

**Keith Evan Green** RA, PhD

*Jean & Douglas McLean Professor in Human Centered Design • Professor, Sibley School of Mechanical & Aerospace Engineering*

*office address* **Cornell University**  
2421 MVR (Martha Van Rensselaer Hall)  
Ithaca, NY 14850-4401 USA

*lab* **Architectural Robotics Lab**, 212 and 202 HEB (Human Ecology Building)

*website* <https://arl.human.cornell.edu/>; [my personal page](#);

*email* [keg95@cornell.edu](mailto:keg95@cornell.edu)

**Research Focus**

My *Architectural Robotics Lab* imagines rooms and their furnishings as robots that enable, support, and augment inhabitants. More practically, I design robot-rooms, and study *how* these rooms partner with people and *what* people make of them and with them. I recognize the physical, built environment, from furnishings to the metropolis, as a next frontier of design, robotics, computing, and cognitive science.

*focus areas* Architectural Robotics; Interaction Design; HCI; HRI, Enabling Technologies.  
*applications* Healthcare & Wellbeing; Learning & Literacy; Individual & Collaborative Work, Play, and Creative Activity.

**Education**

1998 **Ph.D. in Architecture, University of Pennsylvania**  
*advisors:* Marco Frascari, David Leatherbarrow, Joseph Rykwert, and Wendy Steiner  
*thesis topic:* Interactive environments and human-environment interactions within them.

1993 **M.S. in Architecture, University of Pennsylvania**

1990 **M. Arch., University of Illinois at Chicago** | Director Stanley Tigerman

1985 **B.A. with Honors in Psychology, Minor in English, University of Pennsylvania**  
*honors:* Member of PSI CHI, the National Honor Society in Psychology

**Academic Appointments**

since 2016 **Cornell University** (Ithaca, New York, USA)  
*home appointment* • **The Jean & Douglas McLean Professor in Human Centered Design** (HCD)  
*joint appointment* • **Professor, Sibley School of Mechanical and Aerospace Engineering** (MAE)(Robotics)(HRI)  
*grad. field member* • **Professor in the Graduate Field, Information Science** (IS)  
1999-2016 **Clemson University** (Clemson, South Carolina, USA)  
*home appointment* • **Professor and the Homer and Leola Mickel Endowed Chair in the School of Architecture**  
*joint appointment* • **Professor, Holcombe Department of Electrical & Computer Engineering**

1994-99 **University of Auckland / New Zealand**  
• **Lecturer in Architecture** (British Lecturer ≈ USA Assistant Professor); **Tenured (1997)**.

**Key Administrative Appointments**

Spring 2021 **Interim Chair, Department of Design + Environmental Analysis, Cornell University**  
2010-19 **Founding Director, Clemson U. Institute for Intelligent Materials, Systems & Environment**  
2001-03 **Director, Clemson U. Barcelona Architecture Center (BAC), Spain**

**Professional Memberships**

**Registered Architect** (South Carolina #6610 – active; Washington #6036 – currently frozen)  
**Senior Member, IEEE** (*Institute of Electrical and Electronics Engineers*) #90609014 (9% are Senior)  
**Member, ACM-SIGCHI** (HCI, *Association for Computing Machinery*) # 9050700

## Key Sponsored Research Projects



### Robot-Rooms

**AIM:** Within the physical spaces where we live our lives—working, playing, learning, relaxing—we envision a robot that is neither life-like nor industrial but rather environmental. This is a new typology of robotics: a robot embedded in the walls, ceiling, furnishings, and floors of such physical spaces that gives form to and is adaptive to human activity. Robot-rooms actively reconfigure themselves to make many places – practical and escapist.

award: **\$600,000 (#IIS-2221125; 2022-25) with \$8,000 REU support (2023-25)**

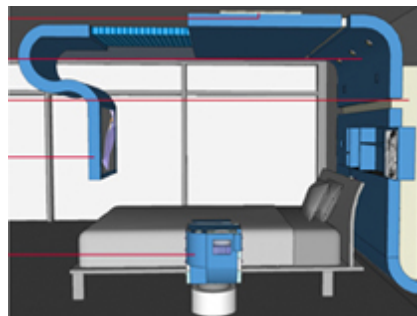
sponsor: **National Science Foundation | Human Centered Computing**

Principal Investigator: **Keith Evan Green (PI, 56% share)**

Co-PIs: I. Walker, Electrical & Computer Engineering

partners: The Gettys Group, Chicago, IL

project webpage: [https://arl.human.cornell.edu/research\\_SPACES-for-health.html](https://arl.human.cornell.edu/research_SPACES-for-health.html)



### home+

**AIM:** To design, prototype and evaluate an intelligent, physical environment featuring a suite of collaborative, robotic home furnishings distributed across any home. home+ aims to increase the quality of life of individuals with impaired mobility and/or cognitive functioning by intelligently enabling routine domestic activities that define independence.

award: **\$606,218 (#IIS-1703267; 2016-21) with REU support**

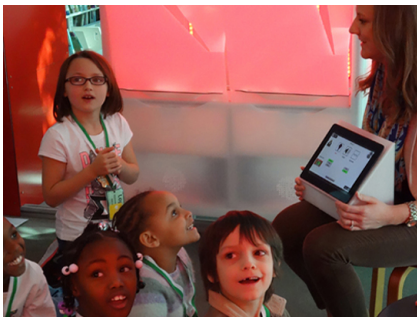
sponsor: **National Science Foundation | Smart and Connected Health**

Principal Investigator: **Keith Evan Green (PI, 34% share)**

Co-PIs: I. Walker, Electrical & Computer Engineering.

partners: Greenville Hospital System, South Carolina

project webpage: <https://arl.human.cornell.edu/research%20-%20home+vision.html>



### The LIT ROOM / The LIT KIT

**AIM:** To develop an evocative, literacy support tool for read alouds. The LIT ROOM is a novel suite of user-friendly, networked, “architectural robotic” artifacts embedded in the library. The LIT KIT is its transportable extension. These physical-digital environments are transformed by words read so that the everyday space of the library or classroom “merges” with the imaginary space of the book: *The book is a room.*

award: **\$199,950 (#IIS-1352992; 2013-15)**

sponsor: **National Science Foundation | Human-Centered Computing**

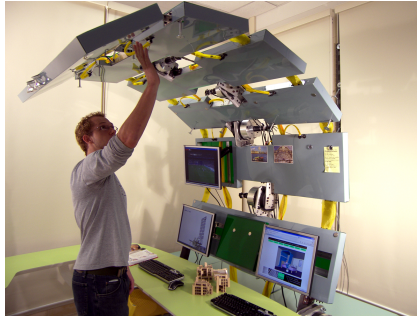
Principal Investigator: **Keith Evan Green (PI, 40% share)**

Co-PIs: Ian Walker, Electrical & Computer Engineering, Susan Fullerton, Education

partners: *The Richland County Public Library* (Columbia, SC)

project webpage: <https://arl.human.cornell.edu/research-LITROOM.html>

## Key Sponsored Research Projects (continued)



### The Animated Work Environment [AWE]

**AWE video** accessed over 40,000 times.

**AIM:** To design, prototype and evaluate an articulated, programmable, interior environment embedded with information technologies facilitating productivity, connectedness and innovation across fluid assemblages of people working in a variety of locations and settings.

award: **\$400,000 (#IIS-0534423; 2005-09)**

sponsor: **National Science Foundation | Human-Centered Computing**

Principal Investigator: **Keith Evan Green (PI, 34% share)**

Co-PIs: L. Gugerty, Psychology; I. Walker, Electrical & Computer Engineering; J. Witte, Sociology

project webpage: <https://arl.human.cornell.edu/research-AWE.html>



### The Assistive Robotic Table [ART]

**AIM:** To design, construct, field, and evaluate "ART," an Assistive Robotic Table supporting independent living. ART is one component in a suite of intelligent components collectively called *home+* that aims to increase the quality of life of healthy individuals as well as persons with impaired mobility, by intelligently supporting the physical organization of their immediate environment.

award: **\$271,250 (#IIS-1116075; 2011-15)**

sponsor: **National Science Foundation | Smart Health and Wellbeing**

Principal Investigator: **Keith Evan Green (PI, 40% share)**

Co-PIs: Ian Walker, Electrical & Computer Engineering; Johnell Brooks, Human Factors Psychology

partners: Fraunhofer Institute, Kaiserslautern, Germany; Greenville Hospital System, South Carolina

project webpage: <https://arl.human.cornell.edu/research%20-%20comforTABLE.html>

## Larger Seed and Workshop Grants



### ARCHIBOTS – An International Workshop

**ARCHIBOTS** was a full-day workshop offered on September 30, 2009 in Orlando, Florida as part of *Ubicomp, the International Conference on Ubiquitous Computing*. ARCHIBOTS identified opportunities and challenges in research and education in the emerging area of "Architectural Robotics" - intelligent and adaptable physical environments at all scales.

award: **\$32,062 (#IIS-0925238; 2008-2009)**

sponsor: **National Science Foundation | Small Grant for Exploratory Research**

Principal Investigator: **Keith Evan Green (PI)**

Co-PIs: Mark D. Gross, Carnegie Mellon University

project webpage: [http://workgroups.clemson.edu/AAH0503\\_ANIMATED\\_ARCH/archibots.htm](http://workgroups.clemson.edu/AAH0503_ANIMATED_ARCH/archibots.htm)

## Larger Seed and Workshop Grant (continued)



### IMAGINARIES OF THE FUTURE:

#### An International Research Network

<https://imaginariesofthefuture.wordpress.com/>

An International Research Network formed by seven investigators conducting a multidimensional, trans-disciplinary study of how the future is imagined. The aim is to develop a set of critical tools to advance methods and approached in futurist research. The main activity of the Network is six symposia hosted by the Network Partner Institutions.

*period:* **20014-17**  
*sponsor:* **The Leverhulme Trust** supporting the formation of *Leverhulme International Research Network*

*award:* **£109,906 = \$190,000 USD**  
*Principal Investigator:* Nathaniel Coleman (PI), University of Newcastle, UK

*network members:* **Keith Evan Green**, Brian Greenspan (Carleton University, Canada), Kenneth Hanshew (University of Regensburg, Germany), Susan McManus (Queens University, Belfast), Tom Moylan (Limerick University, Ireland), Dan Smith (Chelsea College of Arts, London).

## Major Gifts to my Lab

- 2022 **\$75,000 from The Gettys Group (Chicago, IL) supporting research in intelligent environments**  
One-year unrestricted support (for a PhD student in my lab).
- 2011 **\$1,573,455 from Siemens PLM in software supporting research in intelligent environments**  
This gift in-kind of software counted towards Clemson University's "Will to Lead" capital campaign.

## Patents and Industry Support

patent pending **#12/584,944: "Construction System and Resilient Non-Woven Structural Building Panels."**

## Academic Honors and Small Research Awards

- 2023 Named ***The Jean & Douglas McLean Professor in Human Centered Design***
- 2022 **Residential Child Care Project (RCCP), Brofenbrenner Center, Cornell University**  
\$19,994 seed award supporting pilot research for "eMo-Bo: A Robotic Chatbox Supporting Positive Relational Processes between Children and Adults in Out-of-Home Care Settings.
- 2020 **Engaged Cornell / DEA Curriculum Advancement Grant**  
\$1,500 to support pilot research.
- 2015 **Lee Gift Research Grant, Cornell**  
\$10,000 to support pilot research.
- 2015 **Named *The Homer Curtis Mickel and Leola Carter Mickel Endowed Chair in Architecture***  
This title came with a salary stipend, teaching release time, and developmental resources.
- 2014 **Visiting Professor, Industrial Design Engineering, TU Delft (The Netherlands)**  
Visiting Professor at the Technical University of Delft for the Fall Semester.  
*host:* *ID StudioLab (primary) and the Hyperbody Research Group (secondary)*
- 2014 **Awarded the Fulbright Visiting Chair in "Technology, Industry and the Environment"**  
One of three Visiting Chairs awarded across Canada. (Declined to visit TU Delft – a better fit.)  
*host:* *Hexagram Centre for Research-Creation in Media Arts and Technologies*  
Concordia University, Montreal
- 2006-09, 2012-16 **AAH Faculty Research Fellowships, Clemson University**  
Teaching release of 3 credits per semester or \$3000 to support research (e.g. book-writing).
- 2011-13 **Named "Creativity Professor" in the College of Architecture, Arts & Humanities**  
Salary supplement and developmental funds rewarding creativity in teaching and scholarship.

- 2005 **Thesis Studio selected by AIA/COTE for "best practices in sustainable design education"**  
*link:* [http://www.aia.org/cote\\_tides](http://www.aia.org/cote_tides)
- 2004 **Clemson University Board of Trustees 2003 Award for Faculty Excellence**  
*link:* <http://www.clemson.edu/awards/faculty/2003/facultylist.htm>
- 2000 **Council of Principal Investigators, Clemson University**  
 One of five junior faculty members across the University to receive this recognition.
- 1992-94 **Fellowship, Ph.D. Program in Architecture, U. Pennsylvania**  
 Full tuition, fees, and living stipend for the two years in-residence
- 1989 **A.I.A. Roche Traveling Scholarship**
- 1989 **The Schiff Prize in Architecture, the Art Institute of Chicago. First Prize (\$8000)**
- 1989 **National A.I.A. Foundation, Certificate of Merit**
- 1989 **U. Illinois John Entenza Scholarship for Architecture**
- 1989 **Women's Architectural League of Chicago Scholarship**
- 1989-90 **Graduate College Fellowship, U. Illinois at Chicago**  
 Full tuition, fees, and living stipend for one academic year
- 1987 **Full-tuition scholarship, Academy of Art College, San Francisco**
- 1985 **Member, PSI CHI, the National Honor Society in Psychology**

## Published Books

- Green, Keith Evan. 2016. ***Architectural Robotics: Ecosystems of Bits, Bytes and Biology***. Cambridge, MA: MIT Press. <https://mitpress.mit.edu/books/architectural-robotics>
- Green, Keith Evan. 2011. ***Gio Ponti and Carlo Mollino***. Trans. Y. Kishimoto. Tokyo: Kajima Press.
- Houayek, H., Green, K. E. and Walker, I. D. 2009. ***The Animated Work Environment: An Architectural-Robotic System for a Digital Society***. Saarbrücken, Germany: Verlag.
- Keith Evan Green. 2006. ***Gio Ponti and Carlo Mollino***. New York: Edwin Mellen Press.

## Contributions to Books (In HCI, CS, Robotics, Mech. Eng., PI is last author.)

- Zhang, M., Green, K.E. (In Press, 2023.) **Smart Assistive Design Concepts for Enhancing Independent Living in Domestic Environments**. In: M. Kanaani (ed.) *Routledge Companion to Smart Design Thinking in Architecture & Urbanism for a Sustainable Living Planet*.
- Green, K.E. 2023. **Robots in the Room: Robots Are the Room: The Future of Robotics, Architectural Design, and Domestic Routine**. In: M. Kanaani (ed.) *The Routledge Companion to Ecological Design Thinking: Healthful Ecotopian Visions for Architecture and Urbanism*. Routledge. pp. 316-327. ISBN 9781032023892
- Wang, Y. and Green, K. E. 2023. **How Do We Want to Interact with Robotic Environments? User Preferences for Embodied Interactions, from Pushbuttons to AI**. Book Chapter. In P. Morel. and H. Bier (ed.s) *Disruptive Technologies: The Convergence of New Paradigms in Architecture*. Springer Series in Adaptive Environments. New York: Springer, Cham. pp. 25-44. [https://doi.org/10.1007/978-3-031-14160-7\\_3](https://doi.org/10.1007/978-3-031-14160-7_3).
- de Aguiar C.H.A., Green K.E. 2020. **Communit Building**. Book Chapter. In McCrickard D.S., Jones M., Stelter T.L. (eds) *HCI Outdoors: Theory, Design, Methods and Applications*. Human-Computer Interaction Series. Springer. [https://doi.org/10.1007/978-3-030-45289-6\\_12](https://doi.org/10.1007/978-3-030-45289-6_12)

5. Vijykumar, A., Green, K. E., & Walker, I. D. 2019, July. Book Chapter. **A Scalable, Low-Cost, and Interactive Shape-Changing Display**. In *Science and Information Conference*. K. Arai et al. (Eds.): SAI 2018, AISC 858, pp. 772–782. [https://doi.org/10.1007/978-3-030-01174-1\\_5](https://doi.org/10.1007/978-3-030-01174-1_5)
6. Green, Keith Evan. 2018. **“Dispositions and Design Patterns for Architectural Robotics.”** Book Chapter. In *Robotic Building*. ed.s Holger Schnädelbach, Henriette Bier, and Kristof Van Laerhoven. New York: Springer, pp. 121-138. <https://doi.org/10.1007/978-3-319-70866-9>
7. Green, Keith Evan. 2017. **“The Convivial ART of Vortical Thinking.”** Book Chapter. In *Critical and Clinical Cartographies: Architecture, Robotics, Medicine and Philosophy*. ed.s Andrej Radman and Heidi Sohn. Edinburgh, Scotland: Edinburgh University Press, pp. 143-167.
8. Walker, I. D. and Green, K. E. 2009. **“Continuum Robots.”** Book Chapter. In *The Encyclopedia of Complexity and Systems Science*. New York: Springer, pp. 1475-1485.
9. Green, Keith Evan. 2000. **Aldo Rossi, Gio Ponti, Ernesto Rogers, Carlo Mollino, Domus, ...** Encyclopedia Entries. In the *Encyclopedia of Contemporary Italian Culture*. London: Routledge, various pages.
10. Green, Keith Evan. 2005. **Contribution to Ecological Literacy in Architectural Education**. Report. In *AIA / Committee on the Environment Report on Sustainable Architecture*. Reprinted in: Ann Thorpe, *Designer's Atlas of Sustainability*, <http://www.designers-atlas.net/teachguide.html>.

### Peer-Reviewed Journal Articles (In HCI, CS, Robotics, Mech. Eng., PI is last author.)

1. Wang, Y., Green, K.E. 2023. **How Do We Want to Interact with Robotic Environments? User Preferences for Embodied Interactions from Pushbuttons to AI**. In: Morel, P., Bier, H. (eds) *Disruptive Technologies: The Convergence of New Paradigms in Architecture*. Springer Series in Adaptive Environments. Springer, Cham. pp. 25-44. [https://doi.org/10.1007/978-3-031-14160-7\\_3](https://doi.org/10.1007/978-3-031-14160-7_3).
2. De Aguiar, C., Leshed, G., Pinch, T., and Green, K. E. 2022. **“Evaluation of communit, a Large-Scale, Cyber-physical Artifact Supporting Diverse Subgroups Building Community.”** *Journal of Smart Cities and Society* (2022), IOS Press, pp. 287-296. DOI: 10.3233/SCS-220007
3. Wang Y., Green K.E. 2022. **“Space Agency”: A “Strong Concept” for Designing Socially Interactive, Robotic Environments**. In: Li H. et al. (eds) *Social Robotics*. ICSR 2021. *Lecture Notes in Computer Science*, vol 13086. Springer, Cham. [https://doi.org/10.1007/978-3-030-90525-5\\_25](https://doi.org/10.1007/978-3-030-90525-5_25)
4. Wang, Y., Das, K., and Green, K. E. 2021. **“Are Robots Perceived as Good Decision-Makers? Investigation of Trust & Preference of Robot Referees.”** *Journal of Behavioral Robotics*, vol 12, pp. 287-296. DOI: <https://doi.org/10.1515/pjbr-2021-0020>. Available at <https://www.degruyter.com/document/doi/10.1515/pjbr-2021-0020/html>
5. Brooks, J., Jenkins, C., Kocher, D., Wang, Y., Shield, R., Hawks, Z., Walker, I. D., Tanner, S. L., Snider, R. G., and Green, K. E. 2021. **Before coming home: The value of interaction studies with rehabilitation specialists using low-fidelity, physical prototypes prior to inserting novel assistive technologies into seniors’ homes**. *Smart Health*, Volume 22, 2021,100248. ISSN 2352-6483, <https://doi.org/10.1016/j.smhl.2021.100248>.
6. Soleimani, A., Herro, D., Green, K. E., and Walker, I. D. 2019. **“CyberPLAYce – A Tangible, Interactive Learning Tool Fostering Children’s Computational Thinking through Storytelling.”** *International Journal of Child-Computer Interaction*, Elsevier, 20C, pp. 9-23. <https://doi.org/10.1016/j.ijcci.2019.01.002>

7. Green, K. E. 2018. **"Why Make the World Move? Motivations for Adaptive Environments, a Next Horizon of Human Computer Interaction."** *Spool* (special Issue on "Robotic Building"). 4(1): 27-35. ISSN 2215-0897.  
Available at [https://journals.open.tudelft.nl/index.php/spool/issue/view/508/SPOOL\\_4\\_1](https://journals.open.tudelft.nl/index.php/spool/issue/view/508/SPOOL_4_1).
8. Yanik, P.M., Threatt, A.L., Merino, J., Manganelli, J., Brooks, J.O., Green, K.E. and Walker, I.D. 2016. **"A Novel Approach to Lifelong Learning for Robotic Response to Gesture."** *WSEAS Transactions on Computer Research*, 4: 138–152.
9. Kapadia, A., Walker, I. D., Green, K. E., Manganelli, J., Houayek, H., James, A., Kanuri, V., Mokhtar, T., Siles I., and Yanik, P. 2014. **"A Novel Approach to Rethinking the Machines In Which We Live: A Multidisciplinary Course in Architectural Robotics."** *IEEE Robotics and Automation Magazine [RAM]*, 21(3) (September 2014): 143-150.
10. Houayek, H, Green, K. E., Gugerty, L. Walker, I. D. and Witte, J. 2014. **"AWE: An Animated Work Environment for Working with Physical and Digital Tools and Artifacts."** In *Journal of Personal and Ubiquitous Computing [JPUIC]*, June 2014, Volume 18, Issue 5, pp. 1227–1241.
11. Yanik, P.M., Merino, J., Threatt, A.L., Manganelli, J., Brooks, J.O., Green, K.E. and Walker, I.D. 2014. **"A Gesture Learning Interface for Simulated Robot Path Shaping with a Human Teacher."** *IEEE Transactions on Human Machine Systems*, 44(1): 41–54.
12. Manganelli, J., Threatt, A., Brooks, J. O., Smolentzov, L., Mossey, M., Healy, S., Merino, J., Yanik, P., Walker, I. and Green, K. 2014 (Fall). **"Confirming, Classifying, and Prioritizing Needed Over-the-Bed Table Improvements via Methodological Triangulation."** *Health Environments Research & Design Journal [HERD]*, 8(1): 94-114.
13. Manganelli, J., Threatt, A., Brooks, J. O., Merino, J., Yanik, P., Healy, S., ... Green, K. 2014. (Winter). **"Examination of how and why over-the-bed tables are used: Use cases and needs from healthcare providers."** *Health Environments Research & Design Journal [HERD]*, 7(2), 104–126.
14. Manganelli, J., Threatt, A., Brooks, J. O., Smolentzov, L., Mossey, M., Healy, S., Walker, I. and Green, K. 2013 (Spring). **"Examination of Overbed Tables: Healthcare Provider and User Preferences."** *Health Environments Research & Design Journal [HERD]*, 6(3): 9–29.
15. Brooks, J.O., Walker, I.D., Green, K.E., Manganelli, J., Merino, J., Smolentzov, L., Threatt, T., Yanik, P.M., Ficht, S., Kriener, R., Mossey, M., Mutlu, A., Salvi, D., Schafer, G., Srikanth, P., & Xu, P. 2012. **"Robotic alternatives for bedside environments in healthcare."** *International Journal of Systems Applications, Engineering & Development*. 4(6): 308-316.
16. Brooks, J. O., Walker, I. D., Green, K. E., Manganelli, J., Merino, J., Smolentzov, L., Threatt, T. and Yanik, P. 2012. **"Robot Bedside Environments for Healthcare."** *International Journal of Circuits, Systems and Signal Processing*, <http://www.naun.org/journals/circuitssystemssignal> [online]; and, *Proceedings of the 12th WSEAS International Conference on Signal Processing, Robotics and Automation, (ISPRA '12)*, Cambridge, U.K, pp. 32–37.
17. Brooks, J. O., Smolentzov, L., DeArment, A., Logan, W., Green, K., Walker, I., Honchar, J., Guirl, C., Beeco, R., Blakeney, C., Boggs, A., Carroll, C., Duckworth, K., Goller, L., Ham, S., Healy, S., Heaps, C., Hayden, C., Manganelli, J., Mayweather, L., Mixon, H., Price, K., Reis, A. & Yanik, P. 2011. **"Toward a 'smart' nightstand prototype: An examination of nightstand table contents and preferences."** *Health Environments Research & Design Journal [HERD]*, 4(2), 91-108.
18. Yanik, P., Manganelli, J., Smolentzov, L., Merino, J., Walker, I. D., Brooks, J., and Green, K. E., 2011. **"Sensor Placement for Activity Recognition: Comparing Video Data with Motion Sensor Data."** *International Journal of Circuits, Systems and Signal Processing*, Issue 3, vol. 5, 2011: 279–286.

19. Green, K. E. 2003. “**Architecture After Capitalism – Reply from Spain.**” *Praxis* 5, special issue on “Architecture after Capitalism.”
20. Green, K. E. 1998. “**Between Angels and Lovers: The Role of the Architect....**” *Architectural Theory Review*, November, 1998, University of Sydney, pp. 32–44.
21. Green, K. E. 1996. “**Whimsical Beginnings: A First-Year Design Studio.**” Review of the *Committee of Heads of Architecture Schools of Australia*, pp. 73–74.
22. Green, K. E. 1995. “**Citadel: A Precise Anomaly.**” *Interstices* 3, July 1995, pp. 116–117.

### Peer-Reviewed Papers in Proceedings (ACM/IEEE & Springer paper ≈ “journal paper”; PI is last author.)

1. Elena B. Sabinson and Keith Evan Green. (Accepted, 2023). **With Every Breath: Testing the Effects of Soft Robotics on Attention and Stress.** In Proceedings of the 19th Annual ACM/IEEE International Conference on Human Robot Interaction (HRI '24).
2. Elena B. Sabinson and Keith Evan Green. 2023. **A Walk in Nature: Exploring the Creative Potentials of a Generative Design Tool for Soft Robotic Surfaces that Foster a Connection with Nature.** In Proceedings of the 15th Conference on Creativity and Cognition (C&C '23). Association for Computing Machinery, New York, NY, USA, 185–199. <https://doi.org/10.1145/3591196.3593367>
3. Ge Guo, Gilly Leshed, and Keith Evan Green. 2023. “**I normally wouldn't talk with strangers**”: **Introducing a Socio-Spatial Interface for Fostering Togetherness Between Strangers.** In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23)*, April 23–28, 2023, Hamburg, Germany. ACM, New York, NY, USA 20 Pages. <https://doi.org/10.1145/3544548.3581325>  
→ **HONORABLE MENTION AWARD**
4. Carlos Henrique Araujo de Aguiar, Trevor Pinch, and Keith Green. 2022. **De-description at early phases of artifact design.** In *Proceedings of the 25th International Academic Mindtrek Conference (Academic Mindtrek '22)*. Association for Computing Machinery, New York, NY, USA, 179–191. <https://doi.org/10.1145/3569219.3569380>
5. Deanna Kocher, Emily Hana Abbruzzese, Olivia Rodriguez, Julia Mayourian, and Keith Evan Green. 2022. **Sapling & the Travelling Forest: A table-top mobile robot platform for child-robot games.** In *Interaction Design and Children (IDC '22)*. Association for Computing Machinery, New York, NY, USA, 621–624. <https://doi.org/10.1145/3501712.3535273>
6. G. Tan, H. Hidalgo, H. -L. Kao, I. D. Walker and K. E. Green. 2022. **A Continuum Robot Surface of Woven, McKibben Muscles Embedded in and Giving Shape to Rooms, 2022** *International Conference on Robotics and Automation (ICRA)*, Philadelphia, PA, USA, 2022, pp. 11432-11437, doi: 10.1109/ICRA46639.2022.9811987.
7. Y. Wang and K. Evan Green. 2022. **Designing Socially Interactive, Robotic Environments through Pattern Languages.** *2022 18th International Conference on Intelligent Environments (IE)*, Biarritz, France, 2022, pp. 1-8, doi: 10.1109/IE54923.2022.9826761.
8. Yixiao Wang and Keith Evan Green. 2021. **Space Agency: A ‘Strong Concept’ for Designing Socially Interactive, Robotic Environments.** In *Social Robotics: 13th International Conference, ICSR 2021*, Singapore, November 10–13, 2021, Proceedings. Springer-Verlag, Berlin, Heidelberg, 295–307. [https://doi.org/10.1007/978-3-030-90525-5\\_25](https://doi.org/10.1007/978-3-030-90525-5_25)
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10. Sabinson, E. B. and Green, K. E. 2021. "**How do we feel? User Perceptions of a Soft Robot Surface for Regulating Human Emotion in Confined Living Spaces,**" 2021 30th IEEE International Conference on Robot & Human Interactive Communication (RO-MAN), 2021, pp. 1153-1158, doi: 10.1109/RO-MAN50785.2021.9515499.
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### Peer-Reviewed Papers for Video, Demo, Workshop, and Late-Breaking Sessions

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  23. Green, K. E., Eckhoff, A., Rosenblith, S., and Walker, I. D. 2009. “**Extending the Reggio Educational Approach to Creativity Support Environments.**” *WiP paper in Proceedings of ACM Creativity and Cognition 2009*, Berkeley, CA, pp. 375–376.
  24. Green, K. E., Walker, I. D., Brooks, J. O., and Logan, W. C. 2009. “**comforTABLE: A Robotic Environment for Aging in Place.**” Late-breaking paper, *ACM/IEEE Conference on Human-*

*Robot Interaction HRI'09*, La Jolla, CA, pp. 223-224.

25. Logan, W. C., Brooks, J. O., DeArment, A., Honchar, J., Green, K., Walker, I. & Smolentzov, L. 2009. "**Contents of nightstands among older residents of skilled nursing facilities.**" Poster presented at the *2009 Gerontological Society of America Scientific Meeting*, Atlanta, GA.
26. Smolentzov, L., Brooks, J., Walker, I., Green, K., Logan, W., Duckworth, K. & Goller, L. 2009. "**Older and younger adults perceptions of 'smart' furniture.**" Poster presented at the annual meeting of the Gerontological Society of America, Atlanta, GA.
27. Houayek, H. and Green, K. E. 2009. "**The Animated Work Environment.**" Poster presented at the *2009 ACSA National Conference*, Portland, OR.
28. Green, K. E. 2008. "**AWE: An Intelligent Environment Supporting Digital and Tactile Design Manipulation.**" *Workshop Proceedings of DC+C [Design, Computing + Cognition] 2008*, Atlanta.
29. Green, K. E. 2008. "**The Interactive, Adaptive 'AWE' Work Station.**" *Interactive and Adaptive Furniture*, hosted by Microsoft Research/University of Aarhus, Denmark.
30. Green, K. E., Gugerty, L., Walker, I., and Witte, J. C. 2007. "**An Animated Work Environment Supporting Working Life in a Digital Society.**" Poster presented at *ACADIA 2007*, Halifax, Nova Scotia.
31. Green, K. E., Gugerty, L. J., Witte, J. C. and Walker, I. D. 2006. "**Three Robot-Rooms / The AWE Project.**" *Proceedings of 2006 CHI: the ACM Conference on Human Factors in Computing Systems*, Montreal, Canada, April 2006, pp. 809–814.

## Design Awards by Jury-Review

1. Green, K. E. and Houayek, H. 2008. **An Animated Work Environment for Architects of the Info-World for the "DI Designers' Workstation" International Competition.** A physical, robot-enabled workstation for the designers of an increasingly digital world.
  - *award*: Competition Winner – Third Prize in Professional Category (and only USA winner)
  - *exhibition*: Featured at "The Oporto Show" Trade Fair of Design, Interiors and Architecture, Portugal.
2. Green, K. E. 2003. **Houses of Ivy: An Affordable, Sustainable House Prototype.**
  - *award*: Competition Winner, the HOME House project. One of 25 winners from 440 design proposals in this international competition; Touring exhibit. Book publication.
  - *link*: <http://www.secca.org>; also overviewed in *ArtNews*, *ArtPapers*, *Architectural Record*...
3. Green, K. E., Brand, D. and *Architectus*. 1997-99. **Viaduct Basin, an Urban Waterfront Design for the America's Cup, Auckland, New Zealand.**
  - *award*: International competition first-prize and contract for the work (completed).
  - *award*: *New Zealand Institute of Architects/Auckland Award for Architecture* (2000).
4. Green, K. E. 1995-99. **Domus Farfalla: A residence across two disparate sites to accommodate a family after the death of a member.**
  - *award*: Selected for exhibition at *The Art Institute of Chicago* (Chicago, Illinois).
5. Green, K. E. as Project Designer at NBBJ. 1991. **Eddie Bauer Prototype Retail Store Prototypes.**
  - *award*: Competition-winning design and contract for the work.
6. Green, K. E. as Project Architect at RAS. 1990-91. **Lake Pointe Condominiums, Seattle, Washington.**
  - *award*: Competition-winner for contract (completed)
  - *award*: MAME-NW award for "Best Multi-Family Project" and "Best Floor Plan."
7. Green, K. E. 1989. **The Life Cycle House** (design project)



- *Permanent collection, Art Institute of Chicago*  
<https://www.artic.edu/artists/10225/keith-ewan-green>
- *award: The Schiff Prize in Architecture, the Art Institute of Chicago. First Prize (\$8000)*
- *award: The O'Donnell Wicklund, Pigozzi & Peterson Prize "for Outstanding Project Design."*

## Design Works Selected by Major Museum Collections and Catalogues

1. Green, K. E. 2003. **Houses of Ivy: An Affordable, Sustainable House Prototype.** *Catalogued in:* Brown, David J. *The HOME House Project: The Future of Affordable Housing* (Cambridge, MA: MIT Press, 2004).
2. Green, K. E. **Domus Farfalla: A residence across two disparate sites to accommodate a family after the death of a member.** Permanent Collection, *The Art Institute of Chicago* (Chicago, Illinois)
3. Green, K. E. **The Life Cycle House** Permanent Collection, *The Art Institute of Chicago* (Chicago, Illinois)
  - *link:* <https://www.artic.edu/artworks/242063/life-cycle-house-schiff-foundation-fellowship-presentation-drawings>

## Design Exhibitions—selected

1. Green, K. E. with Henrique Houayek. 2008. **Designers Workspace Competition Winner.** Featured at "The Oporto Show" Trade Fair of Design, Interiors and Architecture, Portugal.
2. Green, K. E. 2003-6 "**Houses of Ivy.**" Arizona State U.; U. Minnesota; El Paso Museum of Art; University of Maryland, and 5 other university museums and museums of art.
3. Green, K. E. 1999-00. **Life-Cycle House" and "Domus Farfalla"** The Art Institute of Chicago

## Non Peer-Reviewed Publications

1. Pillan, M., Bier, H., Green, K. E., and Pavlovic, M. 2020. **Animated and Performative Architecture.** SPOOL (TU Delft) v7 issue3, pp. 3-4. ISSN 2215-0897; E-ISSN 2215-0900; OPEN ACCESS.
2. Bier, H. and Green, K.E. 2019. **Dialogs on Architecture: Actuated and Performative Architecture: Emerging Forms of Human-Machine Integration.** SPOOL (TU Delft) v6 issue1, pp. 49-54. ISSN 2215-0897; E-ISSN 2215-0900; OPEN ACCESS.
3. Green, K. E. "**Giò Ponti and his fabulous Villa Planchart.**" 2013. *Italian 9: Ubiquitous Influences.* Volume 20. Number IX. 2013, in-print and on-line at <http://magazine.italianjournal.it/house-and-impermanence-milanese-architect-gio-pontis-unforgettably-philosophical-bent/>.
4. Gross, M. D. and Green, K. E. 2012. "**Architectural Robotics, Inevitably.**" *interactions*, vol. xix.1 (January + February 2012), pp. 28-33. My article establishing "architectural robotics" as a research domain in the ACM CHI community. <http://mags.acm.org/interactions/20120102#pg1>.
5. Green, K. E. and Ellison, M. 2009. "**Non-Woven Fabrics as Structural Building Materials.**" A paper selected for presentation at Clemson University's Summit on Advanced Materials.
6. Green, K. E. and Houayek, H. 2008. "**An Animated Work Environment for the Info-World.**" [widely publicized on the internet, e.g. IEEE homepage]
7. Green, K. E. 2005. "**House of Ivy" in SOUTH.** Clemson University Press. Clemson, SC.
8. Green, K. E. 2004. "**Winning Designs.**" *Clemson World*, pp. 20-21. <http://cworld.clemson.edu/archive/2004/spring04/feature4.htm>
9. Green, K. E. 2004. "**Art of the Machine: New Self-Sustaining 'SURGE' Hospitals.**" *Proceedings of the 2004 AIA Health Architecture Conference*, Washington, 9 pages.
10. Green, K. E. 2004 (Spring). "**Architecture is a Butterfly.**" *CRIT* 57, pp. 32-34.

11. Green, K. E. 2000. "Art of the Machine: A Mobile Medical Hospital." *Proceedings of the 2000 AIA Health Architecture Conference*, Vancouver, 9 pages.
12. Green, K. E. 1998 (September). "Engaging Design: Salone 1998." *Architecture New Zealand*, pp. 92-96.
13. Green, K. E. 1995 (June). "The Elevated Ship." *Auckland Architecture Quarterly*, pp. 13-16.
14. Green, K. E. 1992 (July./August). "The Fantasy of Architectural Detailing." *Arcade*, p. 11.
15. Green, K. E. 1991 (December). "Interview with Steven Holl" on his "Edge Cities" exhibition). *Arcade*.
16. Green, K. E. 1991 (August). "Carlo Forcolini" (Review of lecture and exhibit). *Arcade*.
17. Green, K. E. 1991 (December). "Mi[e]s perceptions." *Arcade*, cover page, pp. 8-9.
18. Green, K. E. 1990 (September) "The Reawakening of Constructivism." *Arcade*. pp. 12-13.

## Invited Lectures and Presentations

- 2020 **TU Delft, Architectural Robotics Lecture** • "Ecosystems of Bits, Bytes, and Biology"
- 2019 **Information Science Colloquium Series, Cornell University** • "Architectural Robotics"
- 2018 **Long(er) Term Design Workshop, Info. Sci., University of Washington** • Distinguished Conversation
- 2018 **Sibley School of Mechanical & Aerospace Engineering Colloquium Series** • "Architectural Robotics"
- 2017 **Border Session, The Hague** (Europe's SXSW Tech Conference) • "Robots for Living In"
- 2017 **Matter Design Computation, Cornell University** • "Robots for Living In"
- 2016 **Conversations in Digital Humanities, Cornell University** • "The LIT ROOM: ..."
- 2016 **Game Set Match 3 Symposium, TU Delft** • "Ecosystems of Bits, Bytes, and Biology"
- 2014 **Critical and Clinical Cartographies Conference, TU Delft** • "The ART of Vortical Thinking"
- 2014 **TU Delft, Hyperbody Research Group lecture series** • "Architectural Robotics"
- 2014 **TU Delft, ID-studiolab lecture series, Industrial Design Engineering** • "Architectural Robotics"
- 2014 **Georgia Tech, Industrial Design and School of Computing** • "Architectural Robotics"
- 2013 **Carnegie Mellon University, School of Computer Science** • "Architectural Robotics"
- 2013 **University of North Carolina - Charlotte, CS/MArch Dual-Degree Launch** • "Architectural Robotics"
- 2012 **University of Texas Arlington, ECE Department Lecture Series** • "Architectural Robotics"
- 2009 **University of Tennessee** • "Animated Architecture"
- 2008 **North Carolina State University** • "Animated Architecture"
- 2007 **RPI (Rensselaer Polytechnic University)** • "Animated Architecture"
- 2005 **Virginia Tech** • "Animated Architecture"
- 2005 **Art Institute of Chicago** • "Animated Architecture"
- 2005 **Auburn University** • "Science and Design"

## Editorship, Peer-Reviewing, and other Professional Services

**Editorial Board** *Adaptive Environments* Book Series, Springer Publishing

**Editor** **SPOOL** (peer reviewed journal of architecture and design), **v7 issue3**. Ed.s. Margherita Pillan, Henriette Bier, Keith Green, and Milica Pavlovic. 2020. Issue dedicated to "Situated and Performative Architecture: Emerging Forms of Human-Machine Interaction." ISSN 2215-0897; E-ISSN 2215-0900; OPEN ACCESS.

- Invited Facilitator** *NSF Engineering Design and Systems Engineering (ESD/SYS) Workshop*
- Session Chair**
- *IEEE RO-MAN* • “Human Centered Design of Robots”
  - *IEEE IROS* • “Biologically-Inspired Robots”
  - *IEEE RO-MAN* • “Degrees of Autonomy and Teleoperation”
  - *IEEE IROS [Intelligent Robots and Systems]* • “Novel Robot Designs”
  - *Fiber Society International Meeting* • “Smart Textiles in Clothing & the Built Environment”
  - *Meeting of the Association of Collegiate Schools of Architecture* • “Digital Aptitudes”
- Progr. Committee** *DIS 2010 – ACM International Conference on the Design of Interactive Systems*
- Co-Convenor**
- Adaptive Environments Symposium 2021, Politecnico di Milano, September 9-10, 2021
  - “Utopia after the Human,” *Leverhulme Trust International Symposium*, Cornell, April 11-12, 2017.
  - “Interaction and Architectural Space” workshop, CHI 2014
  - “Ar-CHI-ecture” workshop, CHI 2012
  - Graduate Student Symposium, *ACM C&C – ACM Intern’l Conf. on Creativity & Cognition*
  - “ARCHIBOTS” workshop, UBICOMP 2009 • PI, \$32,062, NSF-CISE SGER #IIS-0925238.
- Reviewer**
- Journal of Architectural Education*
- ACM C&C • The ACM International Conference on Creativity & Cognition*
- Adaptive Environments book series (Springer)*
- ACSA • The Association of Collegiate Schools of Architecture*
- CHI • The ACM International Conference on Human Factors in Computing Systems*
- Journal of Child Development*
- DIS • The ACM International Conference on the Design of Interactive Systems*
- Einstein Foundation, Berlin – Strategic Professorships at Berlin Universities*
- ETH Zurich Research Commission*
- FOOTPRINT • The Journal of Digitally Driven Architecture, TU Delft, Netherlands*
- HRI • The ACM/IEEE International Conference on Human-Robot Interaction*
- ICRA • The IEEE International Conference on Robotics and Automation*
- IDC • The ACM/IEEE International Conference on Interaction Design and Children*
- IEEE ICDL • IEEE International Conference on Development and Learning*
- Johns Hopkins University Press*
- Interacting with Computers Journal, Oxford University Press*
- International Journal of Architectural Computing*
- IROS • The IEEE/RSJ International Conference on Intelligent Robots and Systems*
- National Science Foundation, CISE, Intelligent Systems*
- Netherlands Organization for Scientific Research*
- RA Letters • The IEEE Robotics & Automation Letters Journal*
- Routledge*
- SPOOL • Peer-reviewed, indexed journal of architecture published by TU Delft*
- TEI • The ACM International Conference on Tangible, Embedded, and Embodied Interaction*
- UIST • The ACM Symposium on User Interface Software and Technology*
- Pervasive • The ACM International Conference on Pervasive Computing*
- RO-MAN • The IEEE International Symposium on Robot and Human Interactive Communication*
- University of Texas Press*

**Cornell University | Teaching and Supervision | 2016 to date****Ph.D. Thesis Committee Chair – Ph.D. in Information Science (IS)**

Since 2021 **Chair for Serena Guo**  
 Topic: Cyber-physical environments cultivating togetherness amongst strangers.

**Ph.D. Thesis Committee Chair – Ph.D. in Human Behavior and Design (DEA)**

Graduated 2023 **Chair for Elena Sabinson, PhD DEA**  
 Topic: “pheB”: Bio-Cyber-Physical Architecture for achieving homeostasis in confined spaces.  
 Appointment: Assistant Professor (Tenure-Track), Design, U. Colorado-Boulder.

Graduated 2022 **Chair for Megni (“Ni”) Zhang, PhD DEA**  
 Topic: “SORT”: Wall-climbing robots for storing, delivering, and retrieving things, enabling independence.  
 Appointment: Assistant Professor (Tenure-Track), Industrial Design and iSchool, U. IL Urbana-Champaign.

Graduated 2021 **Chair for Carlos Henrique Araújo De Aguiar, PhD DEA**  
 Title: Building Community with transFORM, a Cyber-Physical Environment for Diverse Groups to Collaboratively Generate and Exhibit Media in Underused Public Spaces, Indoors and Out.  
 Appointment: Assistant Professor (Tenure-Track), Industrial Design and iSchool, U. IL Urbana-Champaign.

Graduated 2020 **Chair for Yixiao Wang, PhD DEA**  
 Title: Space Making Robots as “Agents”: A Design Paradigm Based on Human-Agent Interaction  
 Appointment: Assistant Professor (Tenure-Track), Industrial Design, Georgia Tech

**M.S. Thesis Committee Chair –Mechanical Engineering (MAE)**

Graduated 2023 **Chair for Deanna Kocher**  
 Topic: Child-robot collaboration towards understanding and cultivating child development and learning.  
 Award (2020): NSF GRFP (Graduate Research Fellowship Program); Tuition and Stipend for 3 years

**M.Eng. Chair – Mechanical Engineering (MAE) or otherwise specified**

Graduated 2023 **Supervisor for Bruno Dantas de Silva Tassari**  
 Design and fabrication of Robot Room surfaces.

Graduated 2023 **Supervisor for Robert Shield**  
 Iterative design and interoperability of assistive robot furniture for the home.

Graduated 2022 **Supervisor for Rick Wang**  
 Iterative design and interoperability of assistive wall-climbing and furniture robots.

Graduated 2022 **Supervisor for Kevin Liu**  
 Iterative design and interoperability of wall-climbing assistive robots.

Graduated 2021 **Supervisor for Ethan Valentine**  
 Designing and fabricating a “wand” interface and robot sensing for Child-Robot Interaction.

Graduated 2021 **Supervisor for Mark Worsley**  
 Advanced a suction-cup, vacuum pump, wall-climbing robot for SORT

Graduated 2021 **Supervisor for Olivia Roberts**  
 Localization for SORT robots and advancing the home+ table robot design.

Graduated 2021 **Supervisor for Jilly Cai**  
 An Architectural Robotics Platform for Delivering Outdoor, Public Library Services During COVID.

Graduated 2021 **Supervisor for Harrison Hidalgo**  
 Design of Woven and Knit Robot Surfaces

Graduated 2020 **Supervisor for Juliette Bendheim**  
 Design/Motion Planning of Continuum Robot “Fin” of a Non-Humanoid Robot for Child-Robot Learning

Graduated 2020 **Supervisor for Isha Pradhan**  
 Design of Soft Robot Surfaces for Homeostatis of Inhabitants in Confined Environments

Graduated 2020 **Supervisor for Yupei Yang (Computer Science)**

Graduated 2020	<b>Supervisor for Seshasowri Chunduri (Systems Engineering)</b> Machine Learning for Error-Prone Robot Partners Partnering with Young Children in Spatial Tasks Design of McKibben-Actuated Robot Surfaces
Graduated 2020	<b>Supervisor for Justin Jacobs</b> Design of Interfaces for home+
Graduated 2019	<b>Supervisor for Kevin Guo</b> Design of Interfaces for transFORM, a Room-Scaled Reconfigurable Environment for Under-Used ....
Graduated 2019	<b>Supervisor for Yeolim Jo</b> Design of Interfaces for transFORM, a Room-Scaled Reconfigurable Environment for Under-Used ....
Graduated 2019	<b>Supervisor for Katherine Roberts</b> Design of Interfaces for transFORM, a Room-Scaled Reconfigurable Environment for Under-Used ....
Graduated 2019	<b>Supervisor for Yuxin Zhou</b> Design of a Wireless Interface for Robot Surfaces, Created in <i>Unity</i> for Tablets and Smartphones.
Graduated 2019	<b>Supervisor for Richa Sirohi (System Engineering)</b> Systems Engineering of a Continuum Robotic Surface for Spacecraft and Space Habitation.
Graduated 2019	<b>Supervisor for Christian Ray</b> Two Robot Grippers: One for Enabling Robotics, One for Robot Surfaces
Graduated 2018	<b>Supervisor for Roanja Milo</b> Towards Mutual Cognitive Development in Children and Robots through their Interaction.
Graduated 2018	<b>Supervisor for Samantha Hollenberg</b> Kinematics of a Continuum Robotic Surface for Small, Physically Adaptive, Cognitive Spaces (Focus Application: Themed Entertainment).
Graduated 2018	<b>Supervisor for Alex Bernard)</b> Design, Kinematics, and Prototyping of transFORM, a Room-Scaled Reconfigurable Environment for Under-Used Public Space to Make Visible Under-Represented Citizens.
award	The <i>McManus Design Award</i> for a graduating student of the Sibley School of Mechanical & Aerospace Engineering, "based on a technical paper... presenting an original solution to a design problem."
link	<a href="http://www.mae.cornell.edu/mae/academics/upload/Award-Recipients-Final-Posting-2018.pdf">http://www.mae.cornell.edu/mae/academics/upload/Award-Recipients-Final-Posting-2018.pdf</a>
Graduated 2018	<b>Supervisor for Christina Keefe</b> Child – Robot Learning using Non-Humanoid Robots.

### M.S. Thesis Committee Chair – M.S. in Human Behavior and Design (DEA)

Since 2022	<b>Chair for Hsin-Ming Chao</b> Interactive and Intelligent Ambient Lighting Supporting Activities of Daily Living.
Graduated 2019	<b>Chair for Kaustav Das</b> An interactive cyber-physical artifact for healthcare.
Graduated 2019	<b>Chair for Paulina Villacreces</b> An interactive cyber-physical artifact for healthcare.

### M.S. and Ph.D. Thesis Committee Member – Design, MAE, Human Development (HD)

since 2022	<b>Committee Member for David Tompkins, Ph.D. student, HD (Robotics)</b> How technological changes in the home affect early development, and particularly early learning.
Graduated 2022	<b>Committee Member for Michael Suguitan, Ph.D. student, MAE (Robotics)</b> "At Least, Be Human: Humanizing the Robot as a Medium for Communication. "

### Teaching

Fall semesters	<b>DEA 6210 Architectural Robotics</b> Architectural robotics is defined as intelligent and adaptable built environments (featuring embedded robotics) that sense, plan, and act. This class: (1) grapples with larger research challenges in architectural robotics, and (2) asks interdisciplinary student teams to design an architectural robotic artifact responsive to one of these challenges.
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- Fall semesters **DEA 2730 Human-Centered Design Methods**  
 Focused on methods for designing for and with people in an increasingly cyber-physical world, with its many challenges and opportunities. Course topics include: design conceptualization, scenarios, videography, prototyping, collaborative design, usability, observations, Interviews, surveys, and “RtD.” While the methods considered apply to design broadly, Interaction Design and HCI are emphasized.
- Spring semesters **DEA 5210 Interaction Design**  
 The built environment made interactive and adaptive by embedded computation has great promise to support and augment us at work, school, and home, as we roam, interconnect, and age. Students in interdisciplinary teams will design and prototype artful, meticulous, cyber-physical artifacts and environments responsive to specific challenges of an increasingly digital society.
- Both semesters **DEA 4010/6020, MAE 4900/6900, INFOSCI 4900/7900, and DEA 9990**  
 Independent research/directed studies courses I offer. I typically have 1-3 students enrolled in each course or pair of courses listed (typically 6-10 students/semester).

### Summer Research Supervisor for Undergraduates Awarded Research Support

- Summer 2020 **Jackson Hardin (MechE)**  
 Award “Educational Learning Initiative” Fellowship, College of Engineering (\$2645)
- Summer 2019 **Robert Shield (MechE)**  
 Award NSF Research for Undergraduates (\$4000)
- Summer 2017 **Liheng Li (ECE)**  
 Award “Educational Learning Initiative” Fellowship, College of Engineering (\$4000)
- Summer 2017 **Audrey Tirtohadiguno (DEA)**  
 Award “Summer Research,” College of Human Ecology (\$4000)

## Clemson University | Teaching, Supervision, and Administration | 1999-2016

### Ph.D. Thesis Supervision (Committee Chair) – Ph.D. PDBE in Architectural Robotics

graduated 2015	for Arash Soleimani, PDBE • <i>CyberPLAYce</i> : A Cyber-Physical-Spatial Learning Environment.
graduated 2015	for George Schafer, PDBE • <i>The LIT KIT</i> : A Cyber-Physical Environment Supporting Literacy (NSF)
graduated 2013	for Anthony Threatt, PDBE • <i>ART</i> : An Assistive, Robotic Table for Post-Stroke Patients (NSF)
graduated 2013	for Joe Manganelli, PDBE • A Model-Based, Human-Centered Design & Analysis Method/Tool
graduated 2011	for Tarek Mokhtar, PDBE • <i>Monumental-IT</i> : A Robotic Monument Configured by Lay Citizens
graduated 2009	for Henrique Houayek, PDBE • <i>AWE</i> : A Robotic “Animated Work Environment (NSF)

### Ph.D. Thesis Committees – Electrical & Computer Engineering and other programs

graduated 2016	for Maryam Hamidpour, PhD PDBE • Integration of Smart Glazing in Buildings
graduated 2016	for Nixon Wonoto, PhD PDBE • Early Parametric Design/Optimization of Tessellated Structure
graduated 2016	for Michael Wooten, PhD ECE • Tendril Robots for Space (NASA/NSF-NRI)
graduated 2014	for Niraj Poudel, PhD PDBE • Phase-Change Materials for Architectural Design
graduated 2013	for Paul Yanik, PhD ECE • Emergent Gesture Recognition for Architectural Robotics (NSF)
graduated 2012	for Vidya Murali, PhD ECE • Low-resolution Vision for Autonomous Mobile Robots

### M.S. Thesis Committees – Electrical & Computer Engineering and Psychology

graduated 2017	Committee Member for Siddharth Verma (ECE) • Continuum Robotics
graduated 2017	Committee Member for Ryan Scott (ECE) • Continuum Robotics
graduated 2017	Committee Member for Sean Reinaldo Gift (ECE) • Continuum Robotics
graduated 2015	Committee Member for Amith Mysore Vijaykumar (ECE) • An Interactive shape-changing display
graduated 2015	Committee Member for Jessie Santiago (ECE) • Continuum Robotics
graduated 2013	Committee Member for Jessica Merino (ECE) • Kinematics for ART’s Continuum Robot Surface (NSF)
graduated 2012	Committee Member for Alper Mutlu (ECE) • Design of an Aquatic Continuum Robot
graduated 2011	Committee Member for Nivedhitha Giri (ECE) • Low-Resolution Vision for Mobile Robots
graduated 2010	Committee Member for Linnea Smolentzov (Psychology) • Evaluation of Assistive Robotics - Elderly
graduated 2008	Committee Member for Martha Kwoka (ECE) • Motion Planning for AWE (NSF)

### M. Arch. Design Thesis Supervision

1999-2007	Served as Thesis Committee Chair for 17 Theses
1999-2007	Serving as Committee Member for 21 Theses
2003-4 Award:	<i>McClure Award for Best Clemson M.Arch. Thesis Project</i> (Billy Zion)

### Landscape Arch. Design Thesis Supervision and Committee

2012	Served as Committee member for Geoff Taylor (MLA) • Urban Design by Crowd Sourcing
2000	Serving as Committee Chair for Jamie Sittig (BLA) • “Third Avenue (Brooklyn) Competition”
Awards:	<i>ASLA Certificate of Honor</i> ; Clemson University Honors Research Grant

### B.S. Thesis Committees – Electrical & Computer Eng. and Materials Science & Eng.

2011-12	Everett Love – Materials Science & Engineering
2010-11	Michelle Buckley – Materials Science & Engineering
2009-10	Jessica Merino – Electrical & Computer Engineering
2009-10	Andrew Ries – Electrical & Computer Engineering
2008-9	William Lui – Materials Science & Engineering

### EUREKA Research Supervisor for Funded *Calhoun Honors* Freshman Undergraduates

Summers 2006-14	<i>In Electrical &amp; Computer Engineering</i> : Sam McKee, Maggie Boyd, Tyler Berkey, Zack Hewitt, Megan Milam, Mary Rutland, Dominic Leali <i>In Digital Production Arts</i> : Alyssa Simpson
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## Teaching

<b>Ph.D. PDBE</b>	<ul style="list-style-type: none"> <li>• <b>Advanced Theory (core class)</b></li> <li>• <b>Readings in Technologies, Materials &amp; Fabrications</b></li> <li>• <b>Research Design</b></li> </ul>
<b>ECE/ARCH</b> publication publication publication publication	<ul style="list-style-type: none"> <li>• <b>Architectural Robotics</b> <i>IEEE Robotics and Automation Magazine [RAS], 21(3) (September 2014): 143-150.</i> <i>Proceedings of ICRA 2010: the 2010 IEEE International Conference on Robotics and Automation.</i> <i>Proceedings of CHI 2010: the ACM Conference on Human Factors in Computing Systems.</i> <i>Proceedings of 2008 ACSA (Association of Collegiate Schools of Architecture) Conference.</i></li> </ul>
<b>M.ARCH STUDIO</b> award award award award publication publication publication Jury comment Editorial comment	<ul style="list-style-type: none"> <li>• <b>Thesis studio • Research Studio • Comprehensive Design Studio</b> <i>Honorable Mention, 2011-12 ACSA Steel Design Competition (Jingjie Zhao)</i> <i>These studios selected by AIA as among the "best practices in sustainable design education"</i> <i>McClure Award for best M.Arch. Thesis in 2003-4 (Billy Zion)</i> <i>St. Petersburg Prize for Excellence in Design (Lukas Kohl)</i> <i>2008 ACSA Conference (Houston, TX) for my M.Arch. studio of Fall 2005.</i> <i>The 2011-12 ACSA Steel Design Competition Winners.</i> <i>2005 ACSA Conference (Chicago, IL) for my M.Arch thesis studio of 2003-04</i> <i>Green's] studio represents some of the most compelling work submitted to the Ecological Literacy in Architectural Education program, demonstrating that design excellence measured by any standard need not be sacrificed to address ecology.</i> <i>The year-long, thesis option, headed by Keith Evan Green...comes as a surprise when you understand that Green is talking about environmental life, life systems, and biological life within the matrix of urban and suburban sprawl.[...] Other university design laboratories need to follow Green's studio experiments in architectural thinking, analyzing, and extrapolating design from nature.</i></li> </ul>

## Academic Administration

2010-16	<b>Director – The Clemson University Institute for Intelligent Materials, Systems &amp; Environments</b> • A partnership of <i>Architecture, Electrical &amp; Computer Engineering, and Materials Science &amp; Engineering</i> • University-level administrative appointment   homepage: <a href="http://www.CU-iMSE.org">www.CU-iMSE.org</a>
2012-16	<b>Director – Digital Ecologies Certificate Program, Clemson University</b>   M.Arch, MS and PhD
2001-03	<b>Director –International Design Program in Barcelona, Spain, Clemson University</b>

## University of Auckland | Teaching and Supervision

### B.Arch. Thesis Supervision

1995 award:	<b>Serving as Chair for Martin King</b> • "Making Architecture: A Matter of the Copy" The Cavalier Bremworth Prize (\$8000 Travel Grant) <i>"The most theoretically adept of the award-winning projects."</i> - <i>Architecture New Zealand</i> (January/February 1996) p. 70.
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### B.Arch. Teaching

<b>B.ARCH STUDIO</b>	• <b>Design Studio Teaching (all year levels)</b>
<b>LECTURE CLASS</b>	• <b>An Introduction to Modern Architecture</b> • <b>Theories of Architecture</b> • Arch. 131 (Lectures to 120 students)

### Independent Course Supervision (selected)

1997 award:	<b>A Cabinet for a Magician / Guy Davies</b> First Prize, The Bestwood Furniture Competition
1996 award:	<b>A Cabinet for a Calligrapher / Melinda Trask</b> Jurors' Citation, The Bestwood Furniture Competition



## Service to Cornell University and General Public

2022-date	<b>Chair</b> , Faculty Search Committee, Cornell U. Human Centered Design
2005-date	<b>Panelist</b> , National Science Foundation, CISE, Intelligent Systems.
2022	<b>Panelist</b> , Design for Collaborative Robotic Environments, Northeastern Univ. Center for Design.
2022	<b>Speaker</b> for an evening event in Chicago with CHE <i>alumni</i> , <i>hosted by Stephanie and Tim Barry</i> .
2022	<b>Member</b> , <i>Design + Technology</i> Faculty Task Force, Cornell U.
Spring 21	<b>Interim Chair</b> , Department of Design + Environmental Analysis (DEA), Cornell U.
2019-21	<b>Co-Chair, College of Human Ecology DEA-FSAD Integration Committee.</b>
2021	<b>Session Co-Chair</b> , “Human Centered Design of Robots,” IEEE RO-MAN 2021.
2021	<b>Session Co-Chair</b> , “Biologically-Inspired Robots,” IEEE IROS 2021.
2021	<b>Information Science Faculty Participant</b> , IS Summer School for Social Impact.
2020-21	<b>Co-Chair</b> , CHE Committee exploring the Integration of Departments DEA and FSAD.
2019-21	<b>CHE Representative</b> , Cornell Office of Faculty Development & Diversity’s Advisory Board.
2020	<b>Invited Speaker</b> , Young Researchers Initiative; attendees from Peru, Nairobi, Kenya, ....
2017, 2020	<b>Reviewer</b> , tenure and promotion case, College of Human Ecology, Cornell University.
2020	<b>Member</b> , Promotion Committee for Full Professor Candidate in Mechanical Eng., Cornell.
2020	<b>Member</b> , Strategic Planning, Mechanical & Aerospace Engineering, Cornell
2020	<b>Session Chair</b> , “Degrees of Autonomy and Teleoperation,” IEEE RO-MAN 2020.
2020	<b>Speaker</b> , Young Researchers Program for High School Students.
2020	<b>External Assessor</b> , Tenure and Promotion, Chajoong (CJ) Kim, UNIST ID.
2019	<b>External Assessor</b> , Promotion to “Chair,” University of Newcastle.
2018-date	<b>Invited Critic</b> , Cornell Architecture midterm and final reviews.
2018	<b>Invited Speaker</b> , Cornell CHE Advisory Board Meeting.
2017-18	<b>Chair</b> , DEA faculty search committee, Cornell U.
2017	<b>Reviewer</b> , tenure case, University of Buffalo School of Architecture.
2017	<b>Member</b> , CHE committee on Digital Design and Fabrication Studios, Cornell U.
2017	<b>Member</b> , Cornell U. committee reviewing the Cornell Research website.
2017	<b>Member</b> , thesis committee for PhD student Alex Cheng, TU Delft (Netherlands).
2016-17	<b>Co-convenor</b> , “Utopia after the Human” International Symposium, Cornell.
2016-17	<b>Member</b> , Design Task Force (feasibility of cross-campus initiative), Cornell U.
2016-17	<b>Development of new grad concentration:</b> <i>Emerging Technologies for Design</i> .
2016	<b>Creation of new course:</b> DEA 4210 <i>Interactive and Adaptive Environments</i>
2016	<b>Revision of existing course as new core:</b> DEA 2730 <i>Human Centered Design Methods</i>

## Service to Clemson University and General Public

2015	<b>Member</b> , <i>2020Forward</i> – Clemson University Strategic Plan, Research Task Force
2015	<b>Member</b> , College Committee Assessing the Director of the PDBE PhD Program
2015	<b>Member</b> , Committee Reviewing an Endowed Chair in ECE (appointed by Provost)
2015	<b>Member</b> , Industrial Design Task Force (new program feasibility), Clemson University
2003-4, 2014-15	<b>Member</b> , Architecture Faculty Search Committee, Clemson University
2010-16	<b>Member</b> , Clemson University Research Council Committee [URCC]
2004-10, 2011-16	<b>Member</b> , Advisory Committee, Ph.D. Program in Environmental Design & Planning
2008-16	<b>Mentor</b> to Junior Faculty Members, Architecture
2007-14	<b>Member</b> , College of AAH Research Consultants Committee (mentoring faculty)
2014	<b>Peer-Reviewer</b> , Tenure Case of Dr. Kihong Ku, Philadelphia University
2009-16	<b>Member (and Chair 2010-2013, 2015-16)</b> , Tenure & Promotions Committee, Architecture
2014	<b>Presenter</b> , Clemson U. “PI Pointers” video   <a href="http://www.youtube.com/watch?v=LwO6DVO_k5c">http://www.youtube.com/watch?v=LwO6DVO_k5c</a>
2013-14	<b>Chair</b> , Committee Revising Bylaws & Faculty Assessment Standards, Architecture
2013	<b>Member</b> , College of AAH Peer Review (Tenure & Promotions) Committee for two Chair hires
2012	<b>Panel Member</b> , “Architectural Leadership,” AIAS South Quad Conference
2009-2012	<b>Member</b> , Clemson University Research Grant Committee [URGC]
2007-2011	<b>Representative of the School of Architecture</b> , the College of AAH Research Committee

- 2010 **Participant**, “Plan Stone Avenue” Design Charrette for Greenville, SC
- 2000-1, 2008-9 **Chair**, Architecture Faculty Search Committee
- 2008-9 **Member**, Chair Review Committee
- 2005-6 **Member**, Post-Tenure Review Committee, Clemson School of Architecture
- 2006-7 **Member**, School of Design and Building Advisory Council to the Dean
- 2007 **Organizer**, workshop, “Drawing from Nature in Architecture, Science and Engineering”
- 2007 **Performance Judge**, First Lego League Regional Competition
- 2005-7 **Member**, Curriculum Review Committee, College of Architecture, Arts & Humanities
- 2005-7 **Chair**, Curriculum Review Committee, Clemson School of Architecture
- 2005-14 **Member**, Admissions Committee, Ph.D. Program in Environmental Design & Planning
- 2005 **Participant**, Expert Panel Visioning Session, CU Materials Science and Engineering
- 2004-5 **Member**, Architect Selection Jury for the Charleston Center Competition
- 2002 **Host**, Meetings of CU (Provost, Dean, Chairs) with universities of Barcelona, Spain
- 2001-03 **Director**, Clemson University’s International Design Program in Barcelona, Spain
- 2001-3 **Author**, Handbook for Directing Clemson’s Barcelona Program
- 2000-1 **Coordinator**, 2000-2001 Architecture Lecture Series
- 1999-2001 **Member**, Faculty/Student Advisory Committee
- 1999-2005 **Member**, M.Arch. Graduate Curriculum, Admissions and Honors and Awards Committees