# • Vitae Overview

## Contact Information

**Keith Evan Green, R.A., Ph.D.**
*The Homer Curtis Mickel and Leola Carter Mickel Endowed Chair in Architecture*
*Professor of Electrical & Computer Engineering*
*Director – The Institute for Intelligent Materials, Systems & Environments | CU-iMSE*
**Clemson University** 2-313 Lee Hall, Clemson, SC 29634-0503 USA
*website.* www.keithevangreen.com | *e-mail.* kegreen@clemson.edu | *tel.* 864.656.3887

## Areas of Specialization

**Human-Computer Interaction + Design, Robotics, Tangible Computing, Design Thinking, Usability**

*applications*    Healthcare & Wellbeing; Learning & Literacy; Individual & Collaborative Work/Play/Creativity.

## Education

1998    **Ph.D. in Architecture, University of Pennsylvania**
*advisors:*    Marco Frascari, David Leatherbarrow, Joseph Rykwert and Wendy Steiner
*thesis:*    Interactions between people and their intimate, physical surroundings define an intelligent environment – a cognitive ecosystem. Draws on theories and historical precedents underlying *interaction design*, particularly the post-War writings and design output of Giò Ponti and Carlo Mollino.

1993    **M.S., 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**
*award:*    Member of PSI CHI, the National Honor Society in Psychology

## Academic Appointments

since 1999    **Clemson University** (Clemson, South Carolina, USA)
*home appointment*    • **Professor of Architecture**
*joint appointment*    • **Professor of Electrical & Computer Engineering**
*other affiliations*    • **Faculty, PhD Program in Planning, Design & the Built Environment [PDBE]**
   • **Faculty, Ph.D. Program in Rhetorics, Communication, and Information Design [RCID]**
   • **Faculty, Materials Science & Engineering** (courtesy appointment)
*promotions:*    To *Full Professor* (2009), To *Associate Professor* with Tenure (2003)

1994-99    **University of Auckland / New Zealand**
   • **Lecturer in Architecture with Tenure** (British equivalent to Assistant Professor)
*Promotions:*    *Tenured* (1997)

## Academic Administration

since 2010    **Director – The Institute for Intelligent Materials, Systems & Environments | CU-iMSE**
   • a partnership of *Architecture, Electrical & Computer Engineering, and Materials Science & Engineering*
   • a University-level administrative appointment | homepage: www.CU-iMSE.org

since 2012    **Director – *Digital Ecologies* Certificate Program |** M.Arch, MS and PhD

2001-03    **Director – Clemson University's International Design Program, Barcelona, Spain**

## Professional Memberships

**Senior Member, IEEE –** member number 90609014 (9% of members are Senior-ranked)
**Member, ACM-SIGCHI** – member number 9050700
**Registered Architect (South Carolina** #6610 – active; **Washington State** #6036 – frozen)
**NCARB (Architectural) Registration –** certificate number 55269; file number 92879

• **Key Sponsored Research Projects**



### The Animated Work Environment [AWE]

**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:* http://workgroups.clemson.edu/AAH0503_ANIMATED_ARCH/research-AWE.html
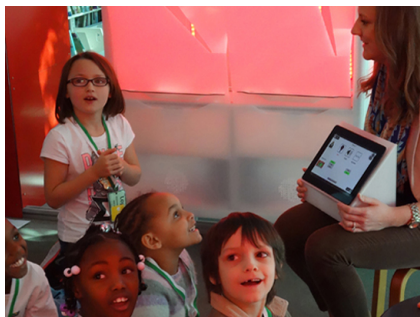


### The Assistive Robotic Table [ART]

**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:* http://workgroups.clemson.edu/AAH0503_ANIMATED_ARCH/research%20-%20comforTABLE.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: http://workgroups.clemson.edu/AAH0503_ANIMATED_ARCH/research-LITROOM.html

• **Additional Research and Sponsorship**

## Significant Gifts to 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.

## 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.

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| *period:* | **2008-2009** |
| *sponsor:* | **National Science Foundation** \| *Small Grant for Exploratory Research* |
| award: | $32,062 (#IIS-0925238). |
| *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 |

**IMAGINARIES OF THE FUTURE:**
**An International Research Network**

IMAGINARIES OF THE FUTURE is the name for an International Research Network formed by the seven investigators. The Network will conduct 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. Funds are used to enable participation by the seven investigators, six named regional participants, and seven additional participants by open competition (the London symposium only will fund 27 additional participants).

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|---|---|
| *period:* | **20014-17** |
| *sponsor:* | **The Leverhulme Trust** *supporting the formation of Leverhulme International Research Network* |
| award: | £109,906 ($190,000). |
| *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). |
| project webpage: | http://www.leverhulme.ac.uk/index.cfm |

## Larger Seed and Workshop Grants

**Exploratory Study of Healthcare Innovation with Application to Domestic Rehabilitative Robotics – A Bilateral Network**

The key goal of the network is to enable international, interdisciplinary research regarding the interactions between industry, government, and research in the development of domestic, rehabilitative robotics feasible for national and foreign markets. Expected outcomes are several academic papers that will serve as a catalyst for innovation in this domain.

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| *period:* | **2015** |
| *sponsor:* | **Danish Agency for Science Technology and Innovation |** *Small Grant for Bilateral Network* |
| *award:* | 278,640 DKR = $44,096 USD |
| *Principal Investigator:* | Ulrik Pagh Schultz (PI), Associate Professor of Software Engineering in Robotics, Maersk Institute, University of Southern Denmark |
| *Co-PIs:* | **Keith Evan Green**; Yingyao Chen, Professor of Health Services at School of Public Health, Fudan University, China |
| *project webpage:* | http://ufm.dk/en |

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| 2008 | **Clemson University Research Investment Grant / $10,510 for one year** |
| *Aim:* | To characterize and develop intelligent behavior in R-TEX, a smart, sustainable panel system for building construction. |
| *Principal Investigator:* | **Keith Evan Green** |
| *Co-PIs:* | Michael Ellison (Materials Science and Engineering); Vincent Blouin (Structural Engineering) |
| *sponsor:* | Clemson University |

## Smaller Grants

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| 2015-16 | **Richard H. Pennell Center Research Program** |
| | $5000 to fabricate additional LIT KIT prototypes for literacy-tool studies in public elementary schools. |
| 2013-15 | **AAH Research Grant, Clemson University** |
| | Course-release and $3000 figure copyright costs towards my *Architectural Robotics* (MIT Press). |
| 2012 | **AAH Research Grant, Clemson University** |
| | Support for pilot research in architectural robotics (that resulted in NSF Award). |
| 2005 | **AAH Research Grant, Clemson University** |
| | $3500 for RA support towards the publication of my book, *Gio Ponti and Carlo Mollino.* |
| 2002 | **McMahan Research Stipend, Clemson University** |
| | $3500 to pursue research in Santiago de Compostela, Spain. |
| 2002 | **McClure Endowment Grant, Clemson University** |
| | $3500 to develop teaching initiatives at Clemson's Center, Barcelona, Spain. |
| 1998 | **Faculty Research Grant, University of Auckland** |
| | $6940 to pursue post-doctoral research in Milan, Italy. |
| 1996 | **New Faculty Research Grant, University of Auckland** |
| | $8000 to pursue doctoral research in Milan and Turin, Italy. |
| 1994 | **Italian Studies Research Fellowship, University of Pennsylvania** |
| | $2500 to pursue doctoral research in Milan and Turin, Italy. |

## Other Key Research Projects

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| 2013-date | **CyberPLAYce: A Cyber-Learning Environment fostering personal expression in classrooms** |
| *aim:* | To iterate our design of a novel, cyber-physical learning environment comprised of smart panels and modules, assembled into "constructionist environments" supporting classroom students in grades 3-5 (8-10 year-olds), and to evaluate this environment for learning efficacy as compared to a screen/tablet-based applications (e.g. Scratch) and educational robotics (e.g. LEGO Mindstorms) |
| *Principal Investigator:* | **Keith Evan Green** |
| *Co-PIs:* | Dani Herro, Education; Christina Gardner, Computer Science, U. Florida-Gainesville. |
| project webpage: | http://workgroups.clemson.edu/AAH0503_ANIMATED_ARCH/research-CyberPLAYce.html |

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| 2011-date | **Emergent, Nonverbal Communication Between Assistive-Robots and their Users** |
| *aim:* | To design and evaluate a nonverbal communication platform where user-defined gestures are learned by an assistive robot, and the robot in turn communicates to users via lights and sounds. |
| *Principal Investigator:* | **Keith Evan Green & Ian D, Walker, Electrical & Computer Engineering** |
| *Co-PI:* | Johnell Brooks, Human Factors Psychology |
| project webpage: | http://workgroups.clemson.edu/AAH0503_ANIMATED_ARCH/research%20-%20nonverbal_communication.html |

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| 2008-2011 | **RoMo: An Intelligent, Robotic Monument for the Information World** |
| *aim:* | Historically, monuments may be characterized as static, physical entities that "petrify" memory of significant human events. **RoMo** reflects the dynamic and inclusive character of the Information Age. Rather than static, **RoMo** is a dynamic, Intelligent Environment "re-tuned" by historical information accumulating on the World Wide Web in the form of text, video and audio files. |
| *Principal Investigator:* | **Keith Evan Green** |
| *Co-PI:* | Ian D. Walker, Electrical & Computer Engineering |

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## Patents and Industry Support for "RTex"

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| patent pending | **#12/584,944: "Construction System and Resilient Non-woven Structural Building Panels."** |
| 2009 | • Presented to the U.S. Department of Commerce for promotion to industry. |
| 2009 | • Presented to Georgia Pacific and Milliken for licensing. |
| 2009 | • Studied for Marketability by Clemson University's *Spiro Institute for Entrepreneurial Leadership*. |

## Formal Collaborations

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|---|---|
| 2015-date | ***Hybrid Ecologies: Architectural Robotics and Spatial Computing.*** <br> A strategic partnership formed by my *Architectural Robotics Lab*, TU Delft's *Hyperbody Research Group*, and the Bartlett School's *Space Syntax Lab*. For enhancing research and student advising. |
| 2010-date | **Member, Scientific Advisory Board, Technical University of Delft** <br> For research conducted by faculty members of the *Hyperbody Research Group* (Henriette Bier). |
| 2010-date | **Research Collaborator, University of Southern Denmark's *Maersk McKinney Moller Institute*** <br> For research with USD's Modular Robotics Lab, *Maersk McKinney Moller Institute* (Ulrik P. Schultz) |
| 2010-date | **Research Collaborator, *Roger C. Peace Rehabilitation Hospital*, Greenville Hospital System** <br> For research with the *Greenville Hospital System University Medical Center*, S. Carolina (Stan Healy) |
| 2009-date | **Research Collaborator, the *Fraunhofer Institute for Experimental Software Engineering*** <br> For research with *Fraunhofer IESE*, Kaiserslautern, Germany (Michael Eisenbarth) |

## • A c a d e m i c  Honors

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.)
*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.

2006,7,11,12,13    **Merit Performance Raises, Clemson University** | not offered by the University every year

2005    **Thesis Studio selected by AIA/COTE for "best practices in sustainable design education"**
*link*:   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

2001,2,11,12,13    **Merit Performance Raise, Clemson University**
Salary increase for "excellent performance" in at least two areas."

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    **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    **Graduation with Distinction in Psychology, University of Pennsylvania**

1985    **Member, PSI CHI, the National Honor Society in Psychology**

• **Publications**

## Books

Expected Feb. 2016    **Keith Evan Green.** *Architectural Robotics: Ecosystems of Bits, Bytes and Biology.* **Cambridge, MA: MIT Press. (In Press – manuscript complete.)**

accepted    **T. H. Mokhtar, K. E. Green, and I. D. Walker.** *How Robotics Will Change the Way We Design Monuments: Monumental-IT.* **New York: Mellen Press.**

2011    **Keith Evan Green.** *Gio Ponti and Carlo Mollino.* **Trans. Y. Kishimoto. Tokyo: Kajima Press.**

2009    **H. Houayek, K. E. Green, and I. D. Walker.** *The Animated Work Environment: An Architectural-Robotic System for a Digital Society.* **Saarbrücken, Germany: Verlag.**

2006    **Keith Evan Green.** *Gio Ponti and Carlo Mollino.* **New York: Mellen Press.**

## Chapters in Books

2009    **I. D. Walker and K. E. Green. Continuum Robots.**
*The Encyclopedia of Complexity and Systems Science.* New York: Springer, pp. 1475-1485.

2000    **K. E. Green. Aldo Rossi, Gio Ponti, Ernesto Rogers, Carlo Mollino, Domus, … entries.**
*Encyclopedia of Contemporary Italian Culture.* London: Routledge.

## Design Work Featured in Books

2004    **K. E. Green. House of Ivy.**
**In David J. Brown*, ed., The HOME House Project: The Future of Affordable Housing.***
Cambridge, MA: MIT Press, 2004.

## Peer-Reviewed Papers, Videos & Posters

accepted    **Soleimani, A., Green, K. E., Walker, I. D., Herro, D., & Garder-McCune, C. "CyberPLAYce, a Cyber-Physical-Spatial Storytelling Tool: Results from an Empirical Study with 8-10-year-old Storyteller."** *Proceedings of HCI International 2015* (Los Angeles, July 2-7, 2016). In [tbd], Ed., *Human-Computer Interaction, Part II, HCII 2014*, LNCS [tbd], Springer International Publishing Switzerland 2015, pp. [tbd].

accepted    **Yanik, P. M., Threatt, A.L., Merino, J., Manganelli, J., Brooks, J. O., Green, K. E. and Walker, I. D. "A Method for Neighborhood Gesture Learning Based on Resistance Distance."** *Proceedings of AHFE 2015, the 6th International Conference on Applied Human Factors and Ergonomics* (Las Vegas, USA July 26-30, 2015). pp. [tbd].

accepted    **Threatt, A.L., Merino, J.N., Brooks, J.O., Healy, S., Manganelli, J., Walker, I.D., Green, K.E (in press). The design, prototyping, and formative evaluation of an Assistive Robotic Table (ART) for stroke patients.** *Health Environments Research & Design Journal,* (In Press).

2014    **Kapadia, A., Walker, I. D., Green, K. E., Manganelli, J., Houayek, H., James, A., Kanuri, V., Mokhtar, T., Siles I., and Yanik, P. "A Novel Approach to Rethinking the Machines In Which We Live: A Multidisciplinary Course in Architectural Robotics."** *IEEE Robotics and Automation Magazine* [RAS], 21(3) (September 2014): 143-150.

2014    **Manganelli, J., Threatt, A., Brooks, J. O., Smolentzov, L., Mossey, M., Healy, S., Merino, J., Yanik, P., Walker, I. and Green, K. (Fall 2014). "Confirming, Classifying, and Prioritizing Needed Over-the-Bed Table Improvements via Methodological Triangulation."** *Health Environments Research & Design Journal* [HERD], 8(1): 94-114.

2014    **Schafer. G, Green, K. E., Walker, I. D., Fullerton, S. K., and Lewis, E., "An Interactive, Cyber-Physical Read-Aloud Environment: Results and Lessons from an Evaluation Activity with Children and their Teachers."** In *Proceedings of DIS 2014, the ACM conference on Designing Interactive Systems*, Vancouver, B.C., pp. 865–874.

2014    **Manganelli, J., Threatt, A., Brooks, J. O., Merino, J., Yanik, P., Healy, S., ... Green, K. (Winter 2014).** "Examination of how and why over-the-bed tables are used: Use cases and needs from healthcare providers." *Health Environments Research & Design Journal*, 7(2), 104–126.

2014    **Yanik, P. M., Threatt, A.L., Merino, J., Manganelli, J., Brooks, J. O., Green, K. E. and Walker, I. D. "A Method for Lifelong Gesture Learning Based on Growing Neural Gas."** *Proceedings of HCI International 2014* (Crete, Greece, July 21-27, 2014). In M. Kurosu, Ed., *Human-Computer Interaction, Part II, HCII 2014*, LNCS 8511, Springer International Publishing Switzerland 2014, pp. 191–202.

2014    **Houayek, H, Green, K. E., Gugerty, L. Walker, I. D. and Witte, J. "AWE: An Animated Work Environment for Working with Physical and Digital Tools and Artifacts."** In *Journal of Personal and Ubiquitous Computing* [JPUC], June 2014, Volume 18, Issue 5, pp. 1227–1241.

2014    **Dalton, N., Green, K. E., Dalton, R., Wiberg, M., Hölscher, C., Anijo, M., Schnädelbach, H. and Varoudis, T.  "Interaction and Architectural Space."** In *Proceedings of CHI 2014: the ACM Conference on Human Factors in Computing Systems*, Toronto, Ontario, Canada, pp. 29–32.

2014    **Threatt, A. L., Merino, J., Green, K. E., Walker, I. D. Brooks, J. O. and Healy, S. "An Assistive Robotic Table for Older and Post-Stroke Adults: Results from Participatory Design and Evaluation Activities with Clinical Staff."** In *Proceedings of CHI 2014: the ACM Conference on Human Factors in Computing Systems*, Toronto, Ontario, Canada, pp. 673–682.

2014    **Soleimani, A., Smith, K., Zeng, J., Green, K. E., Herro, D., Santiago, J., Sharma. S. Tonapi, M., Vijaykumar, A., Walker, I., & Garder-McCune, C. "Learning with CyberPLAYce; a Cyber-Physical Learning Environment for Elementary Students Promoting Computational Expression (archival video)."** In *Proceedings of CHI 2014: the ACM Conference on Human Factors in Computing Systems*, Toronto, Ontario, Canada, p.165 and archived video.

2014    **Yanik, P.M., Merino, J., Threatt, A.L., Manganelli, J., Brooks, J.O., Green, K.E. and Walker, I.D. "A Gesture Learning Interface for Simulated Robot Path Shaping with a Human Teacher."** *IEEE Transactions on Human Machine Systems*, 44(1): 41–54, 2014.

2013    **Schafer. G, Green, K. E., Walker, I. D., Lewis, E., Fullerton, S., Soleimani, A., Norris, M., Fumagali, K., Zhao, J., Allport, R., Zheng, X., Gift, R. and Padmakumar, A. "Designing the LIT KIT, an Interactive, Environmental, Cyber-Physical Artifact Enhancing Children's Picture-book Reading."** *Proceedings of IDC 2013: the 12th International Conference on Interaction Design and Children*, June 24-27, New York, pp. 281–284.

2013    **Mokhtar, T., Green, K. E. and Walker, I. D. "Giving Form to the Voices of Lay-Citizens: Monumental-IT, an Intelligent, Robotic, Civic Monument."** *Proceedings of HCI International 2013* (Las Vegas, July 21-26, 2013). In C. Stephanidis, Ed., *Communications in Computer and Information Science*, 0374 (39). Springer, Heidelberg, 2013, 243--247.

2013    **Yanik, P., Manganelli, J., Merino, Threatt, T., Brooks, J. O., Green, K. E. and Walker, I. D. "A Gesture Learning Interface for Assistive Robotics Employing a Growing Neural Gas Approach."** *The IUI 2013 Workshop on Interactive Machine Learning* of the *ACM Conference on Intelligent User Interfaces,* March 19-22, Santa Monica, California, pp. 283–290; https://sites.google.com/site/iui2013imlw/program [on-line].

2013    **Threatt, A. L., Green, K. E., Brooks, J. O., Merino, J. and Walker, I. D. "Design and Evaluation of a Nonverbal Communication Platform for Human-Robot Interaction."** *Proceedings of HCI International 2013* (Las Vegas, July 21-26, 2013). In N. Streitz and C. Stephanidis, Ed.s, *Springer Lecture Notes in Computer Science* (LNCS) 8082 (25), Springer, Heidelberg, 2013, 505–513.

2013    **Manganelli, J., Threatt, A., Brooks, J. O., Smolentzov, L., Mossey, M., Healy, S., Walker, I. and Green, K. (Spring 2013). "Examination of Overbed Tables: Healthcare Provider and User Preferences."** *Health Environments Research & Design Journal* [HERD], 6(3): 9–29.

2012    **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.

2012    **Merino, J., Threatt, A. L., Walker, I.D. and Green, K.E. "Forward Kinematic Model for Continuum Robotic Surfaces."** In *Proceedings of IROS 2012: the 2012 IEEE/RSJ International Conference on Intelligent Robots and Systems*, Vilamoura, Algarve, Portugal, October 2012, pp. 3453–3460.

2012    **Threatt, A. L., Merino, J., Green, K.E., Walker, I.D., Brooks, J. O. et. al. "A Vision of the Patient Room as an Architectural Robotic Ecosystem."** Video (IEEE archival) in *Proceedings of IROS 2012: the 2012 IEEE/RSJ International Conference on Intelligent Robots and Systems*, Vilamoura, Algarve, Portugal, October 2012, pp. 3322–3323.

2012    **Manganelli, J., Green, K., Brooks, J., Mocko, G., Walker, I., Healy, S., Kopera, K., Threatt, A., Merino, J., and Yanik, P. "Patterns in architecture, cognition, systems, and software: representing and analyzing cognition during the design process."** Poster session presented at the annual Academy of Neuroscience for Architecture Conference (ANFA), La Jolla, CA, September, 2012.

2012    **Schafer. G, Green, K. E., Walker, I. D. and Lewis, E. "A Networked Suite of Mixed-Technology Robotic Artifacts for Advancing Literacy in Children**." *Proceedings of IDC 2012: the 11th International Conference on Interaction Design and Children*, June 12-15, Bremen, Germany, pp. 168–171.

2012    **Brooks, J. O., Walker, I. D., Green, K. E., Manganelli, J., Merino, J., Smolentzov, L., Threatt, T. and Yanik, P. "Robot Bedside Environments for Healthcare**." *International Journal of Circuits, Systems and Signal Processing,* http://www.naun.org/journals/circuitssystemssignal [on-line]; and, *Proceedings of the 12th WSEAS International Conference on Signal Processing, Robotics and Automation, (ISPRA '12)*, Cambridge, U.K, pp. 32–37.

2012    **Yanik, P., Manganelli, J., Merino, Threatt, T., Brooks, J. O., Green, K. E. and Walker, I. D. "Use of Kinect Depth Data and Growing Neural Gas for Gesture Based Robot Control**." *Proceedings of PervaSense2012, the 4$^{th}$ International Workshop for Situation Recognition and Medical Data Analysis in Pervasive Health Environments.* May 21, San Diego, California, pp. 283–290.

2011    **Green, K. E., Walker, I. D., Brooks, J. O., Threatt, T., and Merino, J. "An Assistive Robotic Table (ART) Promoting Independent Living."** Poster paper for the *Workshop on New and Emerging Technologies in Assistive Robotics* of *IROS 2011: the IEEE/RSJ International Conference on Intelligent Robots and Systems*, San Francisco, CA.

2011    **Buckley, M. V., Ellison, M. E., Threat, T., Merino, J., Green, K. E., and Walker, I. D.** "**The Challenges of Material Selection for Compliant Robotic Surfaces."** Paper in *Proceedings of the Fiber Society* Fall Conference, Charleston, SC.

2011    Walker, I. D., Brooks, J. O., Green, K. E., Manganelli, J., Smolentzov, L., Threatt, A., Yanik, P. M., and Merino, J. "Interactive Robotic Environments in Healthcare." Poster paper in *WISH  (Workshop on Interactive Systems in Healthcare)*, Washington, D.C.

2011    Threatt A., Green, K. E., Merino, J., Walker, I. D., Buckley, M. V., and Ellison,  M. S. "A Morphing Robotic Environment Shaped by and Shaping Kindergarteners, Reaching for the Stars." Demo paper in the *Proceedings of ACM Creativity and Cognition 2011*, Atlanta, GA, pp. 419–420.

2011    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.

2011    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; http://www.naun.org/journals/circuitssystemssignal [on-line].

2011    Yanik, P., Manganelli, J., Smolentzov, L., Merino, J., Walker, I. D., Brooks, J., and Green, K. E. (2011). "Toward active sensor placement for activity recognition." *Proceedings of the 10th WSEAS International Conference on Signal Processing, Robotics and Automation, (ISPRA '11)*, Cambridge, U.K., February 2011, pp. 231–236.

2011    Giri, N., Threatt, A. L., & Walker, I. D. and  Green, K. E., (2011).  "RWal." Video (ACM Digital Library archival) in *Proceedings of CHI 2011: the ACM Conference on Human Factors in Computing Systems*, Vancouver, B.C, p. 493.

2010    Smolentzov, L., Brooks, J., Mayweather, L., Beeco, R., Manganelli, J., Green, K. E., & Walker, I. D. "Aging Individuals' Preferences for an Automated Nightstand." *Proceedings of the 2010 Geronotological Society of America Scientific Meeting*, New Orleans, LA.

2010    Kapadia, A., Walker, I. D., Green, K. E., Manganelli, J., Houayek, H., James, A., Kanuri, V., Mokhtar, T., Siles I., and Yanik, P. (2010). "Architectural Robotics": An Interdisciplinary Course Rethinking the Machines We Live In." *Proceedings of ICRA 2010: the 2010 IEEE International Conference on Robotics and Automation*, Anchorage, Alaska, pp. 48–53.

2010    Mokhtar, T., Green, K. E., Walker, I. D., Threatt, T., Murali, V., Apte, A., and Mohan, S. (2010). "Embedding Robotics in Civic Monuments for an Information World." *WiP Proceedings of CHI 2010: the ACM Conference on Human Factors in Computing Systems*, Atlanta, Georgia, pp. 3859–3864.

2009    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 session presented at the *2009 Geronotological Society of America Scientific Meeting*, Atlanta, GA.

2009    Green, K. E., Walker, I. D., Gugerty, L., Witter, J. C., Houayek, H., Kowka, M., Johnson, J., Teja, K.  and Kuntzi, N. (2009). "AWE: A Robotic Wall and Reconfigurable Desk Supporting Working Life in a Digital Society." Video (IEEE archival) in *Proceedings of IROS 2009: the 2009 IEEE/RSJ International Conference on Intelligent Robots and Systems*, St. Louis, MI, pp. 406–407.

2009    Smolentzov, L., Brooks, J., Walker, I., Green, K., Logan, W., Duckworth, K. & Goller, L. (2009). "Older and younger adults perceptions of 'smart' furniture." Poster session presented at the annual meeting of the Geronotological Society of America, Atlanta, GA.

2009 **Green, K. E., Eckhoff, A., Rosenblith, S., and Walker, I. D. (2009).** "**Extending the Reggio Educational Approach to Creativity Support Environments.**" Poster and short paper in *Proceedings of ACM Creativity and Cognition 2009*, Berkeley, CA, pp. 375–376.

2009 **Houayek, H. and Green, K. E. (2009). "The Animated Work Environment."** Poster in the Proceedings of the *2009 ACSA National Conference*, Portland, OR.

2009 **Ellison, M. S., Green, K. E., Blouin, V. and Cox, C. L. (2009). "R-TEX: A Fiber-Based, Nonwoven, Mass-Customizable Building Construction System."** Proceedings of the *Second World Conference on 3D Fabrics,* Greenville, SC.

2009 **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.

2008 **Green, K. E., Gugerty, L. J., Witte, J. C., Walker, I. D., Houayek, H., Rubinstein, J., Daniels, R. Turchi, J., Kwoka, M., Dunlop, I. and Johnson, J. (2008). "Configuring an Animated Work Environment: A User-Centered Design Approach."** *Proceedings of the IEEE/AAAI Conference on Intelligent Environments IE08*, Seattle.

2008 **Kwoka, M., Johnson, J., Houayek, H., Dunlap, I., Walker, I. D., and Green, K. E. (2008). "The AWE Wall: A Smart Reconfigurable Robot Surface."** *Proceedings of the IEEE/AAAI Conference on Intelligent Environments IE08*, Seattle.

2008 **Green, K. E. (2008). "AWE: An Intelligent Environment Supporting Digital and Tactile Design Manipulation."** *Workshop Proceedings of DC+C [Design, Computing + Cognition] 2008*, Atlanta.

2008 **Green, K. E., Gugerty, L. J., Witte, J. C., Walker, I. D., Houayek, H., Rubinstein, J., Daniels, R., Turchi, J., Kwoka, M., Dunlop, I. and Johnson, J. (2008). "The Animated Work Environment: A Design-Research Exemplar Supporting Social and Virtual Collaboration in an Increasingly Digital Society."** *Proceedings of DESIRIST 2008, the ACM* Conference for *Design Science Research in Information Systems and Technology*, Atlanta: 287–292.

2008 **Green, K. E. (2008). "The Interactive, Adaptive 'AWE' Work Station."** *Interactive and Adaptive Furniture*, hosted by Microsoft Research/University or Aarhus, Denmark.

2008 **Green, K. E. (2008). "Back to the Future: Three Educational Experiments in Interactive Environments Anticipated in 1960s Visionary Thinking."** *Proceedings for the 2008 ACSA National Conference*, Houston: 839–845.

2007 **Johnson, J., Kwoka, M., Houayek, H., Walker, I. D. and Green, K. E. (2007). "Design, Construction, and Testing of a Novel Robotic Workstation."** *Proceedings of CIRAS 2007*, Palmerston North, New Zealand.

2007 **Green, K. E., Gugerty, L., Walker, I., and Witte, J. C. (2007). "An Animated Work Environment Supporting Working Life in a Digital Society."** Poster in the *Proceedings of ACADIA 2007*, Halifax, Nova Scotia.

2007 **Green, K. E., Ellison, M. S. and Cox, C. L. (2007). "A Finite Element Analysis and a Measure of Piezoelectric Sensor Output in "R-TEX," a Construction System of Recycled Fiber."** *Proceedings of the Fiber Society* Spring 2007 Conference on Fibrous Materials and Products, Greenville, South Carolina.

2007 **Green, K. E., Ellison, M. S. and Cox, C. L. (2007). "R-TEX: A "Green" Construction System of Recycled Fiber."** *Proceedings of the 9th International Conference on Advanced Materials and Technologies*, Palanga, Lithuania.

2006    **Witte, J., Green, K. E., Gugerty, L. and Walker, I. D. (2006). "CREATING AWE: Formulating a Research Process for an Interdisciplinary Effort to Build an Animated Work Environment (AWE)."** *Proceedings of the International Symposium on Intelligent Environments* hosted by Microsoft Research, Cambridge, UK.

2006    **Green, K. E., Gugerty, L. J., Witte, J. C. and Walker, I. D. (2006). "Three Robot-Rooms / The AWE Project."** Proceedings of 2006 CHI [*Computer Human Interaction*], Montreal, Canada, April 2006, pp. 809–814.

2006    **K. E. Green (2006). *Architecture Plus: The Collaborative Animated Work Environment.*** Proceedings for the *2006 ACSA National Conference*, Salt Lake City.

2005    **Ellison, M. S. and Green, K. E. (2005). "Smart Textile Systems for the Intelligent, Sustainable Home."** Proceedings for *Ambience 2005, a Conference on Intelligent Ambience and Well-Being*, Tampere, Finland.

2005    **Green, K. E., Gugerty, L. J., Walker, I. D. and Witte, J. C., (2006). "AWE (Animated Work Environment): Ambient Intelligence in Working Life."** *Proceedings for Ambience 2005, a Conference on Intelligent Ambience and Well-Being, Tampere, Finland*, pp. 1–7.

2005    **Green, K. E. (2005). Contributions to *Ecological Literacy in Architectural Education.*** *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.

2005    **Ellison, M. S. and Green, K. E. (2005). "Architectural Systems + Advanced Materials."** *Proceedings of the 2005 Fiber Society Meeting*, ETH, Switzerland.

2005    **Green, K. E. (2005). "The 'Bio-logic' of Architecture."** *Proceedings of the 2005 ACSA National Conference*, Chicago.

2005    **Green, K. E. (2005). "Cathedrals of Commerce."** *Proceedings of the Fourth Savannah Symposium: Architecture and Regionalism.*

2004    **Green, K. E. (2004). "Symbiogenetic Architecture: New Directions for Architecture Theses."** *Proceedings of the 2003 ACSA SE Regional Conference*, Tampa, pp. 136–143.

2003    **Green, K. E. (2003). "Architecture After Capitalism – Reply from Spain."** *Praxis* 5, special issue on "Architecture after Capitalism."

2001    **Green, K. E. (2001). "West after West: Neutra's Los Angeles Home, Take 2."** *Proceedings of the 2000 ACSA SE Regional Conference*, Charlotte, pp. 92–96.

2000    **Green, K. E. (2000). "Diabolik Headquarters: A whimsical return to the visionary 1960s."** *Proceedings of the 2000 ACSA SE Regional Conference*, Charlotte, pp. 162–163.

2000    **Green, K. E. (2000). "The Fantasy of Precision."** *Proceedings of the 2000 ACSA CE Regional Conference*, Ann Arbor, 5 pages.

1999    **Green, K. E. (1999). "From Milan to Auckland: The Strange Flight of the Pirelli Skyscraper."** *Proceedings of the 1999 ACSA International Conference*, Rome, pp. 380–383.

1998    **Green, K. E. (1998). "Between Angels and Lovers: The Role of the Architect…."** *Architectural Theory Review,* November, 1998, University of Sydney, pp. 32–44.

1996    **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.

1995    **Green, K. E. (1995). "Citadel: A Precise Anomaly**." *Interstices 3*, July 1995, pp. 116–117.

## Publications, Journals not-refereed

2013    **Green, K. E. "Giò Ponti and his fabulous Villa Planchart,"** 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/.

2012    **Gross, M. D. and Green, K. E. "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.

2009    **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.

2008    **Green, K. E. and Houayek. H. (2008) "An Animated Work Environment for the Info-World."** [widely publicized on the internet, e.g. IEEE homepage]

2005    **Green, K. E. (2005). "House of Ivy" in SOUTH**. Clemson University Press. Clemson, SC.

2004    **Green, K. E. "Winning Designs," *Clemson World*, pp. 20-21.** http://cworld.clemson.edu/archive/2004/spring04/feature4.htm

2004    **Green, K. E. (2004). "Art of the Machine: New Self-Sustaining 'SURGE' Hospitals."** *Proceedings of the 2004 AIA* Health Architecture Conference, Washington, 9 pages.

Spring 04    **Green, K. E. (2004). "Architecture is a Butterfly."** *CRiT* 57, pp. 32-34.

2000    **Green, K. E. (2000). "Art of the Machine: A Mobile Medical Hospital."** *Proceedings of the 2000 AIA* Health Architecture Conference, Vancouver, 9 pages.

Sept. 98    **Green, K. E. (1998). "Engaging Design: *Salone* 1998."** *Architecture New Zealand*, pp. 92-96.

June 95    **Green, K. E. (1995). "The Elevated Ship."** *Auckland Architecture Quarterly*, pp. 13-16.

July/Aug. 92    **Green, K. E. (1992). "The Fantasy of Architectural Detailing."** *Arcade*, p. 11.

Dec. 91    **Green, K. E. (1991). "Interview with Steven Holl" )**on his "Edge Cities" exhibition). *Arcade*.

Aug. 91    **Green, K. E. (1991). "Carlo Forcolini"** (Review of lecture and exhibit). *Arcade*.

Dec. 91    **Green, K. E. (1991). "Mi[e]s perceptions."** *Arcade*, cover page, pp. 8-9.

Sept. 91    **Green, K. E. (1990). "The Reawakening of Constructivism."** *Arcade*. pp. 12-13.

## Features on my Work in Magazines and Professional Journals, Not-refereed

2014    **Everyhope-Roser, J. "Vital Robotics with People in Mind," *Glimpse: Research and Creative Discovery,* Clemson University*, (Spring), pp. 56-58, 67.** Feature presenting a review of my research activities.

2012    **Croasmun, B. "Architectural Robotics: Intelligently Self-Configuring Spaces," *Innovaro Technology Foresight,* (Spring), pp. 1-11.** *Innovaro* offers, by subscription, "actionable technology foresight" to business leaders. For this feature, I was solicited by the author/editor as a leading figure defining this emerging area. http://innovaro.wordpress.com/about-innovaro/

2010    **Fortmeyer, R. "Control Freaks," *Architectural Record,* (March), pp. 102-111.** Continuing Ed article on intelligent environment research, featuring my work and words. http://continuingeducation.construction.com/article.php?L=5&C=653

• **Design Awards, Practice and Exhibitions**

## Design Awards

2008  **K. E. Green and H. Houayek. *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.

2003  **K. E. Green. *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, and potential for construction of design.
*link:*  http://www.secca.org; also overviewed in *ArtNews*, *ArtPapers*, *Architectural Record*….
*catalog:*  D. Brown, *The HOME House Project: The Future of Affordable Housing* (MIT, 2004).

1997-99  **K. E. Green, D. Brand and *Architectus*. *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).

1995-99  **K. E. Green. *Domus Farfalla*: A residence across two disparate sites to accommodate a family after the death of a member.**
*award:*  Selected for exhibition at and part of the Collection of *The Art Institute of Chicago*.

1991  **K. E. Green as Project Designer at NBBJ. *Eddie Bauer Prototype Retail Store Prototypes*.**
*award:*  Competition-winning design and contract for the work

1990-91  **K. E. Green as Project Architect at RAS. L*ake Pointe Condominiums*, Seattle, Washington.**
*award:*  Competition-winner for contract (completed)
*award:*  MAME-NW award for "Best Multi-Family Project" and "Best Floor Plan"

*1990*  **K. E. Green. *The Life Cycle House***
*award:*  The Schiff Prize in Architecture, the Art Institute of Chicago
First Prize ($8000) for a design project, now in the Museum's collection
*link:*  http://www.artic.edu/aic/collections/dept_architecture/schiffwin.html
*award:*  *The O'Donnell Wicklund, Pigozzi & Peterson Prize*
"For An Outstanding Project Design in the Graduate Program at U. Illinois"

## Architectural Practice Overview

since 1992  **Keith Evan Green, Architect**
1991-92  **NBBJ Architects and Planners** (Seattle) / *Urban Designer*
1990-91  **RAS / Kenn Ruppard Architects** (Seattle) / *Project Architect; Intern Architect*
1989-90  **Hinds Schroeder Whitaker Architects** (Chicago) / *Intern Architect*
1988-89  **Urban Investments Developing Company / JMB** (Chicago) / *Intern Architect*
1986-87  **Anshen + Allen Architects** (San Francisco) / *Intern Architect*

## Selected Exhibitions of My Design Work

•  **Keith Evan Green with Henrique Houayek, *Designers Workspace* Competition Winner**
2008  Featured at "The Oporto Show" Trade Fair of Design, Interiors and Architecture, Portugal.

•  **Keith Evan Green, "Houses of Ivy"**
2003-6  Arizona State U.; U. Minnesota; El Paso Museum of Art; University of Maryland, and 5 others

•  **Keith Evan Green, "Life-Cycle House" and "*Domus Farfalla*"**
1999-00  The Art Institute of Chicago

- **Service Leadership Activities**

## Invited Lecturer

| | |
|---|---|
| 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" |

## Workshops Convened | all accepted by peer-review

2014 **Interaction and Architectural Space – at CHI 2014** (Toronto, Ontario)
http://archiitectureinteractionworkshop2012.blogspot.com
Co-Convener with Nick Dalton (Open U.), Christoph Hoelscher (U. Freiburg), Ruth Dalton (Northumbria U.), Anijo Mathew (Illinois Institute of Technology), Gerd Kortuem (Open U.), William Hazlewood (Indiana U.), and Tasos Varoudis (The Bartlett School, London)

2012 **Ar-CHI-tecture – at CHI 2012** (Austin, Texas, USA)
http://archiitectureinteractionworkshop2012.blogspot.com
Co-Convener with Nick Dalton (Open U.), Mikael Wiberg (Umeå U.), Ruth Dalton (Northumbria U.), Christoph Hoelscher (ETH Zurich), Anijo Mathew (Illinois Institute of Technology), Holger Schnädelbach (U. Nottingham), and Tasos Varoudis (University College London)

2011 **Graduate Student Symposium – at ACM Creativity & Cognition 2011** (Atlanta, Georgia, USA)
Co-Convener with Ellen Do (Georgia Tech) for the peer-reviewed Graduate Student Symposium

2009 **ARCHIBOTS – at UBICOMP 2009** (Orlando, Florida, USA)
www.ARCHIBOTS.org
Co-Convener with Mark Gross (Carnegie Mellon University)
**Funded for $32,062 by NSF-CISE SGER** (Small Grant for Exploratory Research) #IIS-0925238.

## Peer Reviewer / Program Committee Member / Session Chair

2015 *IEEE International Symposium on Robot and Human Interactive Communication – RO-MAN*
Peer-reviewer of papers.

2012-date *ACM International Conference on Human Factors in Computing Systems – CHI*
Peer-reviewer of papers.

2011-date *ACM International Conference on Tangible, Embedded, and Embodied Interaction – TEI*
Member of Program Committee (2013) and Peer-reviewer of papers.

2009-date *ACM International Conference on Creativity & Cognition – ACM C&C*
Peer-reviewer of papers.

2010-date *IEEE/RSJ International Conference on Intelligent Robots and Systems – IROS*
Co-chair of the session, "Novel Designs and Architectures," (2010) and Peer-reviewer of papers.

2010-date *IEEE International Conference on Robotics and Automation – ICRA*
Peer-reviewer of papers.

| | |
|---|---|
| 2006-date | ***ACM/IEEE International Conference on Human-Robot Interaction – HRI*** <br> Member of Program Committee (2009, 11) and Peer-reviewer of papers. |
| 2014 | ***ACM Symposium on User Interface Software and Technology – UIST*** <br> Peer-reviewer of papers. |
| 2009, 2014 | ***FOOTPRINT 9 and 15*: Digitally Driven Architecture; Dynamics in Data-Driven Design** <br> Peer-reviewer of papers for this academic journal of Delft Technical U.'s School of Design. |
| 2013 | ***The Netherlands Organization for Scientific Research*** <br> Invited reviewer of faculty proposals in interactive architecture funded by Dutch government. |
| 2013 | ***ETH Zurich Research Commission*** <br> Invited reviewer of faculty proposals in interactive architecture funded by this Swiss university. |
| 2013 | ***The Fiber Society International Meeting*** <br> Invited Session Chair for "Smart Textiles in Clothing and the Built Environment." |
| 2012 | **Special Issue on "Architectural Robotics" –** *International Journal of Architectural Computing* <br> Peer-reviewer of papers. |
| 2012 | ***ACM International Conference on Pervasive Computing – Pervasive 2012*** <br> Peer-reviewer of papers. |
| 2003, 2005, 2011 | ***Meeting of the Assoc. of Collegiate Schools of Architecture, ACSA –"Digital Aptitudes"*** <br> Invited Session Chair for "Digital Aptitudes (2011 at M.I.T.) and Peer-reviewer of papers. |
| 2007, 2009, 2011 | **Member, NSF Proposal Review Panel in CISE (Computing)** <br> Peer-reviewer of research proposals for funding, meeting at NSF, Washington, D.C. |
| 2010 | ***ACM International Conference on the Design of Interactive Systems – DIS 2010*** <br> Member of Program Committee and Peer-reviewer of papers. |
| 2006 | **1:1,** *Journal of Architectural Education* <br> Peer-Reviewer of papers for this issue on design research. |
| 2006 | ***Delirious New Orleans* by Stephen Verderber** <br> Peer-Reviewer of this book-manuscript for University of Texas Press. |

## Workshop Participant – By Invitation

| | |
|---|---|
| 2014 | **NSF – Cyberlearning Workshop, Madison, WI.** <br> Meeting of the cross-cutting Cyberlearning research community towards advancing this NSF area. |
| 2013, 14 | **NSF – SCH/SHB [Smart and Connected Health] Workshop, Arlington, VA.** <br> Meeting of all PI's of active cross-cutting research towards establishing this NSF initiative. |
| 2013 | **IDC 2013,** "**Interactive Technologies that Enhance Children's Creativity" Workshop, New York.** <br> My position paper "Designing the LIT KIT" accepted for presentation. |
| 2011 | **CHI 2011,** "**Evaluating Children's Interactive Technology" Workshop, Vancouver, B.C.** |
| 2006 | **NSF HRI [Human-Robot Interaction] Workshop, USC, Los Angeles, CA.** <br> Meeting of all PI's of active human-centered robotics research towards establishing this NSF area. |

## • Teaching at Clemson University | Thesis Supervision

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

| | |
|---|---|
| since 2014 | **Chair for Yixiao Wang, PDBE** • *I-cubed:* A physically reconfigurable, technology-rich, mobile library. |
| since 2012 | **Chair for Arash Soleimani, PDBE** • *CyberPLAYce*: A Learning Tool for Elementary Classrooms |
| since 2011 | **Chair for George Schafer, PDBE** • *The LIT KIT*: A Cyber-Physical Environment Supporting Literacy (NSF) |
| graduated 2013 | **Chair for Anthony Threatt, PDBE** • *ART*: An Assistive, Robotic Table for Post-Stroke Patients (NSF) |
| graduated 2013 | **Chair for Joe Manganelli, PDBE** • A Model-Based, Human-Centered Design & Analysis Method/Tool |
| graduated 2011 | **Chair for Tarek Mokhtar, PDBE** • *Monumental-IT*: A Robotic Monument Configured by Lay Citizens |
| graduated 2009 | **Chair for Henrique Houayek, PDBE** • *AWE*: A Robotic "Animated Work Environment (NSF) |

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

| | |
|---|---|
| since 2015 | **for Nixon Wonoto, PhD PDBE** • Early Parametric Design/Optimization of Tessellated Structure |
| since 2014 | **for Michael Wooten, PhD ECE** • Tendril Robots for Space (NASA/NSF-NRI) |
| since 2009 | **for Stan Healy, PhD Health Admin., MUSC** • Smart Healthcare Technology |
| 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 2010 | **for Vidya Murali, PhD ECE** • Low-resolution Vision for Autonomous Mobile Robots |

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

| | |
|---|---|
| since 2012 | **Committee Member for Sean Reinaldo Gift (ECE)** • Continuum Robotics |
| since 2012 | **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 / Thesis is no longer a requirement for the M.Arch after 2006-7

| | |
|---|---|
| 1999-2007 | **Served as Thesis Committee Chair for 17 Theses** |
| 1999-2007 | **Serving as Committee Member for 21 Theses** |
| 2003-4 *Award:* | *McClure Award for Best Clemson M.Arch. Thesis Project* (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:* | *ASLA Certificate of Honor*; Clemson University Honors Research Grant |

### B.S. Thesis Committees – Electrical & Computer Engineering and other programs

| | |
|---|---|
| 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 *Calhoun Honors* Freshman Undergraduates

Summer 2014    **Sam McKee – Electrical & Computer Engineering**
Summer 2013    **Maggie Boyd and Tyler Berkey – Electrical & Computer Engineering**
Summer 2012    **Zack Hewitt – Electrical & Computer Engineering**
Summer 2010    **Megan Milam – Electrical & Computer Engineering**
Summer 2008    **Alyssa Simpson – Digital Production Arts**
Summer 2007    **Mary Rutland – Electrical & Computer Engineering**
Summer 2006    **Dominic Leali – Electrical & Computer Engineering**

## • Teaching at Clemson University | Coursework

## Ph.D. Seminars in Planning, Design, and the Built Environment [PDBE]

| | |
|---|---|
| 2005-12 | **PDBE 801: Advanced Theory – Ph.D. Core Seminar** (co-taught with M. Luria) |
| since 2005 | **PDBE 805: Readings in Technologies, Materials & Fabrications –** a full-year PhD seminar |
| since 2005 | **PDBE 991: Ph.D. Dissertation** |
| since 2005 | **PDBE 816: Ph.D. Research Design** |
| since 2005 | **PDBE 990: Ph.D. Independent Study (Fall, Spring and required Summers)** |

## M.Arch. / B.A. Advanced Seminars

| | |
|---|---|
| 2008-**date** | **ECE/ARCH 868: Architectural Robotics (cross-listed)** | see > www.CU-iMSE.org > academics |
| | A research lab course taught with Dr. Ian Walker of Electrical & Computer Engineering |
| *national publication:* | *Proceedings of 2008 ACSA (Association of Collegiate Schools of Architecture) Conference.* |
| *national publication:* | *Proceedings of ICRA 2010: the 2010 IEEE International Conference on Robotics and Automation* |
| *national publication:* | *The 2011-12 ACSA Steel Design Competition Winners.* |
| 2011 | **CPSC 281/481 CREATIVE INQUIRY: Designing and Developing a New Instructor's Station** |
| | A multi-disciplinary course taught with faculty from School of Computing, Industrial and Mechanical Engineering, Psychology, Student Disabilities Service, and CCIT |
| 2005-7 | **ARCH 699: ANIMATED ARCHITECTURE: Emerging Technologies & Intelligent Systems** |
| *national publication:* | *Proceedings of CHI 2010: the ACM Conference on Human Factors in Computing Systems.* |
| 2001-3 | **ARCH 414: The Art of Building: Arch. Detailing and the Construction of Culture** |
| 2001-3 | **ARCH 416: Ways of Seeing, Ways of Thinking, Ways of Constructing** |
| Fall 00 | **ARCH 603/403: Ideas and Forms in Modern Architecture** |

## Design Studios, Architecture

| | |
|---|---|
| 2015 | **M.Arch. Comprehensive Design Studio** (final studio for graduating students) |
| 2008-2014 | **M.Arch. Design Studio IV DIGITAL ECOLOGIES** | see > www.CU-iMSE.org > academics |
| *Award:* | *Honorable Mention, 2011-12 ACSA Steel Design Competition* |
| | *(303 entries, 7 awards, 2% acceptance rate)* |
| 2003-7 | **ANIMATED ARCHITECTURE LAB** • M.Arch Thesis-Year Research Studio |
| *award:* | *These studios selected by AIA as among the "best practices in sustainable design education"* |
| *award:* | *McClure Award for best M.Arch. Thesis in 2003-4 (Billy Zion)* |
| *national publication:* | *2005 ACSA Conference (Chicago, IL) for my M.Arch thesis studio of 2003-04* |
| *national publication:* | *2008 ACSA Conference (Houston, TX) for my M.Arch. studio of Fall 2005.* |
| 2002-3 | **Fluid Spaces in Barcelona: Immigration & the Public Realm** • B.A. 3$^{rd}$/B.L.Arch 4$^{th}$-yr. |
| Fall 01 | **ISoC: Institute for Surrealism of Catalunya** • B.A. 3$^{rd}$/4$^{th}$-yr. |
| Spring 01 | **Reassessing a Machine for Living In: A Hospice** • M.Arch. "Arch. + Health" |
| Fall 00 | **Architecture is a Butterfly: Clemson Institute of Entomology** • M.Arch. |
| *Award:* | *St. Petersburg Prize for Excellence in Design (Lukas Kohl)* |
| Summer 00 | **Whimsical Beginnings** • B.A.1$^{st}$-yr. |
| Spring 00 | **Pacific Cancer Center** • M.Arch. |
| Fall 99 | **Headquarters for *Diabolik* for Milan, Italy** • M.Arch. |

## Program and Curriculum Development

| | |
|---|---|
| created 2011-12 | "**Digital Ecologies" Certificate Program within the M.Arch., M.S. Arch. and Ph.D. PDBE Degrees** |
| developed 2001-3 | **Clemson's Arch/L.Arch. Program in Barcelona** |
| created 2005-6 | **3-Year M.Arch. Curriculum, servings as Chair of the Architecture Curriculum Committee** |
| since 2000 | **Planning and Development of Ph.D. in Planning, Design and the Built Environment** |

## • Teaching at University of Auckland

## B. Arch. Thesis Supervision

|  |  |
|---|---|
| 1995 | **Serving as Chair for Martin King** • "Making Architecture: A Matter of the Copy" |
| *award:* | The Cavalier Bremworth Prize ($8000 Travel Grant) |
|  | *"The most theoretically adept of the award-winning projects."* |
|  | *- Architecture New Zealand* (January/February 1996) p. 70. |

## B. Arch. Design Studios, Architecture

|  |  |
|---|---|
| Spring 98 | **Headquarters for *Diabolik*: a Mixed-Use Building for Milan, Italy** • B.Arch. 5th-yr. |
| Fall 98 | **Istituto per l'immagine in movimento: a Museum for Milan, Italy** • B.Arch. 5th-yr. |
| Spring 97 | **Cultural Spaces: The Hong Kong Consulate of Auckland** • B.Arch. 3rd-yr. |
| Fall 97 | **Reassessing "A Machine for Living In": a Hospice for Auckland** • B.Arch. 5th-yr. |
| Spring 96 | **Architecture is a butterfly: the New Zealand Institute of Entomology** • B.Arch. 5th-yr. |
| Fall 96 | **Whimsical Beginnings: 4 Follies and a Cafe/Gallery** • B.Arch. 1st-yr. |
| Spring 95 | **Spaces for Collectors: A Mixed-Use Urban Building for Auckland** • B.Arch. 3rd-yr. |
| Fall 95 | **Whimsical Beginnings: 4 Follies and an Exhibition Space** • B.Arch. 1st-yr. |
| Spring 94 | **Citadel: A Precise Anomaly – A Visitors' Center for Auckland** • B.Arch. 3rd-yr. |

## B. Arch. Lecture Courses

|  |  |
|---|---|
| Fall Terms | **An Introduction to Modern Architecture** • B.Arch. 130 (Lectures to 120 students) |
| Spring Terms | **Theories of Architecture** • Arch. 131 (Lectures to 120 students) |
| Contributions to: | **Urban Design 1** • Arch. 202/302 (Seminar Format) |
|  | **Research Methods for Graduate Students** • Arch. 700 (Seminar Format) |

## Independent Course Supervision

|  |  |
|---|---|
| 1997 | **A Cabinet for a Magician / Guy Davies** |
| *award:* | First Prize, The Bestwood Furniture Competition |
| 1996 | **A Cabinet for a Calligrapher / Melinda Trask** |
| *award:* | Jurors' Citation, The Bestwood Furniture Competition |
| 1996 | **A House for an Alchemist / Rachel Venables** |
| 1996 | **Collage in 20th Century Art and Architecture / Phillip Matz** |
| 1995 | **Louisa Tuthill: One Woman's Architectural History / Robyn Hill** |
| 1995 | **Threshold: The Enigma of Arriving / Kent Nixon** |
| 1995 | **A House in Flight / Phillip Matz** |

- ## Selected Publications and Awards of My Students

**2015**    **Soleimani, A. "CyberPLAYce: A Cyber-Physical-Spatial Learning Tool."** Awarded 3rd prize from 100 research posters presented by graduate students at Clemson University's *Graduate Research & Discovery Symposium* (GRADS).

**2014**    **Soleimani, A., Green, K. E., Walker, I. D., Gardner-McCune, C., Herro, D. "CyberPLAYce -- A Play Space of Creative Intelligent Tools Promoting Personal Expression; Collaboration and Computational Thinking for Early Learners."** In *Proceedings of DIS 2014, the ACM conference on Designing Interactive Systems*, Vancouver, B.C.. pp. 191–194 (Doctoral Consortium). Student received paid registration to consortium and conference.

**2013**    **Schafer. G, Green, K. E., Walker, I. D., Lewis, E., Fullerton, S. "The LIT ROOM: Advancing Literacy in Children Through a Networked Suite of Architectural Robotic Artifacts."** *Proceedings of IDC 2013: the 12th International Conference on Interaction Design and Children*, June 24-27, New York, pp. 643–646 (Doctoral Consortium).

**2012**    **Jingjie Zhao, "Futuritst.Culinary.Matrix."**
*The 2011-12 ACSA Steel Design Competition Winners.* **Printed book and on-line at** *http://www.acsa-arch.org/programs-events/competitions/competition-archives/2011-12-steel-competition/2011-12-steel-winners.*
*award:*    *Honorable Mention (303 entries, 7 awards – 2% acceptance rate)*

**2008**    **Henrique Houyak, "The Animated Work Environment: A Vision for Working Life…,"** In the Proceedings of *Design Science Research in Information Systems and Technology DESIRIST 2008*, Atlanta: "Doctoral Colloquium," 429–430. Student received a $500 NSF stipend to participate.

**2007**    **Students' thesis work featured in the First AIA-COTE *Biomimicry Student Work Gallery*** The work of 2 of the 5 students selected from nation-wide entries was from my thesis studio.
*Jury:*    "*Both of these examples really engage the life principles [studied], dig into the notion of function, and then seek ways to apply that in the designs.*" – Dayna Baumeister and Rose Tocke (Biomimicry Guild), Tom Fisher (Dean of the College of Design at University of Minnesota), and others.

**2006**    **Coverage of my 2003-4 Thesis Studio in the *ECO LITERACY REPORT*. AIA-COTE** Selected from 49 faculty submissions of Sustainable Architecture coursework.
*excerpt:*    "[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."

**2005**    **Coverage of my 2003-4 Thesis Studio. In Dennis Dullens. *Design Biomimetics: An Inquiry and Proposal for Architecture and Industrial Design*. Barcelona: UIC.**
*excerpt:*    "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."

**2005**    **Architectural models from three of my design students. In Criss B. Mills, *Designing with Models*. New York: Wiley, 2005.**

**Spring 04**    **Keith Evan Green.** "**Architecture is a Butterfly." In CRiT 57, pp. 32–34.** Critical reflection on my M.Arch. studio course, taught in Fall 2000.

**2000**    **Diabolik Headquarters: A whimsical return to the visionary 1960s…,** *Proceedings of the 2000 ACSA SE Regional Conference*, Charlotte, pp. 162–163.

**1995-96**    **Whimsical Beginnings: A First-Year Design Studio** Review of the *Committee of Heads of Architecture Schools of Australasia*.

**Jan. 1996**    **Clever Distortions**, *New Zealand Architect*, pp. 67–71.

**July 1995**    **Citadel: A Precise Anomaly**, *Interstices 3*, p. 116–117.

• **Service, Memberships and Development**

## Service to Clemson University and General Public

| | |
|---|---|
| 2015 | **Member, 2020Forward – Clemson University Strategic Plan, Research Task Force** |
| 2015 | **Member, College Committee Assessing the Director of the PDBE PhD Program** |
| 2015 | **Member, Committee Reviewing an Endowed Chair in ECE (appointed by Provost)** |
| 2015 | **Member, Industrial Design Task Force (new program feasibility), Clemson University** |
| 2003-4, 2014-15 | **Member, Architecture Faculty Search Committee, Clemson University** |
| 2010-date | **Member, Clemson University Research Council Committee [URCC]** |
| 2004-10, 2011-date | **Member, Advisory Committee, Ph.D. Program in Environmental Design & Planning** |
| 2008-date | **Mentor to Junior Faculty Members, Architecture** |
| 2007-14 | **Member, College of AAH Research Consultants Committee (mentoring faculty)** |
| 2014 | **Peer-reviewer, Tenure Case of Dr. Kihong Ku, Philadelphia University** |
| 2009-14 | **Member (and Chair 2010-2012), Tenure & Promotions Committee, Architecture** |
| 2014 | **Presenter, Clemson U. "PI Pointers" video |** http://www.youtube.com/watch?v=LwO6DVO_k5c |
| 2013-14 | **Chair, Committee Revising Bylaws & Faculty Assessment Standards, Architecture** |
| 2013 | **Member, College of AAH Peer Review (Tenure & Promotions) Committee for two Chair hires** |
| 2012 | **Panel Member, "Architectural Leadership," AIAS South Quad Conference** |
| 2009-2012 | **Member, Clemson University Research Grant Committee [URGC]** |
| 2007-2011 | **Representative of the School of Architecture, 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 Committee** |
| 1999-2005 | **Member, M.Arch. Graduate Admissions Committee** and **Honors and Awards Committee** |

## Membership

**IEEE Senior Member** / Robotics and Automation Society, #90609014

**ACM-SIGCHI Member** / Association for Computing Machinery, Computer-Human Interaction, #9050700

**NCARB Member** / The National Council of Architectural Registration Boards #5562

## Professional Development

| | |
|---|---|
| since 1992 | **Annual "Continuing Education" for Professional (Registered) Architects** |
| since 1995 | **IRB Research Compliance Certification (CITI and PHS COI)** |
| since 2009 | **Sponsored Program Certifications – every three years** |

## Foreign Language Skills

| | |
|---|---|
| **Italian** | • 2-years of course work, U. Auckland • Ph.D. exam • 2 years of life experience in Italy. |
| **Spanish** | • 2-years of course work, U. Pennsylvania • Ph.D. exam • 2 years of life experience in Spain. |
| | • 2 summers of Intensive Spanish Courses, University of Santiago de Compostela, Spain. |