **\$25,000** to study and develop new building envelope technology in collaboration with professional architects and manufacturers using advanced prototyping and computer simulation.

2011 **Best Paper/Presentation Award, Architectural Research Centers Consortium** for "Integrating Geometry and Light: Daylight Solutions through Computational, Performance-Based Algorithms."

- 2011 **University Small Research Grant**, Kansas State University. Awarded **\$2,500** internal grant (with **\$1,000** additional matched college support) to study material and construction strategies for buildings in hot, high-insolation climates using full-scale prototype testing. Cited as "excellent" by reviewers, in the top tier of all proposals received.
- 2010 **In-Situ Learning Grant**, Department of Architecture, Ball State University: with colleague Janice Shimizu awarded **\$4,000** funding through a competitive internal proposal for in-situ teaching/learning in the construction of a prefab cabin prototype for Indiana Department of Natural Resources.
- 2008 **RFP Research Initiative Award, American Institute of Architects**: Awarded funding (**\$7,000** with additional **\$4,800** internal matching funds) for the full-scale prototyping for a solar-powered envelope-based cooling system using photovoltaics and thermoelectric technology. Findings published in *The American Institute of Architects Report on University Research, Volume 4*.
- 2008 **New Faculty Creative Arts Grant**, Ball State University. Seed grant (**\$2,000** with additional **\$1,000** institutional support) for construction research project involving prototype-based research prefabricated building methods, BIM, and digital fabrication.
- 2008 **Institute for Digital Fabrication**, Ball State University: Project Support. Awarded seed funding (**\$2,200** in institutional support) for research and prototyping in the areas of prefab building methods and solar-powered cooling.

[iv] FELLOWSHIPS

- 2009-10 Institute for Digital Fabrication: Ball State University
 2008-9 Center for Energy Research/Education/Service (CERES) : Ball State University
 2007-8 Institute for Digital Fabrication : Ball State University

[v] PEER REVIEWED PUBLICATIONS

- 2023 Gibson, Michael. "Getting Real with Hemp in Residential Construction." Residential Building Design and Construction Conference, Pennsylvania State University, March 27-28, 2024. Paper in Progress.
- 2023 Gibson, Michael. "Lean Tech, High Performance: Balancing Affordability and Technology in Net Zero Housing." Chapter in *Transforming Housing*. Kutay Gular, ed. John Wiley & Sons, 2024
- 2020 Gibson, Michael and Paul Karr. "The Net Positive Studio: Seeking High Performance, Affordable Housing." *Proceedings of the 5th Residential Building Design & Construction Conference; Pennsylvania State University*. March 4-6, 2020.
- 2019 Gibson, Michael. "Light-Diffusing Insulation: Existing Solutions and New Prototypes for Glazing Interlayers." *Future Praxis: Applied Research as a Bridge Between Theory and Practice: Proceedings of the ARCC 2019 Conference; Ryerson University, Toronto*. May 29 - June 1, 2019.
- 2017 Gibson, Michael. "Docking State Office Building: Revisiting the Energy Performance of the Modern Glass Tower." *Architecture of Complexity: Proceedings of the ARCC 2017 Conference, Salt Lake City*. ISBN 978-1-935129-22-6
- 2016 Gibson, Michael. "Heat Transfer and the Building Enclosure: Comparing In-Situ Measurement Methods." *Journal of the National Institute of Building Science*. August 2016.
- 2016 Gibson, Michael. "Measuring Envelope Heat Transfer: A critical Comparison of In-Situ Methods." *Proceedings of the Façade Tectonics 2016 World Forum, Los Angeles, CA, October 2016*. ISBN: 978-1-882352-09-8
- 2015 Gibson, Michael. "Designed for performance: research methods in a collaborative studio rethinking modern curtain walls." *Perkins + Will Research Journal*. V07.02, 2015. ISBN: 978-0-9847582-2-7.
- 2015 Gibson, Michael. "Designed for Performance: A Collaborative Research Studio Rethinks the Environmental Integration, Materiality, and Manufacturing of Curtain Wall Systems." *The Future of Architectural Research: Proceedings of the 2015 ARCC Conference, Chicago, IL*. ISBN: 978-0-9847582-0-3
- 2015 Bomberg, Mark, Michael Gibson, and Jian Zhang. "An Integrated Environmental Approach to Building Upgrade and New Construction. "A concept of integrated environmental approach for building upgrades and new construction: Part 1—setting the stage." *Journal for Building Physics*. January 2015 vol. 38 no. 4 360-385
- 2015 Gibson, Michael. "Cool Skins: Materials and Assemblies for Light-Weight Building Envelopes in Warm Climates" *Proceedings of BEST Conference Building Enclosure Science & Technology, Kansas City, MO*.
- 2014 Gibson, Michael. "Designed for Performance: Informed Models and Experimental Methods in Architectural Education." *Working Out – Thinking While Building: Proceedings of the 2014 ACSA Fall Conference, Halifax, NS, October 2014*. ISBN 978-0-615-78533-2
- 2013 Gibson, Michael. "Cool Skins: Exploring the Cooling Potential of Light-Weight, Layered Wall Systems." *Visibility of Research: Proceedings of the 2013 ARCC Conference, Charlotte NC, March 2013*. ISBN: 978-0-61578-533-2

- 2012 Gibson, Michael. "Construction Critical: A Case Study in the Critical Application of Prefabrication Technology." *Offsite: Proceedings of the 2012 ACSA Fall Conference, Philadelphia, Oct 2012*. ISBN: 978-0-935502-85-5
- 2011 Gibson, Michael. "Integrating Geometry and Light: Daylight Solutions through Computational, Performance-Based Algorithms." *Considering Research: Proceedings of the ARCC 2011 Conference, Detroit, April 2011*. ISBN: 978-1-257-32189-6.
- 2011 Gibson, Michael. "Construction Critical: Technology and Innovation in a New Era of Practice." *Design Principles and Practices: An International Journal, Volume 4*. Champaign, IL, USA: Common Ground Publishing, 2011. ISSN: 1833-1874. pp155-173.
- 2011 Gibson, Michael. "The Active Thermal Manifold Skin: Feasibility, Prototyping, and Performance Studies of a Wall System Integrating Distributed Solid State, Solar Powered Cooling and Heating Technology." *The American Institute of Architects Report on University Research, Volume 4*. Washington, DC: The American Institute of Architects, 2011. pp 208-229. ISBN 978-1-57165-029-0.
- 2008 Gibson, Michael, Kevin R. Klinger and Joshua Vermillion. "Constructing Information: Towards a Feedback Ecology in Digital Design and Fabrication," *Proceedings of the 28th Annual Conference of the Association for Computer Aided Design in Architecture (ACADIA), Minneapolis, MN, Oct. 16-19, 2008*. pp 182-191. ISBN: 978-0-9789463-2-6
- 2008 Gibson, Michael. "Construction Critical: Technology and Experiment in Designer-Manufacturer Collaboration." *Without a Hitch: Proceedings of the 2008 ACSA Northeast Fall Conference/2008 UMass Wood Structures Symposium, Amherst, MA, Sept. 25-27, 2008*. pp 54-64. ISBN 978-0-557-08075-5.

[vii] EXHIBITIONS

- 2015 Gibson, Michael. "Designed for Performance: Cool Skins and Curtain Wall Studio Research Exhibit." *BEST Conference Building Enclosure Science & Technology, Kansas City, MO*.
- 2010 Gibson, Michael. "Active Thermal Manifold: Experiments in Building-Integrated, Solid State Cooling" Input_Output Conference and Exhibit, Temple University.

[viii] MAJOR ACTIVITIES AND SERVICE – INTERNAL (Fall 2011 to present)

- 2019- Chair, Academic and Curricular Affairs Committee, College of Architecture, Planning, and Design
- 2018- Chair, Academic Affairs Committee, Department of Architecture
- 2018- Affiliated Faculty Member, Kansas City Design Center
- 2017 NAAB Accreditation Exhibit co-coordinator, Department of Architecture
- 2012-16 Faculty Mentor, Kansas State University Developing Scholars Program
- 2012-3 Faculty Councilor, Association of Collegiate Schools of Architecture

[ix] MAJOR ACTIVITIES AND SERVICE – EXTERNAL (Fall 2011 to present)

- Various* Expert peer review for conferences of the Architectural Research Centers Consortium, Association of the Collegiate Schools of Architecture, Building Technology Educators Society, and Façade Tectonics Institute; the journals *Enquiry* and *Architectural Science Review*.
- Various* Presenter for several professional continuing education sessions accredited by the American Institute of Architects Continuing Education System
- 2017 President, Topeka Section of the American Institute of Architects
- 2017- Full Member, American Institute of Architects
- 2012-17 Associate Member, American Institute of Architects
- 2013- Editorial Board Member, *Enquiry: The Architectural Research Centers Consortium Journal of Architectural Research*
- 2012-19 Executive Board Member, Topeka Section of the American Institute of Architects
- 2016 Session Coordinator and Moderator, AIA Central States Region Annual Conference
- 2016 Advisory Board Member, *Architectural Graphic Standards Student Edition, 12th Edition [Wiley Pub.]*
- 2014 Member, exhibit task force, Kansas Children's Discovery Center (Topeka, KS)
- 2011 Conference Co-Chair and Proceedings Co-Editor, *Architecture in the Fourth Dimension Conference: Methods and Practices for a Sustainable Building Stock, Boston, MA – Nov 15-17, 2011*