

# George J. Schafer, Ph.D., RA LEED AP BD+C

Clemson University  
Lee Hall 1-158  
(704) 562-9100  
gschafe@clemson.edu

## EDUCATION

### Ph.D., Planning Design & the Built Environment

Clemson University School of Architecture, Clemson SC  
August, 2015

Concentration: Technology, Materials & Construction

**Dissertation Title:** *The LIT Room: The Design, Implementation and Evaluation of a Multi-Media, Architectural-Robotics Embedded Installation in a Public Library for Augmenting Children's Interactive Picturebook Read-Alouds*

**Description:** The LIT Room installation aimed to cultivate children's literacy and creativity in an environment that is digital, physical and evocative of a picturebook. This exemplar of research-through design featured an interactive, interdisciplinary process involving architects, engineers, educators and librarians. During a two-year, participatory design process, children and librarians were engaged as co-designers in the creation of a technologically sophisticated, robotic environment that fosters literacy in an increasingly digital society. A summative evaluation of the full-scale, working prototype engaged librarians and two classrooms of second grade children in a quasi-experiment to determine the overall usability of the system as well as its impact on children's meaning-making when compared to read-alouds in a traditional setting. The LIT Room concept won funding from the National Science Foundation, and was used by Richland Library after the end of formal research activities to facilitate innovative programming and outreach opportunities for children, teens and adults in this one-of-a-kind, technology-enhanced space for literacy acquisition and creativity support. Words become worlds.

### Master of Architecture

Harvard University Graduate School of Design, Cambridge, MA  
Class of 1996

Thesis: Language of the Architect: Descriptions of Architectural Discourse

### Bachelor of Arts in Architecture

Clemson University School of Architecture, Clemson, SC  
Class of 1992

Clemson Architectural Center, Charleston SC, Fall 1991

Honors: Pella Design Award for Senior Thesis Project

## TEACHING

### Senior Lecturer

Clemson University School of Architecture, Clemson SC  
2019 - present

### Lecturer (full-time)

Clemson University School of Architecture, Clemson SC  
2015 - 2019

### Lecturer (part-time TA)

Clemson University School of Architecture, Clemson SC  
2011 - 2015

## TEACHING Courses Taught & Developed

(continued)

### **ARCH 879 - User-Centered Design of Interactive Artifacts and Environments**

Graduate seminar in the Digital Ecologies Certificate track. Focuses on understanding, developing and testing interactive, robotics and technology-embedded systems for the built environment. The course exposes designers to the history of user-centered design methods in the context of interaction environments, and prepares students, through hands-on experience with the user-centered techniques and methods, for the design of complex spatial environments. 3 credits.

### **ARCH 851 - Design Studio III**

Graduate studio. Design studio for projects of relative complexity, with varied scales and programs, focusing on investigative skills, fundamental design skills, sustainability, and technical documentation. Emphasizes the relationship between architecture, site, and context in preparation for more advanced design projects and off-campus study. 6 credits.

### **ARCH 857/351 - Design Studio V / Studio Clemson / Fluid Studio**

Senior graduate/undergraduate vertical studio. ARCH 351 - Addresses architectural problems with varied scales, programs and locations. Emphasizes the relationship between architecture and context. Projects include analysis, conceptual development, and architectonic resolutions. ARCH 857 - Design studio for increasingly comprehensive design projects, with varied scales and programs, with an emphasis on pre-design, site design, sustainability, and collaborative processes. Emphasizes the relationship between architecture, site and context. 6 credits.

### **ARCH 699/499 - Selected Topics in Architecture**

Graduate/undergraduate elective study of selected topics in architecture. Adaptation of ARCH 879, focusing on understanding, developing and testing interactive, robotics and technology-embedded systems for the built environment. The course exposes designers to the history of user-centered design methods in the context of interaction environments, and prepares students, through hands-on experience with the user-centered techniques and methods, for the design of complex spatial environments. Course is aligned with ongoing Creative Inquiry grant. 1-3 credits.

### **ARCH 452 - Synthesis Studio**

Senior undergraduate comprehensive studio. Integrates acquired skills, abilities, and interests from previous architecture studios. Projects emphasize the accumulation of architectural experiences and knowledge. 6 credits.

### **ARCH 401 - Architectural Portfolio**

Junior undergraduate seminar cultivating graphic communication skills and the development a cohesive design identity. Students develop an architectural brand through a suite of portfolios (physical and digital, academic and professional, info-graphic and three-dimensional), and are guided to develop a practice of indexing, communicating and evaluating their design artifacts. 3 credits.

### **ARCH 350 - Introduction to Urban Contexts**

Junior undergraduate studio. Addresses architectural problems related to urban contexts, and studies architectural resolutions that explore the interface between buildings and the public realm for particular sites. Introduces urban design fundamentals, building egress codes, and zoning, and promotes continued development of architectural, graphic and oral communication skills. Design problems vary every semester according to current issues. 3 credits.

### **ARCH 151 - Architecture Communication**

Freshman undergraduate studio. Introduction to the principles of architectural design. Collaborative foundation studio offering instruction in the specific skills of formal composition, visual communication, oral presentation, and computer literacy. 5 credits.

## **Professor-in-Residence / Co-Director**

Charles E. Daniel Center for Urban Studies, Genoa, Italy  
Clemson University School of Architecture, Clemson SC  
2015 - 2016

## **Courses Taught & Developed**

### **ARCH 416/616 / LARCH 419 - Field Studies in Architecture and Related Arts**

Intensive study of place in an off-campus setting as context for design. Documentation and analysis of architectural structures observed during European travels in graphic and written form. 3 credits.

**TEACHING**  
(continued)

**ARCH 353/857 / LARCH 452 - Studio Genoa**

Interdisciplinary, "fluid" vertical studio comprised of architecture and landscape architecture students, undergraduate and graduate levels. ARCH 353 - Addresses architectural problems with varied scales and programs in the context of Genoa, Italy, and historic Europe. Emphasizes the relationship between architecture and context. Projects include analysis, conceptual development, and architectonic resolutions. Design problems vary every semester according to current issues. ARCH 857 - Design studio for increasingly comprehensive design projects, with varied scales and programs, with an emphasis on pre-design, site design, sustainability, and collaborative processes. Emphasizes the relationship between architecture, site and context. LARCH 452 - Off-campus landscape architecture studio in Genoa. Students participate in an interdisciplinary project linked to one of the focus areas in the department: restoration (environmental or cultural/historical), growth and change. 6 credits.

**Adjunct Lecturer**

University of Colorado College of Architecture and Planning,  
Boulder CO  
2009 - 2010

**Courses Taught & Developed**

**ENVD 4510 - Studio 3**

Senior undergraduate architectural studio emphasizing an iterative, exploratory design process, the development of design concepts, and critical evaluation and discourse. Exploration through precedent research, site mapping / analysis, programming and conceptual development culminating in a complex architectural proposal in an urban context. 6 credits.

**ENVD 1004 - Introduction to Environmental Design**

Interdisciplinary, foundation design studio introducing the complexity of forces that interact to shape the physical environment. A lecture sequence and parallel set of design exercises integrates environmental design theory and practice, elucidating seminal issues guiding the work of architects, landscape architects, urban designers and urban planners. 3 credits.

**Student Instructor**

Harvard University Graduate School of Design, Cambridge MA  
Summer 1996

**Career Discovery Design Studio**

Six week intensive design studio for high school and college students interested in exposure to design education. Projects focused on analysis of urban conditions and conceptual development of short, intensive design interventions. Using portfolios consisting primarily of work from the six-week program, students from my studio were accepted into graduate programs in architecture at Harvard, MIT, UC Berkeley and RISD.

**STUDENT  
SUPERVISION**

**Senior Thesis Practitioner Advisor**

University of North Carolina College of Arts + Architecture,  
Charlotte NC  
Spring 2006

*Claiming Space - Chrissy Burton*

Practitioner supervision of senior thesis adaptive-reuse project for the historic Morgan School in Charlotte, NC including programming, project development and documentation.

**TEACHING  
AWARDS**

**Excellence in Teaching**

Clemson University College of Architecture, Arts & Humanities  
Academic Year 2014

For demonstrated excellence in teaching at the undergraduate and/or graduate level in the College of Architecture, Arts and Humanities. Recipient exhibits excellence in promotion of the subject, classroom activities and involvement and provides an environment that holds true to the college mission that includes focusing on transformative education, knowledge development and creative expression to anticipate and meet the needs of rapidly changing regional, national and global environment.

## LECTURES & WORKSHOPS

Career Expo Prep Courses: Portfolio 101 / Portfolio Workshop  
Clemson University School of Architecture, Clemson SC  
Spring 2014 - present  
Two separate courses, one a lecture focusing on tricks and tips for making professional resumes and portfolios, another a workshop offering one-on-one intensive review and critique of individual student portfolios in an atelier setting.

AP Peers Lunch Lecture Series: "Everything You Need To Know About Architecture You Can Learn From Lady Gaga"  
University of Colorado College of Architecture and Planning, Boulder CO  
Spring 2010  
Lecture relating verbal and visual language within architectural discourse.

AP Peers Portfolio Design Series Lecture / Workshop  
University of Colorado College of Architecture and Planning, Boulder CO  
Spring 2010

## RESEARCH Peer-Reviewed Academic Journals

Fullerton, S. K., Schafer, G. J., Hubbard, K., McClure, E. L., Salley, L. & Ross, R. "Considering Quality and Diversity: An Analysis of Read-Aloud Recommendations and Rationales from Children's Literature Experts." *New Review of Children's Literature and Librarianship*, in press.

## National & International Peer-Reviewed Papers & Posters

Schafer, G., Fullerton, S. K., Green, K. E., Walker, I. D. & Vijaykumar, A. "Words Become Worlds: The LIT ROOM, a Literacy Support Tool and Room Scale." *In Proceedings of DIS 2018, the ACM conference on Designing Interactive Systems*, June 9-13, Hong Kong, pp. 511-522.

Schafer, G., Green, K. E., Walker, I. D., Fullerton, S. & 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*, June 21-25, Vancouver, B.C., pp. 865-874.

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. & Padmakumar, A. "Designing the LIT KIT, an Interactive, Environmental, Cyber-Physical Artifact Enhancing Children's Picture-book Reading." *In Proceedings of IDC 2013: the 12th International Conference on Interaction Design and Children*, June 24-27, New York, pp. 281-284.

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." *In Proceedings of IDC 2013: the 12th International Conference on Interaction Design and Children*, June 24-27, New York, pp. 643-646.

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

RESEARCH  
(continued)

Exhibitions

Schafer, G. & Fullerton, S.K. "The LIT KIT: A Mixed-Technology Architectural-Robotic System for Enhancing Children's Picturebook Reading." At the ACCelerate: ACC Smithsonian Creativity and Innovation Festival, Washington, DC, (April 5-7 2019).

National & International Conference Presentations

OCLC Annual Meeting

Baltimore, MD (October 2017)

"The LIT Room: Reading Reinvented"

Co-Presenter: Tony Tallent, Richland Library

American Library Association

Chicago, IL (June 2017)

"The Necessary Library: User-Centered Design Solutions for Public Libraries"

Co-Presenter: Tony Tallent, Richland Library

Orlando, FL (June 2016)

"Libraries: The Space to Be"

Co-Presenter: Tony Tallent, Richland Library

Literacy Research Association

Carlsbad, CA (December 2015)

"Initial Findings from the Design, Implementation, and Evaluation of the LIT ROOM: A Mixed-Technology Architectural-Robotic Embedded Environment for Augmenting Interactive Picturebook Read-Alouds."

Co-Presenter: Dr. Susan King Fullerton, Clemson University School of Education

"Do Experts' Book Selections Promote Literacy, Equity, and Imagination?: An Analysis of Read-Aloud Recommendations and Rationales From Children's Librarians and Children's Literature Professors."

Co-Presenters: Dr. Susan King Fullerton, Erin L. McClure, Koti Hubbard, Rachel Huber & Leslie Salley, Clemson University School of Education

Marco Island, FL (December 2014)

"A Review of Research in the Design of Technology-Enhanced Literacy Tools and Texts: Implications for the Dialogic Construction of Literacy."

Co-Presenter: Dr. Susan King Fullerton

The European Conference on Literacy

Klagenfurt, Austria (July 2015)

"Interactive Read-Alouds of Picturebooks within Multi-modal Environments: Implications for Interdisciplinary Design and Research."

Co-Presenter: Dr. Susan King Fullerton, Clemson University School of Education

American Reading Forum

Sanibel Island, FL (December 2014)

"The LIT KIT: How Interactive-Read Alouds Within a Cyber-Physical, Multisensory Environment Impact Children's Responses to Picturebooks."

Co-Presenter: Dr. Susan King Fullerton

Sanibel Island, FL (December 2013)

"Looking Back to Envision What Lies Ahead: A Comparative Review of Research in Interactive Read-Alouds and Technology-Enhanced Literacy Texts and Tools."

Co-Presenter: Dr. Susan King Fullerton

**RESEARCH AWARDS** **Best Paper**  
Designing Interactive Systems Conference, Hong Kong  
June 2018  
“Words Become Worlds: The LIT ROOM, a Literacy Support Tool at Room Scale.”

**PRACTICE** **Registration**  
Licensed Architect  
North Carolina #10567  
2008 - present

### **Professional History**

#### **BOUDREAUX**

Columbia, SC  
2019 - present  
Architect / Designer  
Coastal Discovery Museum Competition, Hilton Head Island SC

#### **Schafer Design Studio**

Columbia SC, Boulder CO, Charlotte NC  
2008 - present  
Project Manager / Project Architect / Designer  
Lamar Residence Renovation, Boulder CO  
Grissom Residence, McAdenville NC  
Schafer Residence, Cherryville NC  
Lesbian & Gay Community Center of Charlotte Adaptive Reuse, Charlotte NC

#### **The Preston Partnership, LLC**

Charlotte NC  
2006 - 2008  
Project Manager / Project Architect  
Post Wade Mixed Use, Raleigh NC

#### **SchenkelShultz Architects**

Charlotte NC  
2002 - 2006  
Project Manager / Designer  
Mecklenburg County Courthouse, Charlotte NC  
Sara Collins Elementary School, Greenville SC  
Washington Center School, Greenville SC  
Asheville Regional Airport Terminal Renovation, Asheville NC

#### **Burgess Design Studio**

Davidson NC  
2000 - 2002  
Junior Partner / Project Manager / Designer  
WDAV Headquarters, Davidson NC  
Eleven Eleven Central Adaptive Reuse, Charlotte NC

#### **Middleton McMillan / SchenkelShultz Architects**

Charlotte NC  
1997 - 2000  
Project Team / Designer  
Phillip O. Berry Academy of Technology, Charlotte NC  
Western Carolina University Fine & Performing Arts Center, Cullowhee NC

## **SERVICE Academic / Professional**

### **Peer Reviewer**

IDC - International Conference on Interaction Design and Children  
(2013-present)

### **Awards Jury Member**

AIA East Tennessee Chapter  
(2019)

### **Digital Ecologies Committee**

Clemson University School of Architecture  
(2017-present)

### **Cooper Library Master Planning Executive Committee**

Clemson University  
(2019-present)

### **Lecturer Faculty Search Committee**

Clemson University School of Architecture  
(Summer 2019)

### **PR Task Force**

Clemson University School of Architecture  
(2017-2018)

### **Faculty and Student Advisory Committee**

Clemson University School of Architecture  
(2016-2018)

### **Design Teaching Stream Committee**

Clemson University School of Architecture  
(2016-2018)

### **Board of Zoning Appeals**

City of Columbia, SC  
(2018-present)

### **Educational Partnerships Committee**

Charlotte Chamber of Commerce, Charlotte NC  
(2001)

### **Campus Revitalization Project Committee**

Southpark Educational Campus, Charlotte NC  
(2000-2001)

## **Personal**

### **Board Treasurer**

Out Boulder, Boulder CO  
(2009-2010)

### **Arts Selection Committee**

Boulder Public Library, Boulder CO  
(2009)

### **Board Secretary**

Jacob's Ladder Job Center, Charlotte NC  
(2005-2008)

### **Academic Internship / Community Partnership Program**

Charlotte-Mecklenburg Schools, Charlotte NC  
(1998-2006)

### **Board Member**

The Lesbian & Gay Community Center of Charlotte, Charlotte NC  
(2000-2002)