curriculum vitae

kyle steinfeld
356 Wurster Hall, University of California, Berkeley, CA 94720-1800
net: ksteinfe@berkeley.edu
tel: +01 510 485 9537
born: Jacksonville, Florida, USA   Dec, 1975

education

Masters of Architecture   May 01 - Jun 04
Massachusetts Institute of Technology

Bachelors of Design in Architecture   Aug 93 - Jun 99
University of Florida, with honors

academic experience

Assistant Professor, University of California, Berkeley   Aug 10 - Present
Director, Studio One Degree Program 2014-2015

ARCH 229	Turkers' Delight
ARCH 200c	Representational Practice in Architectural Design
ARCH 205	Studio One
ARCH 229	Graduate Seminar in Digital Design Theories and Methods
ARCH 202	Advanced Option Studio
ARCH 200a	Architectural Design Studio
ARCH 229	Building Performance and Visualization
ARCH 101	Case Studies in Architecture
ARCH 100a	Fundamentals of Architectural Design

Visiting Instructor, Pratt Institute   Sep 06 - Aug 10
Director, Digital Futures Consultant Group

ARCH 313	Building Services
ARCH 521c	Special Topics in Digital Representation
100S-01	Pre-College Summer Studio
ARCH 400	Advanced Design
ARCH 300	Advanced Design
100S-01	Pre-College Summer Studio
ARCH 200	Comprehensive Design

Visiting Instructor, Cornell University   Sep 07 - May 08

ARCH 465	Technology Seminar - Component Architecture
ARCH 401	Research Studio - Component Arcologies

Researcher, Technische Universiteit Delft   Apr 06 - Apr 07

Adjunct Professor, Stevens Institute of Technology   Jan 06 - Mar 06

PAE 640	Special Topics: Programming for Design Applications

Adjunct Professor, New York Institute of Technology   Jan 00 - May 01

AAID 101	Design Fundamentals I
AAID 102	Design Fundamentals II

professional experience

Digital Design Consultant, Skidmore, Owings, and Merrill   Aug 08 - Dec 08
Lead Researcher, SOM / Sci Arc Applied Studies Seminar

Designer, Acconci Studio   May 07 - Aug 07

Digital Design Researcher, Kohn Pedersen Fox Associates   Mar 05 - Mar 06

Designer, TEN Arquitectos   Sep 04 - Feb 05

Project Designer, White Noise - White Light   Dec 03 - Aug 04

Designer, Diller + Scofidio   May 03 - Nov 03

Designer, Acconci Studio   Apr 00 - May 01

publications

books, book chapters, and special issues

PB-02	**Geometric Computation (Forthcoming)** *Joy Ko, Kyle Steinfeld* *** Authors are currently in contract with Routledge.*	Expected 2016
PB-01	**The Data Made Me Do It** *Direct, Deferred, and Dissolved Authorship and the Architecture of the Crowd* Kyle Steinfeld, Levon Fox, Alex Spatzier *in:* **Paradigms in Computing: Making, Machines, and Models for Design Agency in Architecture** *edited by: M Ibanez, D Gerber*	Oct 14

conference papers (peer-review)

PC-06	**Imperative, Functional, Object-Oriented** *An alternative ontology of programmatic paradigms for design* Kyle Steinfeld, Carlos Sandoval *in:* **Design Agency,** Proceedings of Proceedings of the 34th Annual Conference of the Association for Computer Aided Design in Architecture (ACADIA) *edited by: J Sanchez, A Huang, D Gerber*	Oct 14
PC-05	**Dhour** *A bioclimatic information design prototyping toolkit* Kyle Steinfeld, Brendon Levitt *in:* **Adaptive Architecture,** Proceedings of The 32nd Annual Conference of the Association for Computer Aided Design in Architecture (ACADIA 2013) *edited by: P Beesley, O Khan, M Stacey*	Oct 13
PC-04	**Decodes** *A platform-independent computational geometry environment* Kyle Steinfeld, Joy Ko *in:* **Open Systems,** Proceedings of The 18th International Conference on Computer-Aided Architectural Design Research in Asia (CAADRIA 2013) *edited by: R Stouffs, P Janssen, and B Tuncer*	May 13
PC-03	**Housing Agency System (HAS)** *Multi-Criteria Satisficing & Mass-Customization of Homes* Michael Bergin, Kyle Steinfeld *in:* **Offsite: Theory and Practice of Architectural Production,** Proceedings of Fall Conference of the Association of Collegiate Schools of Architecture (ACSA 2012) *edited by: R Smith, J Quale, R Ng*	Apr 13
PC-02	**Open Graphic Evaluative Frameworks** *A climate analysis tool and web-based weather data visualization platform* Kyle Steinfeld, Stefano Schiavon, Dustin Moon *in:* **Digital Physicality - Physical Digitality,** Proceedings of The 30th International Conference on Education and research in Computer Aided Architectural Design in Europe (eCAADe 2012) *edited by: H Achten and D Matejovska*	Sep 12
PC-01	**Situated Bioclimatic Information Design** *A new approach to the processing and visualization of climate data* Kyle Steinfeld, Pravin Bhiwapurkar, Anna Dyson, Jason Vollen *in:* **LIFE in:formation, On Responsive Information and Variations in Architecture,** Proceedings of The 29th Annual Conference of the Association for Computer Aided Design in Architecture (ACADIA 2010) *edited by: P Lorenzo-Eiroa, A Sprecher, S Yeshayahu*	Oct 10

invited publications

PIV-03	**Data Agency** *Kyle Steinfeld* *in:* **Proceedings of the 34th Annual Conference of the Association for Computer Aided Design in Architecture (ACADIA)** *edited by: J Sanchez, A Huang, D Gerber*	Oct 14
PIV-02	**Public, Private, Protected** *Encapsulation and the Disempowerment of the Digital Architect* *Kyle Steinfeld* *in:* **Room One Thousand Fall/Spring 2013 Edition: Technology and the Box** *edited by: P Maitland*	Sep 13

PIV-01	**Synthetic Digital Ecologies**	Oct 12

Mark Cabrinha, Jason Kelly Johnson, and Kyle Steinfeld
in: **Proceedings of the 32nd Annual Conference of the Association for Comput-
er Aided Design in Architecture (ACADIA)**
** Introductory essay for ACADIA 2012 conference proceedings.

digital tools

*In the subject area of Design Computation, the development of innovative design methods through
the authoring of free and open-source software (FOSS) is an important means by which contributions
to the discipline are made. For this reason, software is regarded as an important medium of creative
work. Listed below are the research projects related to the development of design tools that have
served to organize many of my other professional activities. These include the publication of research
results, the securing of financial support for research, the forging of professional partnerships, and the
development of teaching and pedagogy.*

CW-04	**Decloud**	Aug 14

Kyle Steinfeld, Erica Brett
A cloud-based computational geometry modelling environment
decodes-code-editor-v1.appspot.com/login-page.html

CW-02	**CBE Thermal Comfort Tool for ASHRAE-55**	Jun 12

Tyler Hoyt, Stefano Schiavon, Alberto Piccioli, Dustin Moon and Kyle Steinfeld
*A web-based graphical user interface was developed for thermal comfort prediction
according to ASHRAE Standard-55. This included models for conventional building
systems (predicted mean vote) and also for comfort using the adaptive comfort mod-
el, and with increased air speeds (for example, when using fans for cooling).*
cbe.berkeley.edu/comforttool

CW-01	**Studiomaven**	May 11

Kyle Steinfeld
*An online platform that targets students of environmental design and facilitates the
peer-to-peer exchange of representational techniques, software tutorials, and other
skill-training material relevant to studio practice. The Studiomaven project couples
instructional improvement with research in the areas of user interface and digital
design.*
studiomaven.org

CW-06	**Decod.es Geometry Library**	ongoing

Kyle Steinfeld, Joy Ko
*A platform-independent computational geometry library targeting architectural de-
signers, and built upon the strategies of host-independence, domain-specificity, and
context-appropriate abstraction.*
decod.es

CW-05	**Decod.es for Grasshopper**	May 12 - Mar 13

Kyle Steinfeld
A visual-programming interface for the Decod.es geometry library (see above).

CW-03	**Dhour**	Nov 12 - Jan 13

Kyle Steinfeld
*A bioclimatic information design prototyping toolkit developed for the Grasshopper
visual programming environment, which enables the situational development of
information graphics.*
www.food4rhino.com/project/dhour

grants and funded research

*It is the norm in architectural design research to undertake many small-scale investigations that
support larger research aims, and to fund such efforts through a multiplicity of funding structures.
The project support presented below should be seen in the context of the other research outcomes
produced, which may include the development of digital tools and/or the authoring of published work
(related publications are noted). Unless otherwise indicated, I have served as principal investigator for
all grants and funded research listed.*

FR-18	**Data + Design Research Workshop**	May 15

Graham Fleming, UC Berkeley Vice Chancellor for Research
*Funding provided for a workshop to kick-start the development of a central repository
of free and open-source software (FOSS) tools housed at UC Berkeley that enables
the use of big data tools for urban data collection, coordination, and integration.*

FR-17	**Studio One Technical Partnership**	Aug 14 - May 15

Autodesk Design Research Group
Design Variations and Optimization
*Support for research assistance related to Studio One, in the development of meth-
ods for the generation and exploration of massive design spaces.*

| FR-16 | **Studio One Technical Partnership** | Aug 14 - May 15 |

Autodesk Revit Project Group
Declarative Design Tools
> Support for research assistance related to Studio One, in the development of design tools for the application of a "declarative design method" to the domain of architectural design.

| FR-15 | **Studio One Technical Partnership** | Aug 14 - May 15 |

Autodesk Pier 9
Digital Fabrication Pipelines
> Support for research assistance related to Studio One, in the development of automated "pipelines" for the rationalization and fabrication of architectural form. These include algorithms for the automated generation of flat panels for 2d-cutting, automated surface subdivision for 3d-milling, and automated geometric relaxation for finding similarly-sized elements.

| FR-14 | **Faculty Research Grant** | Mar 14 - Sep 14 |

UCB Committee on Research
DHour
> Support to further the development of an opensource software plugin called "Dhour" that enables the visualization of climate and building performance data.

| FR-13 | **IIS Mini-Conference Grant** | Jan 15 - Apr 15 |

UCB Institute of International Studies
Public, Private, Protected Symposium
> Support for a symposium on the current state of geometric and algorithmic literacy in architectural design education, and seeks to understand the evolving dynamic between increasingly powerful tools of design and the empowerment of designers.

| FR-11 | **IDEA Studio Fellowship** | May 13 |

Autodesk
Computational Literacy for Architectural Designers
> Support is to further the development of a library of computational geometry lessons and code samples intended to demystify the core concepts of design computation for an audience of architectural designers. This library, titled "Decod.es" and currently implemented as a cross-platform Python module, closely mirrors a pedagogical framework outlined in a forthcoming book to be published by Routledge in 2014.

| FR-10 | **Faculty Research Grant** | Jan 13 - Jun 13 |

UCB Committee on Research
Decod.es
> Support for the development of a computational geometry library targeted to architectural designers. By facilitating an enhanced computational literacy, the proposed software holds the potential to become a key catalyst in the ongoing transformation of the practice of architecture into a more deeply collaborative and innovative discipline.

| FR-09 | **Hellman Fellowship** | Sep 12 - Sep 13 |

The Hellman Foundation
Visualization Tools for Climate-Calibrated Design
> Support for the development of a weather-data analysis and visualization tool-set for the next generation of climatically-responsive architecture. In contrast with heuristic tools directed toward known solutions, this tool offers architects an exploratory framework for discovering new design approaches by enabling nuanced and customizable queries of weather data, and aims to facilitate design processes better calibrated to climatic flows.

| FR-07 | **Research Enabling Grant** | Sep 11 - Dec 11 |

UCB Committee on Research
Dhour: A bioclimatic information design prototyping toolkit
> Support for research that seeks to develop a set of graphic interfaces, procedural standards, and software libraries that empower architectural designers to produce evaluative and rhetorical graphics.

| FR-05 | **Instructional Improvement Grant** | Jun 11 - May 11 |

UCB Office of Educational Development
Studiomaven
> Support for the development of a web-based platform for the peer-to-peer exchange of representational techniques.

| FR-01 | **Faculty Development Grant** | May 08 - Aug 08 |

Pratt Institute
Force Feed
> role: Co-PI
> Support for a case study in design generation that tested the use of near real-time structural analysis, proposed in collaboration with Lonn Combs.

FR-02	**Graduate Fellowship**	Sep 09 - May 10
	Rensselaer Polytechnic Institute	

professional activities

workshops and symposia

An important locus for the production and dissemination of knowledge surrounding the application of design software is the workshop. It is an honor to be invited to lead such workshops, just as it is a mark of distinction to organize symposia at parallel institutions and organizations. Workshops such as the ones listed below act both as professional service, a means of sharing design methods and fostering the critical application of design software, and as an instrument to further research through the field testing of new technologies of design.

WS-13   Workshop Organizer, **Design Modeling Symposium**   Sep 15
The Royal Danish Academy of Fine Arts
In collaboration with Jessie Braden, Luis Jaggy, Joy Ko, and Lynnette Widder, organized a workshop on the visualization of large-scale data flows and small-scale human behavior.

WS-12   Chair, **The Data Made Me Do It Symposium**   Mar 15
UC Berkeley
Chaired a two-day symposium on the dynamics of new technologies of design and the changing notions of design authorship, with focus on two divergent scales: data-mining as a new way of understanding the urban environment, and declarative design as an approach that disrupts traditional notions of the relationship between software tools and the physical realization of architecture.

WS-11   Co-Chair, **Data + Design**   Mar 15
UC Berkeley
Organized a research workshop on making big-data analytics actionable for architectural design. The challenges of integrating big data analytics into the domain of architectural design and of making big data sets actionable within design practice remain critically underdeveloped. This one-day workshop sought to take steps to address this need by developing the models and interfaces required to enable designers to access cutting-edge geospatial mapping tools, crowdsourcing techniques, spatio-temporal analytics and data visualization methods, thereby significantly increasing their research capabilities.

WS-10   Cluster Organizer, **Smart Geometry 2014**   Jul 14
The Chinese University of Hong Kong
Successfully proposed and executed a 6-day workshop cluster in Hong Kong through a peer-review process. This workshop speculates about about the use of a novel analytical tool for structuring the various spatial constituents and datasets related to high-density urban environments. This cluster argues that the complexity of Hong Kong's dense, interconnected commercial spaces cannot be properly analyzed and represented through conventional methods. In order to develop new ways to visualize and understand this spatial complexity, we developed a novel analytical tool for structuring the various spatial constituents and datasets. In collaboration with Carlos Sandoval, John Faichney, Scott Ewart, and Matthew Shaxted.

WS-09   Chair, **Public, Private, Protected Symposium**   Apr 14
UC Berkeley
Chaired The Public, Private, Protected symposium, which takes stock of the current state of geometric and algorithmic literacy in architectural design education, and seeks to understand the evolving dynamic between increasingly powerful tools of design and the empowerment of designers. The discussion pivots around a manuscript for a foundational text on computational geometry and algorithmic architectural design, PB-02, authored by Joy Ko and Kyle Steinfeld.

WS-08   Cluster Organizer, **Smart Geometry 2011**   Jul 11
The Royal Danish Academy of Fine Arts
Successfully proposed and executed a 6-day workshop cluster in Copenhagen through a peer-review process. Workshop examines the means by which environmental flows are identified and described. In contrast with generic approaches to quantification, this cluster hypothesizes that data-driven design must be supported by designed data, and promotes the production of designer-authored environmental datastreams: highly contingent, intrinsically idiosyncratic, free for public use, and encouraging of interpretation. In collaboration with Kat Park and Nicholas Novelli.

WS-07   Workshop Organizer, **Rhinoscript Workshop**   Apr 08
The Ohio State University
Organized and led a 4-day workshop on generative design techniques utilizing Rhinoscript, a built-in scripting language for Rhinoceros.

WS-06	Workshop Organizer, **Game, Set, Match**	Mar 07

TU Delft
> Tutored a 1-day workshop on generative design techniques at TU Delft.

WS-05	Workshop Organizer, **Digital Futures Workshop**	Feb 07

Pratt Institute
> Organized and led a 1-day workshop on generative design techniques utilizing Processing, a Java development environment.

WS-04	Workshop Organizer, **De-mystifying Multi-Agent Design**	Nov 06

TU Delft
> Organized and instructed a 3-day workshop on design strategies utilizing "multi-agent" computational models, in collaboration with Saeed Arida and Kaustuv De Biswas.

WS-03	Workshop Organizer, **Design Fabrication Workshop**	Jun 06

TU Delft
> Organized workshop on digital design-to-fabrication techniques, instructed by Larry Sass.

WS-02	Tutor, **Smart Geometry**

> Led a series of annual week-long workshops focusing on parametric and generative design techniques for the Smart Geometry Conference and presented selected projects, prior to the shift in the format of this event to the peer-reviewed cluster model which was adopted in 2010.

San Francisco	Mar 09
New York	Jan 07
Cambridge, UK	Jan 06

WS-01	Tutor, **Generative Components Workshop**

> Organized and tutored a series of workshops on Generative Components and presented selected projects at subsequent digital design symposium.

NLSO conference	Oct 06
Pratt Institute	Sep 06
Prague Academy of Fine Arts	Jun 06
Stevens Institute	Mar 06
Massachusetts Institute of Technology	Apr 05
Columbia University	May 05
Columbia University	Oct 05

invited lectures and presentations

As is the case in other subject areas in architectural design, it is an honor to be invited to present research and creative work at parallel institutions and to an audience of professionals in practice. Given my research focus, the presentations and lectures listed below take on a particular significance as they represent a critical interface between my research and its domain of application. In this way, they form an important indicator of the impact of my research on the cultural and social structures of design practice. Where a presentation is given in the context of the publication of a conference paper, the related paper is indicated.

"An Architecture of the Crowd", Tool() symposium, RISD	Mar 15

> Presented work that explores the use of crowdsourced techniques in creative design.

"Data Agency Session Presentation", Session Chair, ACADIA Conference	Oct 14

> Presented an essay on "Data Agency", and moderated a subsequent discussion in Session 6 of the ACADIA conference.

"Imperative, Functional, Object-Oriented", ACADIA Conference	Oct 14

> Cambridge, Ontario, Canada
> Presented case-study results of the use of Dhour, a bioclimatic information design prototyping toolkit.

"The Data Made Me Do It", Skidmore, Owings and Merrill	Jul 14

> Presented to the San Francisco office of SOM a discussion of crowdsourced techniques in architectural design and urban analysis.

"The Data Made Me Do It", Gensler	Jul 14

> Presented to members of the San Francisco office of Gensler a discussion of crowdsourced techniques in architectural design and urban analysis.

"The Data Made Me Do It", Stamen Design	May 14

> Presented to Stamen Design a discussion of crowdsourced techniques in architectural design and urban analysis.

"Dhour", International Building Performance Simulation Association	Sep 13

> Presented to the New York Chapter of IBPSA a discussion of Dhour, a bioclimatic information design prototyping toolkit.

"Dhour", ACADIA Conference   Oct 13
Cambridge, Ontario, Canada
Presented case-study results of the use of Dhour, a bioclimatic information design
prototyping toolkit.

"Dhour", SOM Performative Design Group   Aug 13
Presented Dhour, a bioclimatic information design prototyping toolkit.

"Decodes for Grasshopper", CAADRIA Conference   May 13
Singapore
Presented progress toward a visual-programming interface for the Decod.es geom-
etry library.

"Dhour", Autodesk Building Performance Analysis Group   May 13
San Francisco
Presented a bioclimatic information design prototyping toolkit to industry group.

"Studiomaven", Autodesk Education Group   Jan 12
Presented an online platform that targets students of environmental design and facil-
itates the peer-to-peer exchange of representational techniques, software tutorials,
and other skill-training material relevant to studio practice.

"Situated Bioclimatic Information Design", California College of the Arts   Nov 10
Presented selected design projects.

"Graphic Evaluative Frameworks", ACADIA Conference   Oct 10
New York, New York
Presented paper, Graphic Evaluative Frameworks.

"Reflective Toolcraft", Rhode Island School of Design   Apr 10
Presented selected computational design projects.

"Reflective Toolcraft", Bentley Enterprises Conference   Mar 09
Presented selected design projects at this algorithmic design research symposium
organized by Columbia GSAPP and the Architectural Association Design Research
Laboratory.

University of Pennsylvania   Mar 06
Presented selected computational design projects completed while at MIT.

Bentley Enterprises Conference   Jun 06
Presented selected computational design projects at Bentley's annual innovation
summit in Prague, Czech Republic.

Bentley Research Seminar   May 05
Presented selected computational design projects completed while with Kohn Peder-
son Fox Associates.

eCAADe conference, Lisbon   Sep 05
Presented selected computational design projects completed while with Kohn Peder-
son Fox Associates.

professional service

While other organizations remain relevant, my professional service centers upon the leadership role
I have taken in The Association for Computer Aided Design in Architecture. ACADIA is regarded as
the foremost organization in the world promoting research in digital design, and its stated aims hem
closely to my own: "to facilitate communication and critical thinking regarding the use of computers
in architecture... with a particular focus on the software, hardware and pedagogy involved in design
education".

PS-04   **Editorial Board Member,** Frontiers in Digital Humanities   May 15
Served as a Review Editor on the Editorial Board of Digital Architecture, a speciality
of Frontiers in Built Environment and Digital Humanities.
http://journal.frontiersin.org/journal/digital-humanities

PS-03   **Session Chair,** ACADIA 2014 Conference   Oct 14
Organized and moderated a session titled "Data Agency" at the 2014 ACADIA con-
ference in Los Angeles.
http://2014.acadia.org/schedule.html

PS-02   **Member, Board of Directors,** ACADIA   Jan 15 - Jan 17
Served on the Board of Directors for the Association for Computer Aided Design in
Architecture (ACADIA) as an 'alternate' member.

PS-01   **Technical Co-Chair,** ACADIA 2012 Conference   Oct 11 - Oct 12
Co-chaired the 32nd Annual Conference of the Association for Computer Aided Design in Architecture (ACADIA). Along with Jason Kelly Johnson and Mark Cabrinha, determined and implemented the conceptual, technical, operational and social vision for the conference. Oversaw the peer-review process and ensured the quality of the conference proceedings.
http://2012.acadia.org/

professional affiliations

Remaining closely attuned to the details of practical application of design software is essential to my work. The primary mechanism by which I maintain a connection to practice is the professional organizations with which I am affiliated. Included below are purely professional organizations, as well as those that aim to facilitate productive interfaces between academics and professional practice.

Academic Partner, **Autodesk Pier 9 Creative Projects Partner**   Aug 14 - May 15
The Pier 9 Creative Projects Partnership program gives organizations a chance to work with technicians at Autodesk's Pier 9 in the development of creative or artistic work.
http://www.autodesk.com/artist-in-residence/projects

Academic Partner, **Autodesk BPA Research Partnership Program**   Apr 13 - Present
The Building Performance Analysis Partnership Program supports a relatively low touch relationship between Autodesk and research teams working specifically on building energy performance.
http://sustainabilityworkshop.autodesk.com/bpa-research-partnerships#st-hash.3IWMbbzs.dpuf

Member, **ACSA**   Mar 13 - Present
The Association of Collegiate Schools of Architecture, founded in 1912 to advance the quality of architectural education through support of member schools, their faculty, and students.

Member, **ACADIA**   May 08 - Present
ACADIA facilitates communication and critical thinking regarding the use of computers in architecture, planning and building science. A particular focus is education and the software, hardware and pedagogy involved in education.

Member, **Smart Geometry**   May 06 - May 14
Smart Geometry promotes the emergence of an algorithmic design paradigm in architectural practice, and fosters a community built on annual workshops and an international conference. As a "core" member from 2010-2012, I participated in organizational governance and service.

Member, **CAADRIA**   Sep 12 - Sep 14
The Association for Computer-Aided Architectural Design Research in Asia (CAADRIA) promotes teaching and research in CAAD in Asia, and has members on six continents. To promote research and teaching in CAAD that enhances creativity rather than production.

Member, **eCAADe**   Apr 13 - Apr 14
eCAADe (Education and research in Computer Aided Architectural Design in Europe) is a non-profit making association of institutions and individuals with a common interest in promoting good practice and sharing information in relation to the use of computers in research and education in architecture and related professions.

Member, **Digital Fabrication Alliance**   Aug 11 - Sep 13
The Digital Fabrication Alliance is a professional organization that brings together architects, engineers, fabricators, and builders interested in promoting the use of digital tools in the construction industry.

peer review

Listed here is a selection of book manuscripts, journal submissions, and conference papers for which I have served as a peer-reviewer.

Bloomsbury Publishing (manuscript review)   Mar 16
Association for CAAD Research in Asia (CAADRIA 2015)   Dec 14
Routledge (blind manuscript review)   Sep 14
Journal of Architectural Education (JAE Vol 69, No. 01)   Jun 14
Texas Architects Annual Convention (TxA 2014, Austin TX)   Jun 14
ACADIA Conference Proceedings (ACADIA 2014, Los Angeles CA)   Jun 14
Simulation for Architecture and Urban Design (SimAUD 2014, Tampa FL) Jan 14
Texas Architects Annual Convention (TxA 2013, Austin TX)   Jul 13
Smart Geometry Conference (SG 2013, London)   Mar 13
Future Traditions Conference (eCAADe Regional Workshop 2013, Porto) Feb 1

invited design juries

In architectural design, it is a distinction to serve on an invited jury of student design work at peer institutions. Those listed below represent a selection of institutions to which I have been invited to serve as an external reviewer over the last ten years.

California College of the Arts
Graduate School of Architecture, Planning and Preservation, Columbia University
Rhode Island School of Design
Taubman College of Architecture and Urban Planning, University of Michigan
PennDesign, University of Pennsylvania
Ohio State University
School of Architecture + Planning, Massachusetts Institute of Technology

ucb courses instructed

I teach two types of courses in the Department of Architecture at UC Berkeley: core courses in design and architectural representation, and topical research studios and seminars in Design Computation. In the former category, I have organized much of the first semester of the MArch program through teaching courses comprising eight out of the twelve required credits in this semester (ARCH 200a & ARCH 200c) in 2011, 2012, and 2013. During this time, I applied principles regarding the relationship between design and digital representation uncovered in my research to the core design curriculum. In the latter category, I have introduced advanced topics in the application of computation to architectural design through studio and seminar work (ARCH 205, ARCH 229, ARCH 202, and ARCH 101). The nature of architectural design studios is such that subject matter is not repeated from year-to-year. As such, unless otherwise indicated below, each studio course listed here may be regarded as a new course that I have developed for each year it was instructed. This largely holds true with seminar courses as well, although in some cases seminar content may repeat, and subject matter iteratively refined each year. Distinctions noted below.

ARCH 229   Turkers' Delight
Topical research seminar.
Description forthcoming
> Spring 15

ARCH 200c Representational Practice in Architectural Design
Core seminar on architectural representation, required of MArch option three students.
I was the first to develop and instruct this introductory graduate seminar in 2011, and have been iteratively refining it each year since. The course seeks to cultivate an understanding of the foundational discourse and diversity of approaches to architectural representation; to develop a fluency in the canonical methods found in architectural practice; and to encourage the development of a personal relationship to forms of modeling and formats of drawing.
> Fall 14
> Fall 13
> Fall 12
> Fall 11

ARCH 205   Studio One
Topical research studio, required of MArch option one (Studio One) students.
Set in the larger context of the Studio One program, this studio shapes inquires into the contemporary status of global spaces of work in the context of the shift from industrial to cognitive-cultural societies. The application of data-driven design methods will guide this investigation, including the use of generative, analytical, and optimization routines set in the service of the design of office space at a range of architectural scales. The setting of Silicon Valley and the broader Bay Area provides studio participants with a unique opportunity to forge radically new design paradigms.
> Spring 15
> Fall 14

ARCH 229   Graduate Seminar in Digital Design Theories and Methods
Topical research seminar.
Both a survey of contemporary theories and a treatment of foundational technical topics, this course aims to demystify design computation and prepare students to engage with computational tools and techniques as practicing architects. An account of contemporary practices is paired with a rigorous treatment of computational geometry and applied computer programming. Course content iteratively refined each year.
> Spring 14
> Spring 13

ARCH 202   Advanced Option Studio

Topical research studio, open to MArch students.
Advanced architectural design studio seeking to explore emerging technologies and methods that supplant traditional models of design, and suggest a new deferred authorship found in complex systems and a distributed agency offered by co-authored works. The theme of work and play guide the investigations, both on methodological and programmatic levels - these include the analysis and design of existing structures of gaming, the hybridization of these games with precedent works of architecture that present idealized models of work, and the production of a co-authored parametric design system that utilizes crowd-sourcing technologies.

Spring 14

ARCH 200a Architectural Design Studio

Core design studio, required of MArch option three students.
Introductory course in architectural design and theories for graduate students. Problems emphasize the major format, spatial, material, tectonic, social, technological, and environmental determinants of building form.

Fall 13
Fall 12
Fall 11

ARCH 229   Building Performance and Visualization

Topical research seminar.
Advanced simulation tools allow us to predict building performance with increasing accuracy while challenging conventional modes of architectural design practice. How can we visualize simulated data in a way that gives intuitive, nuanced feedback? How can we take advantage of computing power and scripting techniques to establish quick feedback loops between parametric analysis and iterative design? This seminar explores the potential of building performance simulation and data visualization to shape architectural design.

Spring 13

ARCH 101   Case Studies in Architecture

Topical research studio, open to undergraduate students of architecture.
Selected topics undergraduate studio: Imaging Architecture. If visual means of representation inevitably leave behind an imprint of their character on the architectural work, then what are the latent biases of our traditional means of representation? What new and more intentional biases may we invoke by more consciously deploying our means of representation?

Spring 11

ARCH 100a Fundamentals of Architectural Design

Core design studio, required of undergraduate students of architecture.
Introductory course in the design of buildings. Problems emphasize conceptual strategies of form and space, site relationships and social, technological and environmental determinants.

Fall 10

mentorship

Guiding students through an engagement with the most urgent issues in the field today concerning digital design is an important part of my role as an academic. It is worth noting that a number of students I have worked with as a graduate thesis advisor were first introduced to the methods required for scholarly research as co-authors on many of the publications and research projects listed above. I consider this introduction to contributions to the discipline through design research an important part of student mentorship.

master of architecture thesis advising

Dongll Kim, Untitled	Spring 16
SeoJoo Lee, Untitled	Fall 15
Jun Li, Not Standard	Spring 15
Kelsey Brennan, Not Exactly	Spring 15
Rudy Letsche, The City and the City	Spring 15
Luis Jaggy, The Feed	Spring 14
Levon Fox, Post-Post Office	Spring 14
Ned Reifenstein, Subject to Change	Spring 13
Peter Suen, A Balanced Architecture	Spring 13
Kristen Henderson, Evocative Relief	Spring 13
Nicholas Buccelli, Data Diving: Novel Adjacencies in Cloud Space	Spring 12
Michael Bergin, Housing Agency System (HAS)	Spring 12
Kyung Jin Han, Untitled	Spring 11
Chun Sing Kwan, Customizability in Residential Housing	Spring 11

master of urban design thesis advising

Ned Reifenstein, Subject to Change	Spring 13

doctor of philosophy advising

I have served as a committee member for a number of PhD students outside of the Department of Architecture, often advising students of Computer Science in work that suggests applications in design and architecture.

Eric Lee Turner   Spring 15
3D Modeling of Interior Building Environments and Objects from Noisy Sensor Suites
Doctor of Philosophy in Electrical Engineering and Computer Sciences
advisory role: Inside Member

Nicholas Corso   Spring 15
TBD
Doctor of Philosophy in Electrical Engineering and Computer Sciences
advisory role: Inside Member

graduate mentorship

Mentorship in professional design education moves beyond formal advising related to thesis. Listed here is a selection of graduate students for whom I have served as a research mentor in a less formal manner.
Dongil Kim, Peter Samuelson, Max Edwards

undergraduate mentorship

Undergraduate design education often does not require the production of a formal thesis, but offers other opportunities for student mentorship. Listed here is a selection of undergraduate students for whom I have served as mentor.
Khoa Vu, Jaclyn Berry, Jung In Seo, Anne Wei, Hannes Frykholm, Henry Stephens, Zaw Myat, Bernadette Ma, Alice Kao, Sean Phillips, Amy Hu

university service and administration

Detailed below are the administrative and service positions I have held at the departmental and college levels.

department-level service

Faculty Adviser, **GSI Affairs**   Sep 14 - Sep 15

Director, **2014-2015 Studio One Degree Program**   Oct 13 - May 15

Member, **Undergraduate Committee**   Jul 14 - Jun 15

Member, **Branner Fellowship Committee**   May 14 - Sep 14
Reviewed applications for the Branner Travelling Fellowship, and recommended winning entries.

Chair, **2014 Studio One Graduate Admissions Committee**   Jan 14 - Mar 14

Member, **Undergraduate Committee**   Jul 13 - Jun 14

Chair, **Committee on Representation and Visual Communications**   Jan 12 - Jan 14
Initiated the formation of a departmental service position whereby the management of all graduate student instructors teaching in the area of representation and visual communication is consolidated.

Member, **2013 MArch Graduate Admissions Committee**   Jan 13 - Mar 13

Member, **2012 MArch Graduate Admissions Committee**   Jan 12 - Mar 12

Member, **Branner Fellowship Committee**   Jun 11
Reviewed applications for the Branner Travelling Fellowship, and recommended winning entries.

Member, **2011 MArch Graduate Admissions Committee**   Jan 11 - Mar 11

Member, **Undergraduate Curriculum Committee**   Jul 10 - Jun 11
Played a key role in assessing the existing BA in Architecture curriculum, and developing a proposal for revisions thereof.

college-level service

Secretary of the Faculty, **Secretary of the CED Executive Committee**   Aug 15 - Dec 15

Member, **Wurster Hall Studio Redesign Pilot**   Sep 13 - May 14
Consulted in the production of designs for the renovation of Wurster Hall studios.

Member, **Strategic Planning Round Two Task Force**   Mar 13 - May 13
Participated in the "Power Performance Analytics" group, tasked with developing a strategic plan for the College of Environmental Design.

Member, **Strategic Planning Round One Task Force**   Jan 13 - Mar 13
Participated in the "Future of Design" group, tasked with developing a strategic plan for the College of Environmental Design.

Member, **Cal Design Lab Organizational Retreat**   Oct 11
Provided feedback on lab activities to date, and developed ideas for future collaborations, pedagogical initiatives, and partnerships.

Member, **CED Website Redesign Committee**   Sep 11 - Jun 13
Consulted with web designer Oilpan in the redesign of the College of Environmental Design website.