

2021 ACSA DP AWARD



Julio Bermudez, Ph.D.
Professor of Architecture

School of Architecture and Planning
The Catholic University of America. Washington, DC

Short bio

Professor Julio Bermudez has directed the Sacred Space and Cultural Studies graduate concentration at the Catholic University of America School of Architecture and Planning since 2010. He holds a Master of Architecture and a Ph.D in Education from the University of Minnesota.

Dr. Bermudez's interests focus on the relationship between architecture, culture, and spirituality through the lens of phenomenology and neuroscience. He has widely lectured, led symposia, taught, and published in these areas. Current projects include a neuro-phenomenological study of sacred vs. secular architecture (funded by the Templeton Religion Trust) and the forthcoming book *"Spirituality in Architectural Education."* He has published two other books: *"Architecture, Culture, and Spirituality"* (Ashgate, 2015, co-edited with Thomas Barrie and Phillip Tabb) and *"Transcending Architecture"* (CUA Press, 2015).

Before this work and at the University of Utah (1993-2010), Bermudez investigated (1) the interaction between design process and computers, and (2) the use of architectural thinking to design data environments.

Results of this effort were the award-winning and influential analog-digital design method, a successful information visualization study across multiple domains (attracting over \$5M in funding), and a large number of lectures, workshops, patents, and publications in the U.S. and abroad. During this time, he co-created and co-led SiGraDi (Iberoamerican Society of Digital Graphics, 1997-2005) and an academic exchange program between Santa Fe-Arentina and Utah (1995-2010).

Bermudez has received several national and international recognitions, including the 1998 AIA Education Honors Award, the 2004-05 ACSA Creative Achievement Award, the 2005 Arturo Montagu Creative Career Prize (bestowed by Latin American SiGraDi), the 2006 ACADIA Award for Teaching Excellence, and the 2010 Sasada Award for significant record in scholarship and service (conferred by CAADRIA, Asia). In 2007, Bermudez co-founded the Architecture, Culture and Spirituality Forum, a 600 members (from 56 countries) organization, and has served as its president since 2015.

Submission

- 1 Bio
- 2 Statement
- 3-7 Teaching
- 8-16 Research & Scholarship
- 17-20 Service

2021 ACSA DP AWARD

Statement



I am honored to be considered for the **ACSA Distinguished Professor Award**, having dedicated my life to the architectural academy. What drives my architectural professing is my conviction that *the design and experience of the built environment can assist the spiritual development of humanity*. It has taken me many years and a few detours to clarify and find the right path and means to pursue such an ideal. In the process, I have learned that three attitudes/practices underlie my work.

First is a desire to **explore and extend the disciplinary boundaries of architecture**. This interest has never been driven by a thirst for novelty or attention but by internal questioning and external world developments. Thus, the *analog-digital design method* (1995-2000s) emerged from investigating how computers would transform architectural design. My cutting-edge *information visualization research* (1995-2005) grew out of realizing that cyberspace and data could and should become territory and materials for architectural operation. The study of *the relationship between architecture and spirituality* (2006-now) arose out of my life-long meditation on consciousness, beauty, and transcendence. I “adopted” *neuroscience* to quantitatively frame highly qualitative questions to advance the science and design of architecture.

The second and third characteristics defining my work are intimately related: **interdisciplinarity** and **collaboration**. My probing of our discipline’s boundaries has demanded me to move beyond architecture’s knowledge base. This has meant to enter in dialogue with other fields. Were it not for my interactions with psychology, medicine, computer science, bioengineering, finance, philosophy, performing arts, communications, theology, and neuroscience, my (1) co-founding and co-leading *CROMDI* (University of Utah), (2) investigation of the *interactions between architecture and spirituality* (mostly at CUA), and (3) work in *phenomenology and neuroscience* would have never taken place. Collaborating with individuals from different disciplines has not been easy: it has required serious listening, a humble attitude, communicative skills, and lots of patience. At the same time, the results, I believe,



have been more than worth it. Yet, the highly interdisciplinary and/or collaborative nature of these efforts also means that I cannot fully claim the results as “mine.” What I can possibly claim is the vision, innocence, determination, sweat, and leadership behind them.

Collaboration is the reason for my service achievements. The *international academic exchange program* between the University of Utah and the Universidad Nacional del Litoral in Argentina (1995-2010), the co-founding and development of Latin-American *SIGradi* (Sociedad Iberoamericana de Gráfica Digital, 1997-2003), and the co-founding and leadership of *ACSF* (Architecture, Culture, and Spirituality Forum, 2007-now) came from, grew, and succeeded because I collaborated with so many people! And not surprisingly, all these research and service activities have always involved individuals of different nationalities, cultures, ethnicities, faiths, ideologies, genders, languages, and so on. I totally believe in and practice diversity, not out of some politically correct mandate but because it works, is real, and the best path to excellence.

It goes without saying that **boundary exploration/extension**, **interdisciplinarity**, and **collaboration** have been central to my teaching as well. In the following pages, you will see how my research and service involvements always engaged with my teaching. In fact, my pedagogic work often preceded my scholarly and service ventures. I genuinely believe that my accomplishments in the studio and classroom, as well as in directing the *Sacred Space and Cultural Studies graduate concentration* and the *Walton Distinguished Critic Program* at CUA, owe much to the three qualities that have guided my academic and personal life.

As I move into the last chapter of my professional career, I redouble my commitment, enthusiasm, and energy towards instilling a new generation of students (and future architects) with a vision and practice of architecture that is authentic, ethical, informed, reflective, competent, and meaningful.

Teaching

Sacred Space and Cultural Studies (SSCS) Graduate Concentration

Director
(2010-now)

SSCS FACULTY



Julio Bermudez



Michael Gick



Stanley Hallet



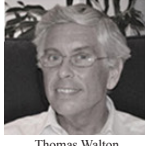
Kathleen Lane



Travis Price



Milton Shinberg



Thomas Walton

OVERVIEW

COURSEWORK

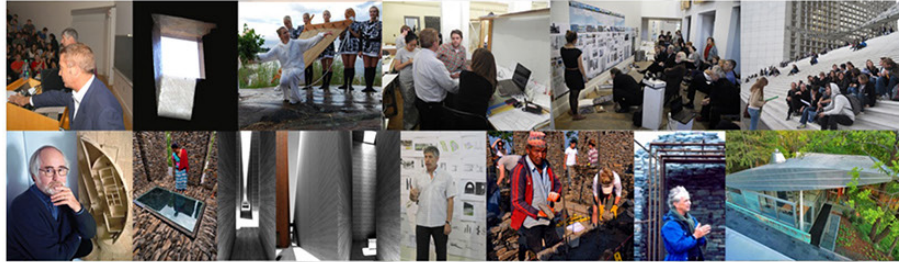
SCHOLARSHIP

PEOPLE

EVENTS

STUDENTWORK

APPLY



Coursework

All full-time students accepted in the CUA Master's in Architecture are eligible to enter this concentration. The SSCS curriculum functions within the normal 2 (or 3) year long Master's program and demands students to take at least 2 concentration studios and 3 concentration elective classes. Concentration's courses cover SSCS content from a variety of perspectives including design, typology, semiotics, phenomenology, history/theory, religion, and science. As in most architecture programs, the design studio constitutes the central learning environment where graduate students study, apply, test, and develop architectural skills and knowledge. Although not required, most SSCS students naturally choose their Master's thesis to focus on subjects germane to the concentration interests.

In addition to the concentration electives, other opportunities exist. The two most obvious ones are the WALTON STUDIO and the SPIRIT OF PLACE program. The *Walton Studio* is offered every fall and involves bringing a world-class architect, the *Walton Critic*, to teach with Professor *Julio Bermudez*. The pedagogy and curriculum of this studio are designed to align with the architectural methodology and philosophy of the renowned visitor. The other unique opportunity is the award-winning *Spirit of Place* | *Spirit of Design* workshop. Led by architect *Travis Price*, this is an off-campus design-build intense studio exploring the spirit of place through historic and contemporary architecture and landscapes in (depending on the particular year) the Middle East, Asia, South America and Europe. Other studio-based Foreign Study programs are sometimes offered, providing students a chance to explore European cultural contexts in cities such as Rome, Barcelona and Paris. The SSCS concentration also takes advantage of the National Geographic Society, as well as courses drawn from the university's School of Theology and Religious Studies, the departments of anthropology and art, and courses offered through the Consortium of Universities of the Washington Metropolitan Area.

The school also offers a one-and-a-half, post-professional *Master of Architectural Studies*, an excellent program for individuals interested in immersing themselves in the study of sacred space and cultural issues in architecture. This Master's program gives a great deal of autonomy to each student who may customize their studies based on her/his specific goals and interests

SSCS courses to be offered at the School of Architecture during the 2020-21 Academic Year:

Fall 2020
ARPL 603/603/701: the WALTON Studio (Prof. Julio Bermudez w/ the 2020 Walton Critic Marshall Brown)
ARPL 515: Beauty & Brains (Prof. Milton Shinberg)
ARPL 694: Independent Study

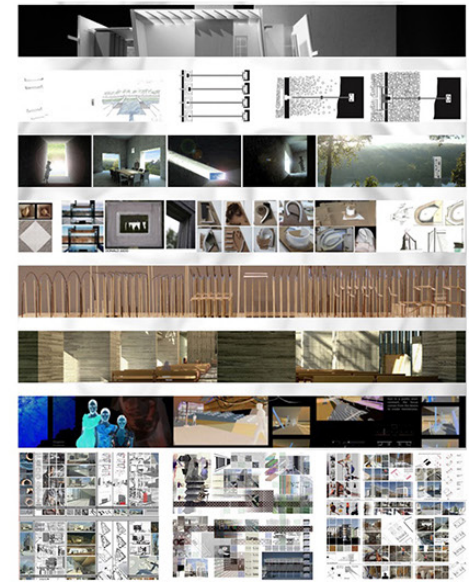
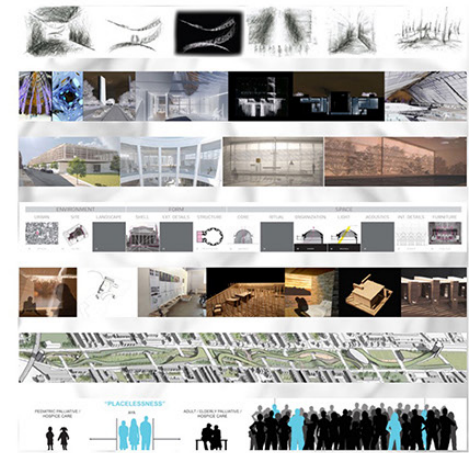
WEB PAGE (above). EXTRAMURAL ACTIVITIES (below)

Sacred Space and Cultural Studies - The Catholic University of America School of Architecture and Planning



(Design-Build) The Spirit of Place (Travis Price)

STUDENT WORKS (ARCHIVE)



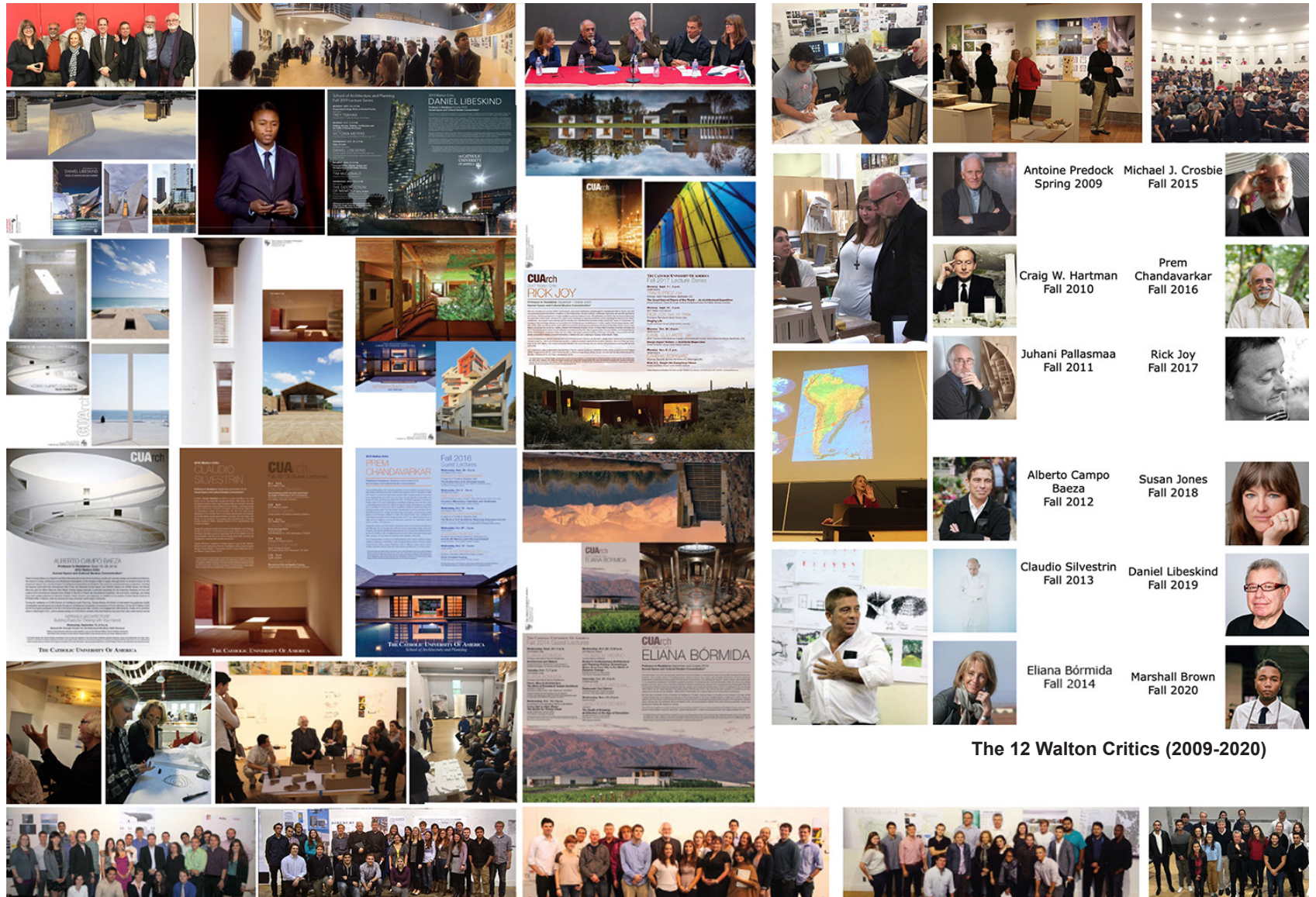
The Catholic mission of the university provides an environment uniquely positioned to support and advance these studies. At the same time, SSCS takes an ecumenical or broader definition of spirituality.

As culture, nature, and issues about religion and the sacred are of growing concern in the world, SSCS appeals to a diverse student and professional body. The strategic location of Washington-DC permits me to bring in (by chance or choice) a wide variety of remarkable guests. The range of SSCS activities is extensive and various, in and off campus.

Teaching

The Walton Distinguished Critic Program

Director (2010-now)



The 12 Walton Critics (2009-2020)

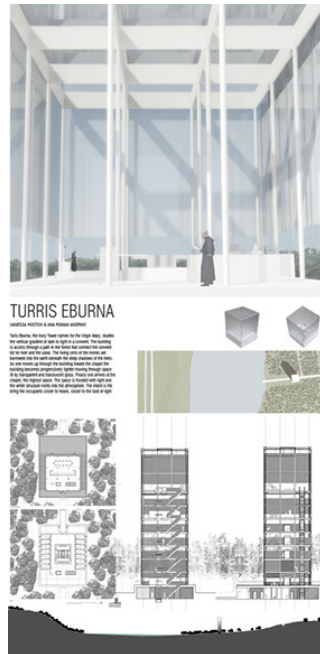
For 10 years I have been directing the *Walton Distinguished Critic Program*, a well-funded endeavor that brings a world-class architect with a demonstrated commitment to the spiritual dimension of architecture. I have brought renowned guests from the four corners of the earth — three from Europe: *Alberto Campo Baeza*, *Juhani Pallasmaa*, and *Claudio Silvestrin*; one from Asia: *Prem Chandavarkar*; one from South America: *Eliana Bórmida*; and five from North America: *Marshall Brown*, *Michael J. Crosbie*, *Susan Jones*, *Rick Joy*, and *Daniel Libeskind* (*Antoine Predock* and *Craig W.*

Hartman were selected prior to my tenure). I have worked with metro-area partners (e.g., AIA-DC) and the Embassies of our international visitors to host lectures, exhibits, and other events that permit CUA students and faculty to go off-campus and for Washington-DC metro practitioners a chance to hear and meet remarkable architects. The cumulative effect of these activities has enriched not only our school but also the architectural discipline. As important, the Walton Program has sparked renewed design, pedagogic, and scholarly interest in the unmeasurable dimension of architecture.

Teaching

The Walton Studio

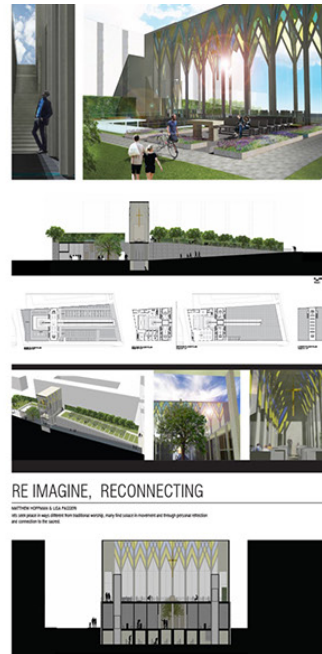
Co-teaching (2010-now)



Walton Studio 2012 (monastery)
Alberto Campo Baeza



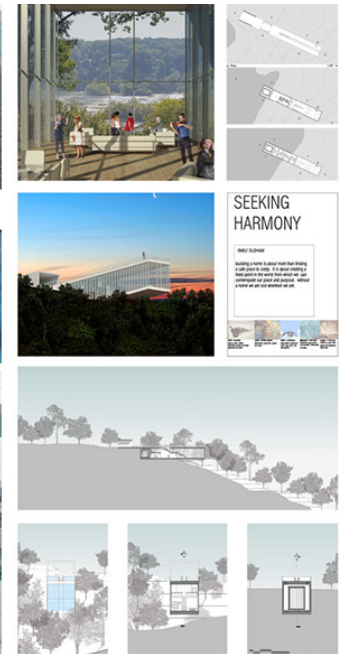
Walton Studio 2013 (immigration museum) — Claudio Silvestrin



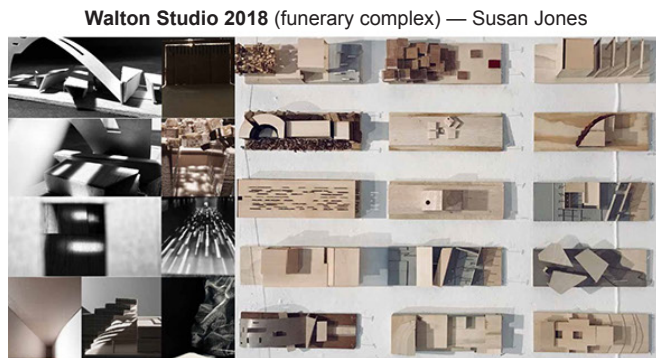
Walton Studio 2015 (sacred-secular space) — Michael J. Crosbie



Walton Studio 2016 (vocation center) — Prem Chandavarkar



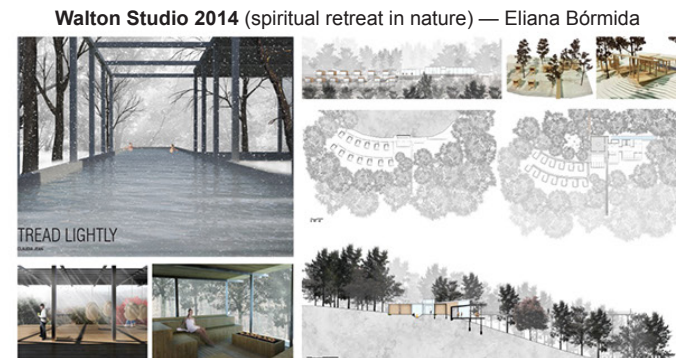
Walton Studio 2017 (home)
Rick Joy



Walton Studio 2018 (funerary complex) — Susan Jones



2019 Walton Critic **Daniel Libeskind** talking to students



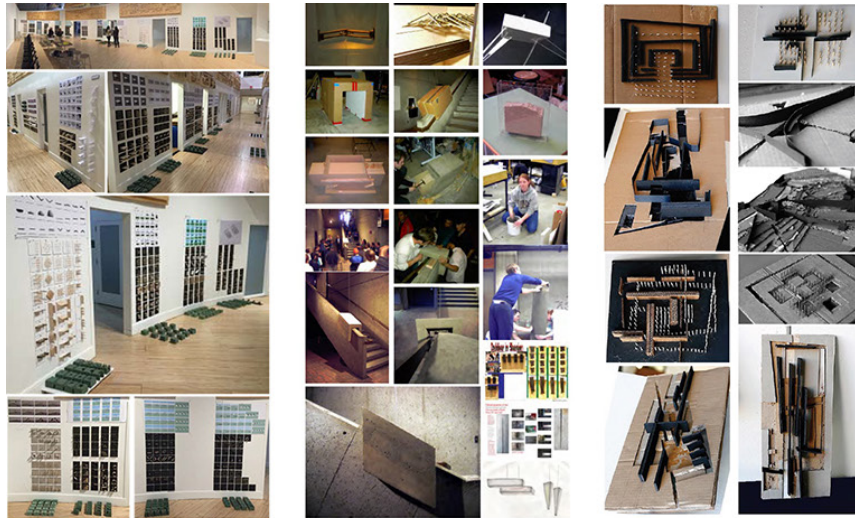
Walton Studio 2014 (spiritual retreat in nature) — Eliana Bórmida

Co-designed and taught by the renowned Walton Critic and myself, the **Walton Studio** provides a compelling vision, a safety net, and daring but straightforward instructions to send students off into the little-explored territory where architecture and spirituality meet. Immersing students in such an architectural-spiritual journey is not an esoteric academic undertaking. On the contrary, it covers curricular and pedagogic needs largely ignored by higher education and schools of architecture alike. Because of the lack of precedents and its uniqueness, the **Walton Studio** began as and continues to be a twelve year long “in-progress” experiment on how to integrate spirituality into architectural education.

The **Walton Studio** proposes that architecture can and should assist the spiritual growth of humanity in the service of tackling both our urgent and enduring challenges. Offered every fall, the studio is intended for graduate students in the Sacred Space and Cultural Studies concentration but usually available to senior undergraduates.

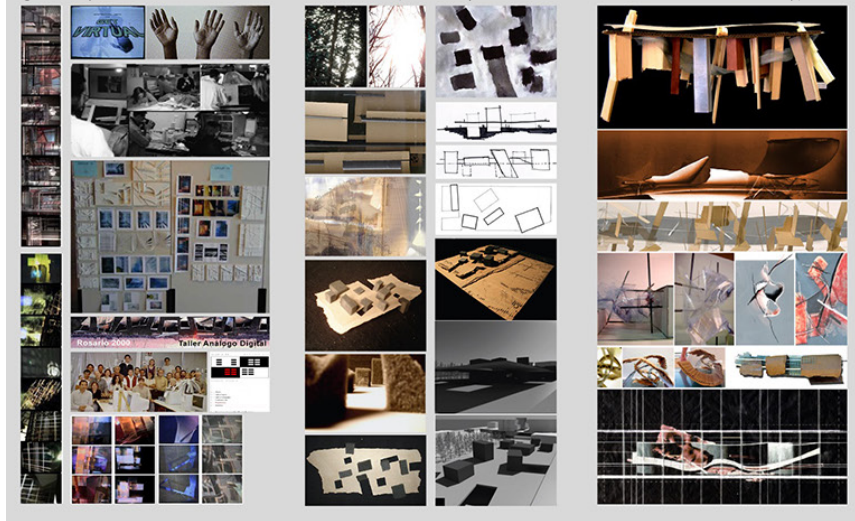
The work produced by the students has been exhibited, published, and/or covered by media. For example, projects of the 2015 Walton Studio were published in *Faith & Form* magazine and work done under Walton Critics Alberto Campo Baeza and Claudio Silvestrin exhibited at the *Dadian Gallery of the Wesley Theological Seminary* and *AIA-DC* respectively.

Teaching



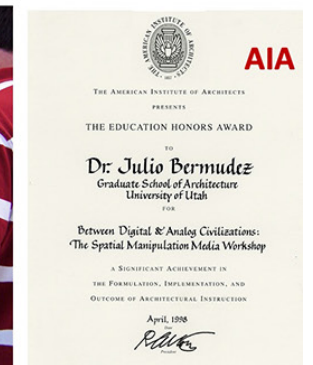
Foundation Studio (above): intellectual discipline, emotional commitment, materiality, and model making are central to my approach to teaching beginning design students.

The Analog-Digital Design Method (below) played a big role in my early teaching career and was recognized by an AIA Educational Honors Awards (with Prof. Bennett Neiman, Texas Tech University)



Outstanding Teaching (2017)

Professor of the Year (2007)



Multiple Courses

30+ years

During my 30+ years of teaching architecture at different American and foreign universities (large and small, public and private, research I and research II), I have covered from foundation studios to thesis, from technical to theoretical courses, and from required to elective classes at graduate and undergraduate levels. I believe in model making as a fundamental design tool at all stages but specially in beginning studios. I developed the Analog-Digital (A-D) design method (and applied in my studios and offered as a workshop in many other schools) that utilizes a robust dialogue between

both systems of representation to advance architectural thought and practice. While this is common sense now, it was no so in the 1990s, particularly on how best to accomplish it. The publication of many peer-reviewed articles on architectural education as well as the invitation to deliver A-D workshops at many schools (or guest-jurying and lecturing) indicate that some of my educational efforts have been useful to the discipline. The national recognitions by the AIA and ACADIA and the ones by architecture students from the University of Utah and CUA seem to confirm such a statement.

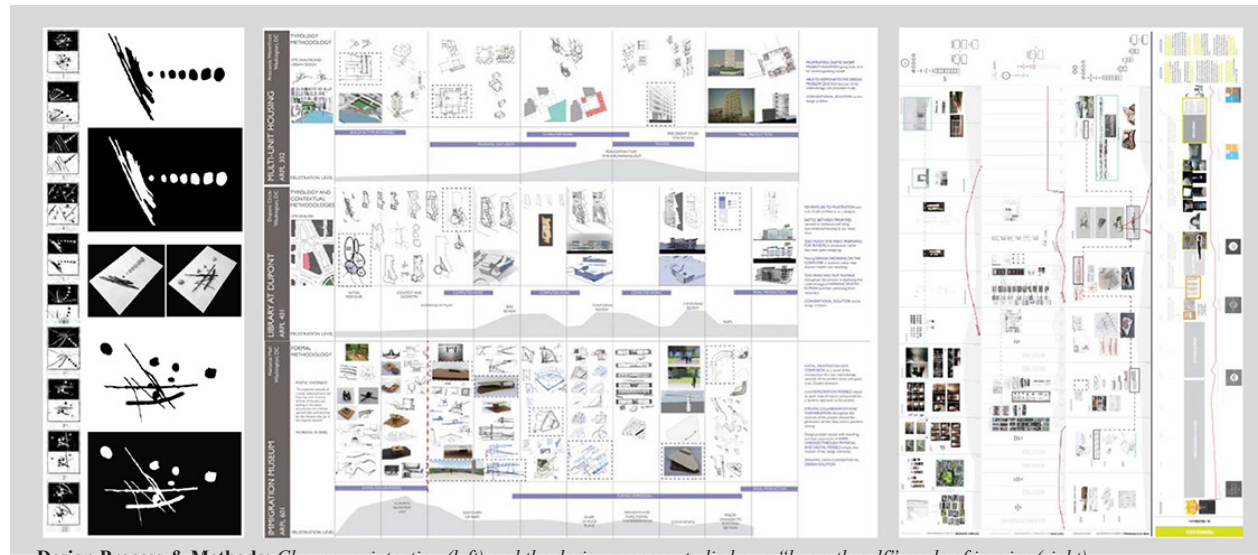
Teaching

Three Unique Curricula

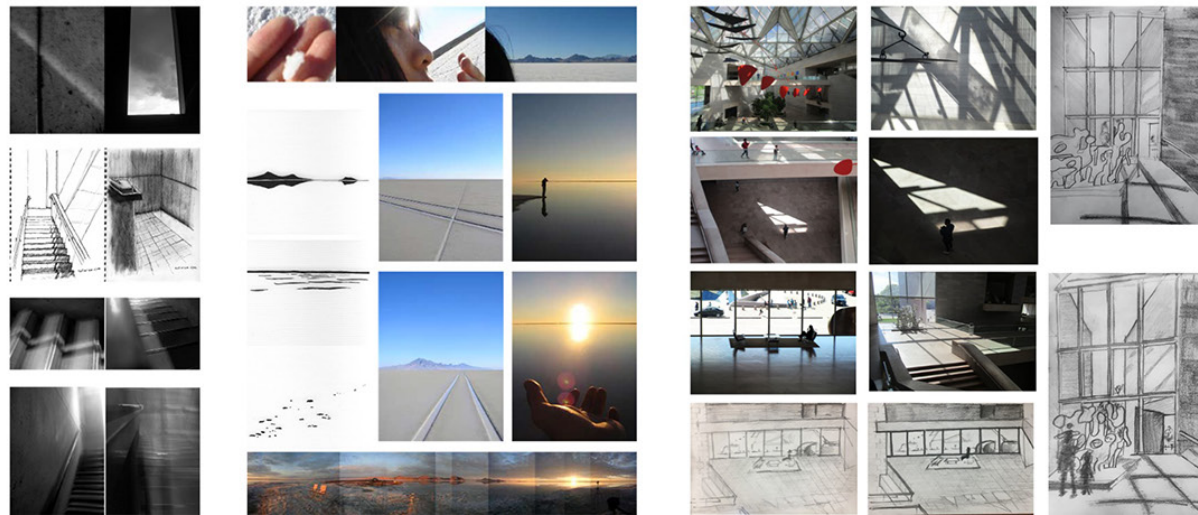
Design Process & Methods (2014-now)

Experiencing Architecture (2007-now)

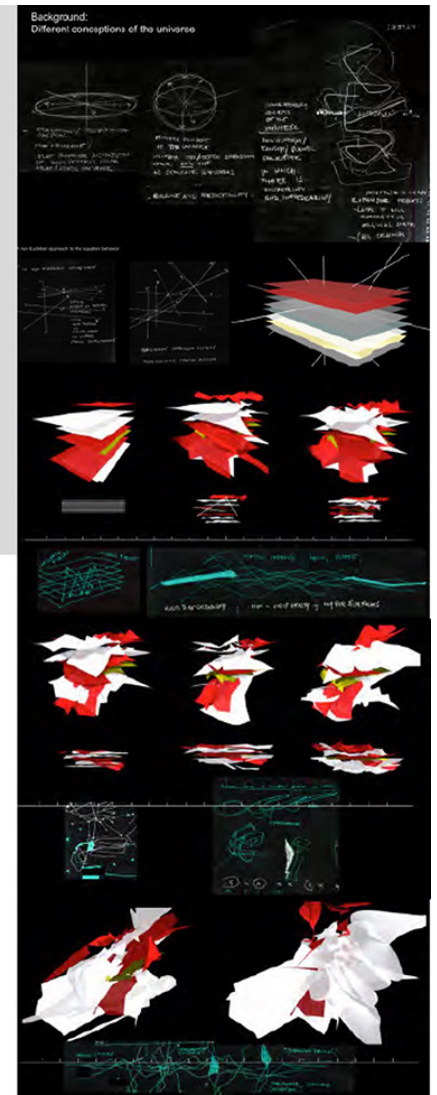
Data Architecture (2000-2005)



Design Process & Methods: *Chance vs. intention (left) and the design process studied as a “know thyself” mode of inquiry (right).*



Experiencing Architecture: *the built environment and nature become contemplative opportunities via sketching and media.*



Data Architecture: *re-conceiving what we do.*

Three classes deserves special consideration. The **Design Methods and Process** is a graduate course that, instead of approaching the topic through lectures, readings, and writing (as often done), engages students in hands-on experiments in design decisions making, comparative methods analyses, and systematic self-reflection. The goal is developing the ultimate metacognitive ability: “know thyself.” The other course (**Experiencing Architecture**) introduces students to *contemplative practices via architecture*. Visits to buildings become opportunities to deploy a mindful, non-analytical, and receptive attitude. Sketching, photography, video, and idling are utilized as tools to invite a meditative encounter with embodied existence, architecture,

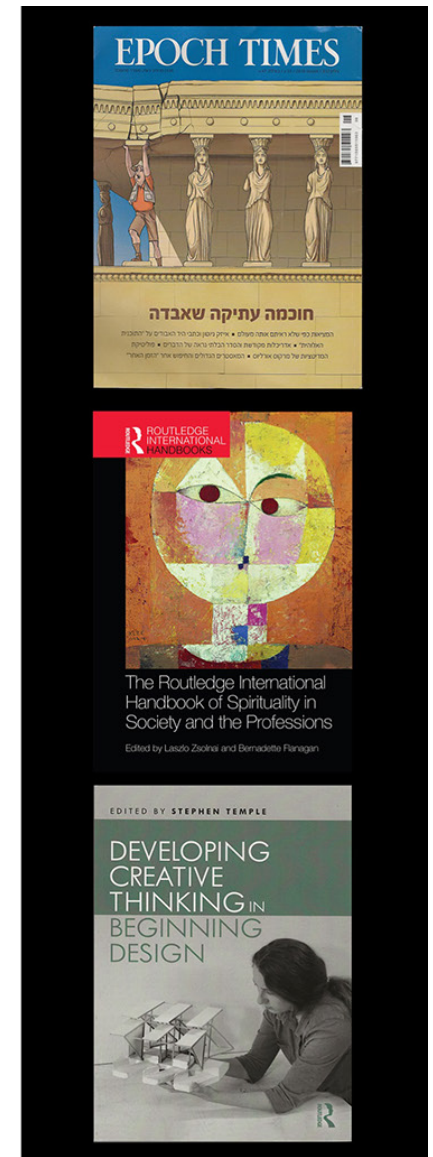
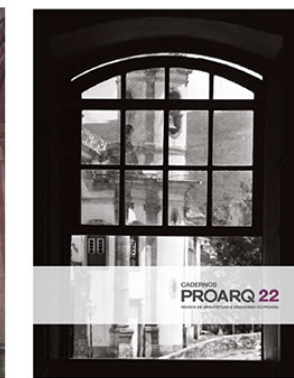
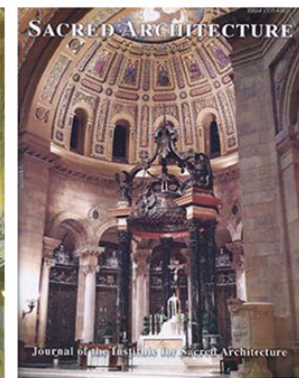
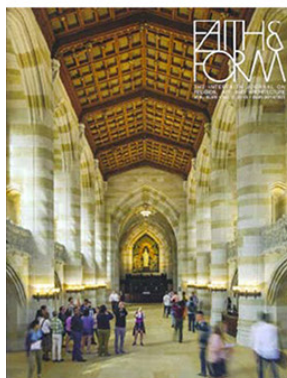
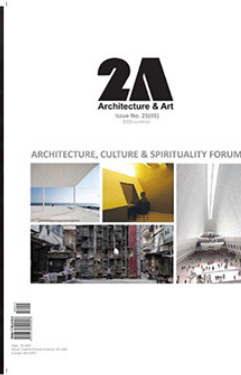
and beyond. My “*Usus in Praesens*” is the foundation for this effort (see later in this portfolio). These two courses support and are supported by my ongoing scholarly work on spirituality, phenomenology, and architecture.

The third class is “**Data Architecture**” and uses information as “construction material” and virtuality as space of operation. Functionality and aesthetics are directed towards navigation and pattern recognition. Design thinking is the creative problem solving engine behind it. This class (that I no longer teach) deployed design knowledge learned in my *Information Visualization Research* (see later in this portfolio).

Research & Scholarship

Architecture and Spirituality

Publications, interviews, and lectures (2006-now)



I study how the built (physical, material) and socio-cultural (behavioral, immaterial) environments meet in the context of spirituality. I consider old and new conceptions of sacredness and faith vis-à-vis architecture. Since I am interested in the phenomenology of architecture, the experience of secular buildings that produce strong responses in line with the beautiful, sublime, and/or the contemplative (what Le Corbusier called “ineffable space,” Rudolf Otto “numinous,” and Louis Kahn “immeasurable”) also enter my investigation. The movement beyond the religious is imperative in the context of an increasingly secular culture. This scholarship is inevitably

interdisciplinary, demanding attention to theology, philosophy, psychology, anthropology, social work, and more. My journal articles, conferences abstracts and papers, book chapters, extramural lectures, and interviews have strengthened the case for taking spirituality in architecture seriously beyond religious building and sacred space.

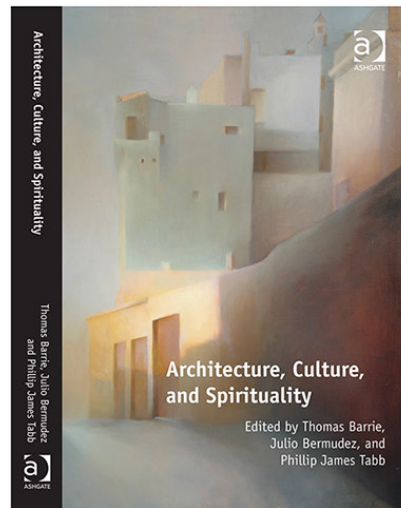
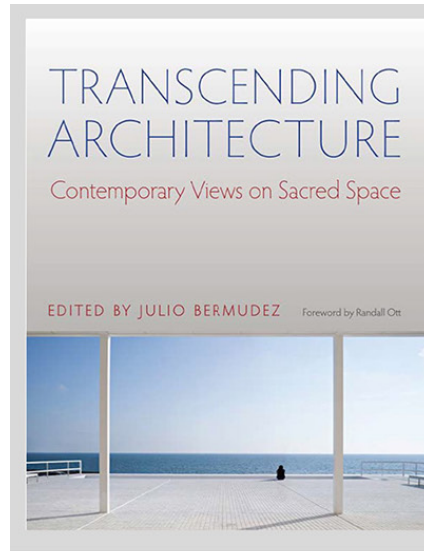
My work on extraordinary architectural experiences, neuroscience and “*Usus in Praesens*” (see later) as well as my CUA teaching (SSCS and Walton Program) and leadership in the Architecture, Culture, and Spirituality Forum (ACSF) are all part of this focus on architecture and spirituality.

Research & Scholarship

Architecture and Spirituality

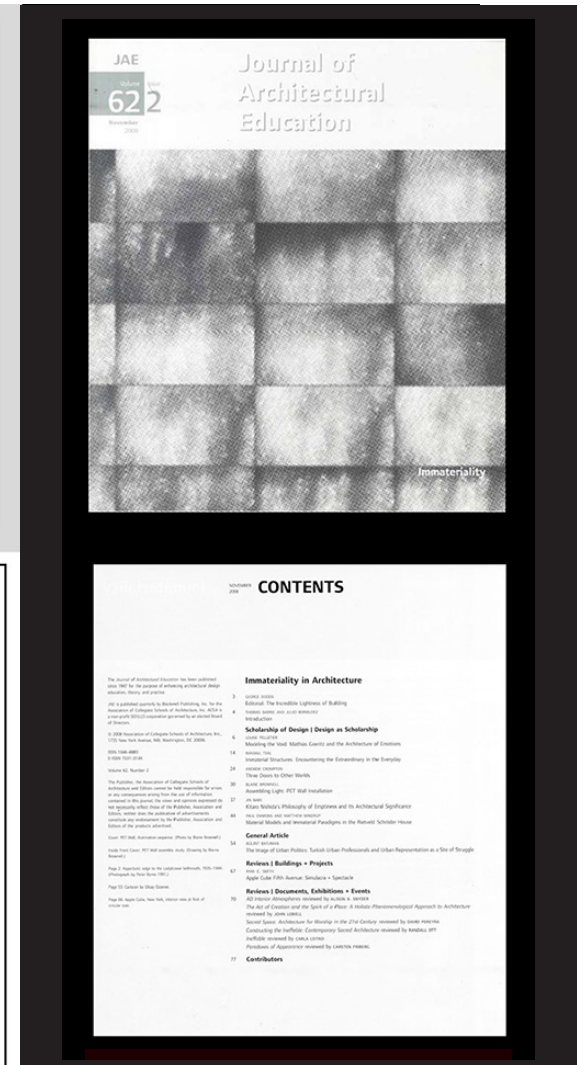
Books (2015)

JAE 62:2 (2008)



| CONTENTS | |
|---|------|
| List of Illustrations | ix |
| Foreword RANDALL OTT | xiii |
| Acknowledgments | xvii |
| PART I. DISCIPLINARY PERSPECTIVES | |
| 1 INTRODUCTION JULIO BERMUDEZ | 3 |
| 2 LIGHT, SILENCE, AND SPIRITUALITY IN ARCHITECTURE AND ART JUHANI PALLASMAA | 19 |
| 3 THE DOMESTIC AND THE NUMINOUS IN SACRED ARCHITECTURE THOMAS BARRIE | 33 |
| 4 NATURE, HEALING, AND THE NUMINOUS REBECCA KRINKE | 47 |
| 5 FROM BIODIVERSITY TO REVERENTIAL URBANISM MAGD SEINBEL | 63 |
| 6 THE RISK OF THE INEFFABLE KARLA CAVARRA BRITTON | 74 |
| 7 LE CORBUSIER AT THE PARTHENON JULIO BERMUDEZ | 88 |
| PART II. INTERDISCIPLINARY PERSPECTIVES | |
| 8 THE CHRISTIAN CHURCH BUILDING KEVIN SEASOLTZ | 113 |
| 9 ECCLESIAL ARCHITECTURE AND IMAGE IN A POSTMODERN AGE MARK E. WEDIG | 130 |
| 10 SPIRITUALITY, SOCIAL JUSTICE, AND THE BUILT ENVIRONMENT MICHAEL J. SHERIDAN | 143 |
| 11 RITUAL, BELIEF, AND MEANING IN THE PRODUCTION OF SACRED SPACE SUI ANN TAYLOR | 160 |
| 12 ARCHITECTURAL CATALYSTS TO CONTEMPLATION LINDSAY JONES | 170 |
| 13 TRANSCENDING AESTHETICS KASSTEN HARRIES | 188 |
| PART III. RESPONSE FROM ARCHITECTURAL PRACTICE | |
| 14 CALLING FORTH THE NUMINOUS IN ARCHITECTURE MICHAEL J. CROSSIE | 225 |
| 15 ELEMENTAL SIMPLICITY SUZANE REATING | 231 |
| 16 TRANSCENDENCE, WHERE HAST THOU GONE? DUNCAN C. STODOL | 239 |
| 17 ARCHITECTURAL QUESTS INTO THE NUMINOUS TRAVIS PRICE | 247 |
| 18 REACHING FOR THE NUMINOUS RICHARD S. VOSKO | 254 |
| 19 EXPLORING TRANSCENDENCE THOMAS WALTON | 260 |
| Notes | 269 |
| Bibliography | 269 |
| Contributors | 272 |
| Index | 311 |

| Contents | |
|--|--|
| List of Figures | |
| List of Tables | |
| Notes on Contributors | |
| Foreword by Alberto Pérez-Gómez | |
| 1 Introduction Thomas Barrie, Julio Bermudez, and Phillip James Tabb | |
| PART I: BEING IN THE WORLD | |
| 2 On Architecture, Divinity, and the Interhuman Michael Benedikt | |
| 3 Encountering Significance: Architecture, Place, and Heidegger's Gods Randall Teal | |
| 4 Phenomenology of the Architectural Extraordinary and Merleau-Ponty's Philosophy Julio Bermudez | |
| PART II: SACRED, SECULAR, AND THE CONTEMPORARY CONDITION | |
| 5 The Sacred becomes Profane Michael J. Crossie | |
| 6 An Aesthetic and Ethical Account of Genius Loci Hoyoung Chang | |
| 7 Neophilia, Spirituality, and Architecture Paul Teasor | |
| PART III: SYMBOLIC ENGAGEMENTS | |
| 8 A Home in the World: The Ontological Significance of Home Thomas Barrie | |
| 9 Symbolism and Myth of Mountains, Stone, and Light as Expressed in Sacred Architecture Anat Geva | |
| 10 Narrating Chichén Itzá: Storytelling, Disagreement, and Second Naïveté at the "City of the Sacred Well" Lindsay Jones | |
| PART IV: SACRED LANDSCAPES | |
| 11 Space, Object, and Encounter Rebecca Krinke | |
| 12 Regarding Sacred Landscapes and the Everyday Corollary Dennis Alan Winters | |
| 13 Sacred Landscapes: The Threshold between Worlds A.T. Mann | |
| PART V: SPIRITUALITY AND THE DESIGNED ENVIRONMENT | |
| 14 Secular Sacredness in Place Creation: A Case Study and Analysis of Sevenhe Community Phillip James Tabb | |
| 15 Experiencing the Architecture of the Incomplete, Imperfect, and Impermanent Rumiko Honda | |
| 16 Wonder, Wisdom, and Mastery in Architecture Prem Chandrasekhar | |
| 17 From Within: On the Spiritual in Art and Architecture Nader Ardalan | |
| Index | |



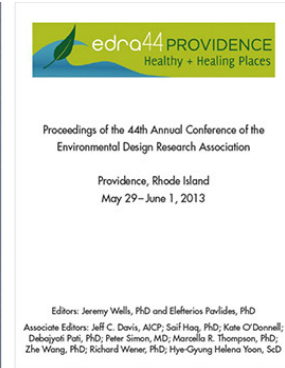
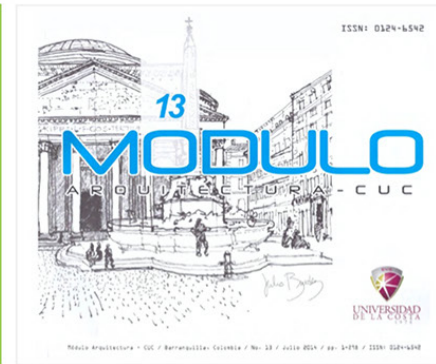
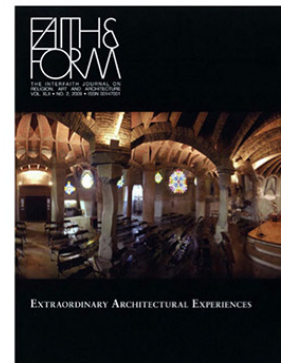
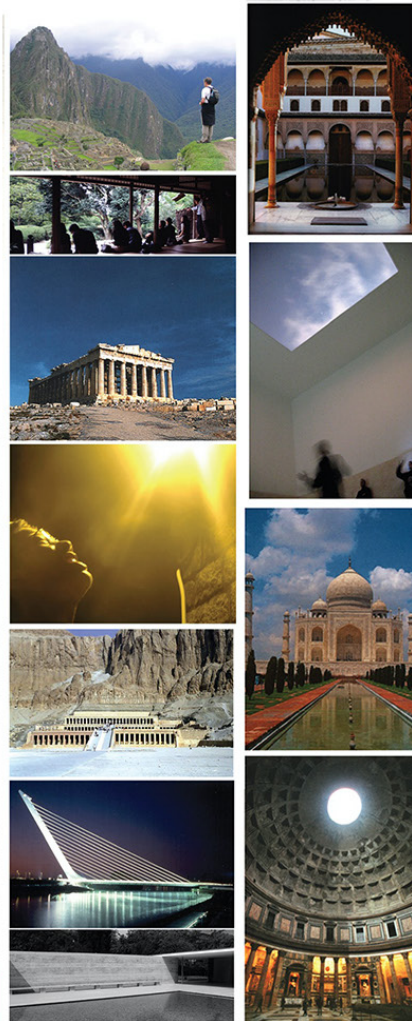
I have published two edited volumes about architecture and spirituality. My book *Transcending Architecture. Contemporary Views on Sacred Space* (CUA Press, 2015) is one of the most interdisciplinary conversation solely devoted to the lived relationship between architecture and the sacred to date. The contributions of recognized individuals such as Finnish architect Juhani Pallasmaa, philosopher Karsten Harries, comparative religion scholar Lindsay Jones, theologian Kevin Seasoltz, and social worker Michael Sheridan bring the discussion to the highest level. The four published book reviews have been positive. My second volume is *Architecture, Culture, and Spirituality* (Ashgate, 2015), a book I co-edited with Thomas Barrie (North Carolina State University) and Phillip Tabb (Texas A&M University).

ty). It includes 17 chapters by the most active scholars and practitioners in the field and a foreword by respected scholar Alberto Pérez-Gómez. This book marked the coming of age of ACSF (see later) with a selection of the best works produced by its members in its first 5 years of existence. The two published book reviews were positive.

In 2008, Thomas Barrie and I co-defined and co-edited *JAE (Journal of Architectural Education)* theme issue "Immateriality in Architecture." This opportunity allowed me/us to bring the immeasurable and numinous into the official radar of an architectural community often concerned with more concrete and obvious matters. This early effort paved the way for other initiatives, such as the affirmation and growth of ACSF.

**Extraordinary
Architectural
Experiences**

**Surveys
and
publications
(2007-now)**

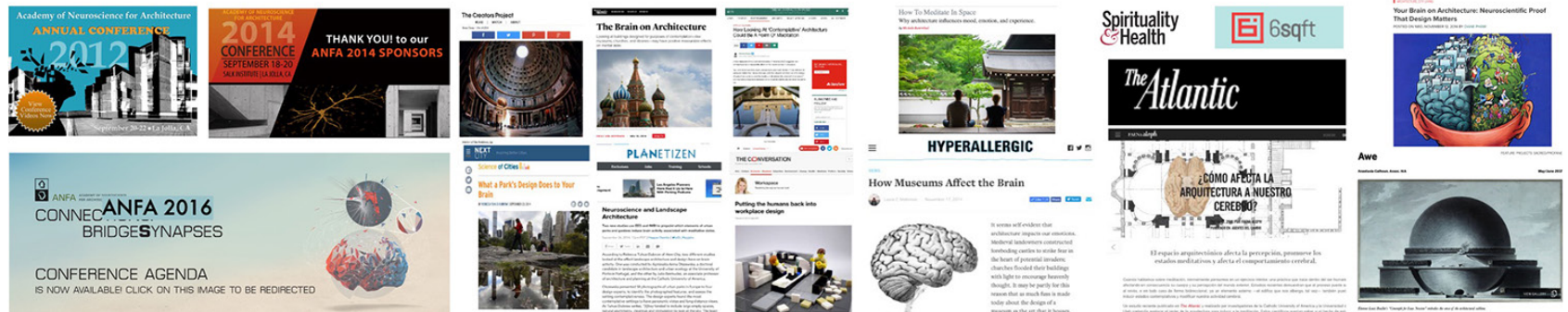
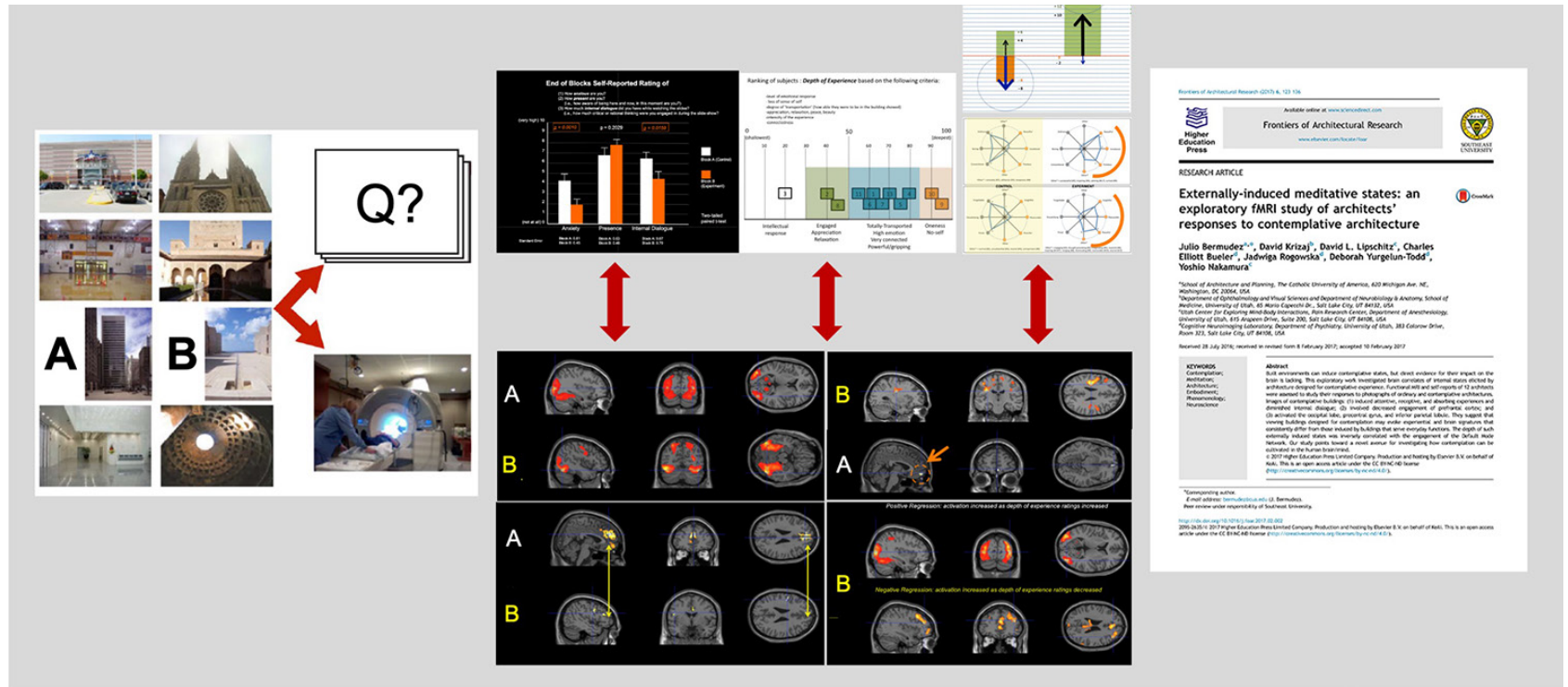
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This study seeks to empirically define **Extraordinary Architectural Experiences** (EAEs) by analyzing data gathered through two large online surveys (in English and Spanish) over the course of one year (2007-2008). EAEs were defined as “*an encounter with a building or place that fundamentally alters (physically, emotionally, intellectually, and/or spiritually) one’s normal state of being and has a significant impact in one’s life.*” After collecting an unprecedented number of personal accounts (2,872; 1,890 in English and 982 in Spanish), the work shifted to statistically analyze the results from a variety of perspectives, questions, and dimensions.

Because of its controversial character — traditional phenomenologists see empirical gauging as destroying the “lived experience” whereas positivist scientists don’t consider “qualia” real — this research demanded the careful negotiation between these two positions. The result has opened a new area of study, not unlike what experimental philosophy is doing in philosophy. The findings of this effort have been communicated in journal articles, conference papers, lectures, and book chapters. I am currently working on a book on EAEs combining the results of these surveys with case-studies, scholarly analyses, published testimonies, neuroscience, and more.

Research & Scholarship

Architecture and Neuroscience



Principal Investigator (2009-now)

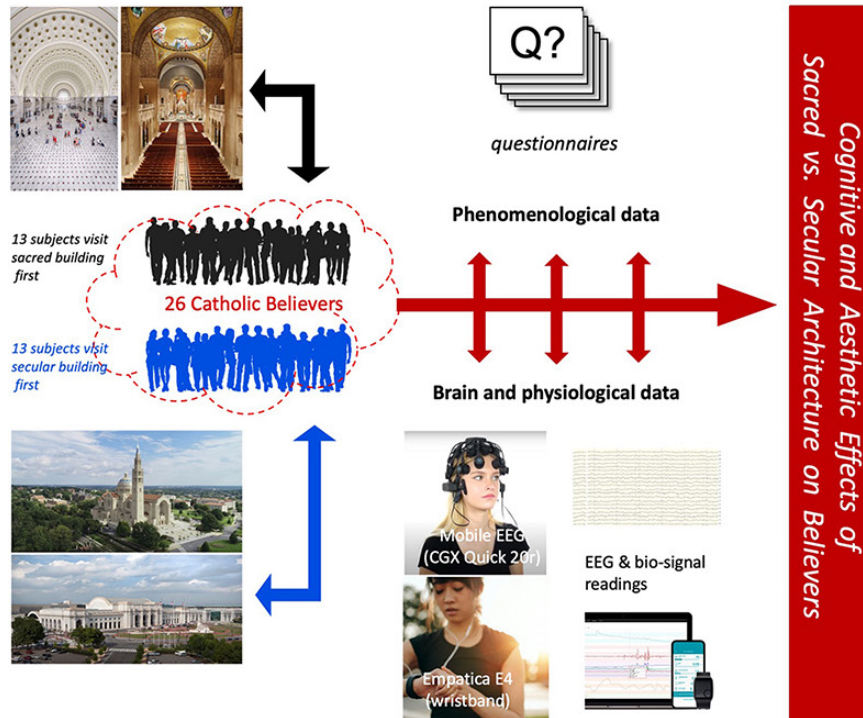
My investigation of spirituality in architecture recruited neuroscience (and psychology) to interrogate if/how the built environment may support and advance contemplation. The idea came as a natural next step to the statistical study of EAEs. My research used fMRI technology to look at the neuro-phenomenological responses that contemplative buildings produce on people. We found that such architecture (a) induces distinct experiential states and brain activations than ordinary buildings; (b) allow subjects to enter into a meditative state with low levels of anxiety and mind wandering; and (c) activates cortical regions of sensory-motor and emotional integration, non-judgmentality, and embodiment. We also found that depth of con-

templative experience was correlated with the deactivation of major cerebral regions, noticeably the Prefrontal Cortex. These results and the novelty of the study attracted considerable scientific (e.g., speeches at ANFA, lectures at various forums) and media (e.g., The Atlantic, the Huffington Post's 'Third Metric') attention during 2014-16. The full-length scientific article covering the experiment and results ("*Externally-Induced Meditative States: An Exploratory fMRI Study of Architects' responses to Contemplative Architecture*," published in *Frontiers of Architectural Research*, 2017) has brought more attention and played an important role in securing a highly competitive Templeton Religion Trust grant (see next).

Research & Scholarship



In Progress



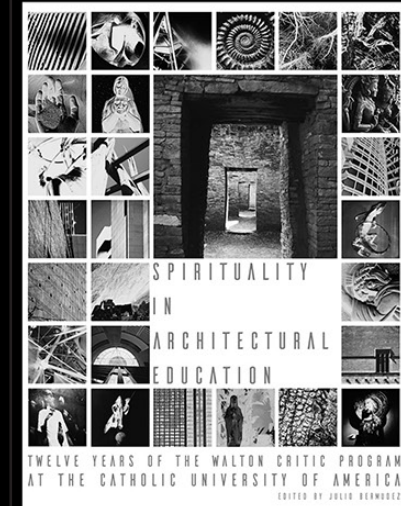
Neuroscience and Spirituality
(research)

Education and Spirituality
(book)

Last March my proposal to use *neuroscience to study architecture's aesthetic capacity to produce spiritual cognitive outcomes* was funded by a \$234,000 grant from the Templeton Religion Trust. Starting this January 2021, mobile electroencephalography (EEG) and bio-sensors will be used to analyze the differential responses of 26 individuals of faith experiencing two architectural conditions (one secular and one religious: Union Station and the Basilica of the Immaculate Conception, both in Washington, DC) in combination with their first-person phenomenological data. Should this novel research succeed, it will have a large impact in architecture, neuroscience, psychology, theology, and beyond.

My forthcoming book (CUA Press, Spring 2021) *"Spirituality in*

Architectural Education" covers an area hardly recognized but fundamental to the education of a human being that wants to be an architect: *spirituality*. Grounded on the twelve-year-old Walton Program (see earlier), this volume offers provocative design works and insightful reflections on the role that "big questions" may play in the architectural academy. Using 11 design studios as stopping points, the reader journeys through meaningful inquiries, timely meditations, pedagogic techniques, and beautiful designs. Essays from renowned architects such as Juhani Pallasmaa, Craig W. Hartman, Eliana Bórmida, Prem Chandavarkar, and Daniel Libeskind offer new vistas on spirituality in architectural education and practice. The result is an unprecedented book that starts a long-awaited conversation.



CONTENTS

| | |
|---|--|
| List of Illustrations | 40 |
| Acknowledgments | 41 |
| Foreword | THOMAS BALDWIN 42 |
| Spirituality in the Design Studio: Introducing the Walton Program | JULIE BERNADEZ 1 |
| Spirituality in Architectural Education: Methodology | JULIE BERNADEZ 11 |
| The Walton Studio | JULIE BERNADEZ 34 |
| Being at the Edge of Order | DANIEL LIBESKIND 45 |
| Emotional and Material Foundations of Architecture | ELIANA BÓRMIDA 61 |
| Physical, Emotional, and Spiritual Home | ROCKY 75 |
| Visions and the Deep Self: Teaching the Voice Within | PREM CHANDAVARKAR 87 |
| Changing Networks and Practices of Spirituality and the Sacred | MICHAEL J. O'ROURKE 103 |
| Designing Experiences: Ritual, Narrative, and Embodiment | ELIAN BÓRMIDA 119 |
| Contemplation and Non-Ecological Impagination | CLAUDIO GUERIN 137 |
| Building Emotional Sites | ALBERTO CAMPES BACH 149 |
| The Sacred Task of Architecture | JUHANI PALLASMAA 165 |
| Consuming Creation: Rethinking Consumption and Materiality | CRAIG W. HARTMAN 181 |
| Healing Spirituality Through Making, Space, and Light | ANDREW PRESCOTT 193 |
| Spirituality in Architectural Education and Practice | CRAIG BACH, CHANDAVARKAR, O'ROURKE, JONES, PALLASMAA 199 |

APPENDIX

| | |
|---|--------------------|
| The Voluntary Architectural Simplicity Manifesto | JULIE BERNADEZ 215 |
| Choosing Being: How to Respond to Today's University State of Affairs | JULIE BERNADEZ 219 |
| On the Architectural Design Path | JULIE BERNADEZ 227 |
| Index | 234 |

Research & Scholarship



Information

Visualization

Design

Co-founder and leader (PI or Co-PI) 1995-2005

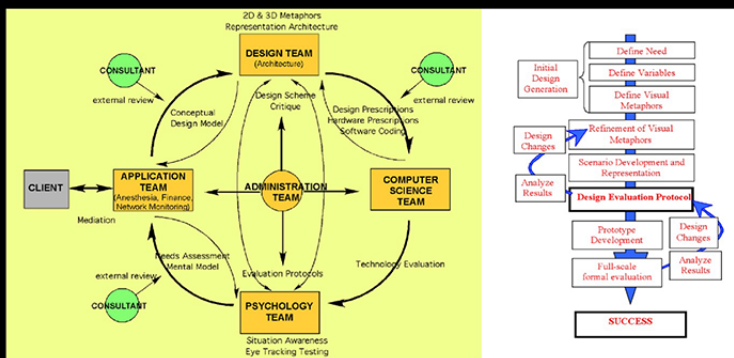
CROMDI Interdisciplinary Team

| | |
|---------------------|--|
| Jim Agutter | College of Architecture + Planning, University of Utah |
| Julio Bermudez | College of Architecture + Planning, University of Utah |
| Stefano Foresti | CHPC / CA+P, University of Utah |
| Dwayne Westenskow | Department of Anesthesiology, University of Utah |
| Noah Syroid | Department of Anesthesiology, University of Utah |
| Sandra Smith | College of Nursing, University of Utah |
| William Dudley | College of Nursing, University of Utah |
| Cassandra Von Buren | Department of Communication, University of Utah |
| David Strayer | Department of Psychology, University of Utah |
| Frank Drews | Department of Psychology, University of Utah |
| Yarden Livnant | School of Computer Science, University of Utah |
| Chuck Hansen | School of Computer Science, University of Utah |
| Liz Tashjan | Department of Finance, University of Utah |
| Robert Wood | Distinguished Prof. of Finance, Univ. of Memphis |
| Jingyi Zhu | Department of Mathematics, University of Utah |
| Tracy Petersen | Department of Music, University of Utah |
| Dale Richards | State COEP Consultant |

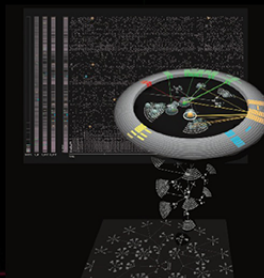
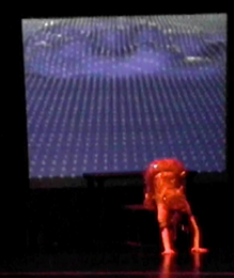
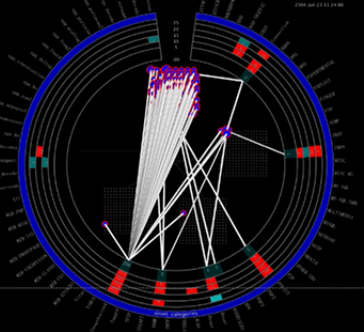
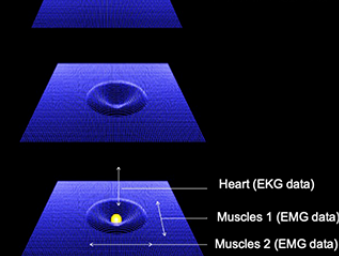
+ others (Performance Art faculty from Oberlin College, UT Austin, etc.)

\$ 5 M in Grants and Contracts in multiple domains (medicine, network monitoring, finance, defense, and art performance)

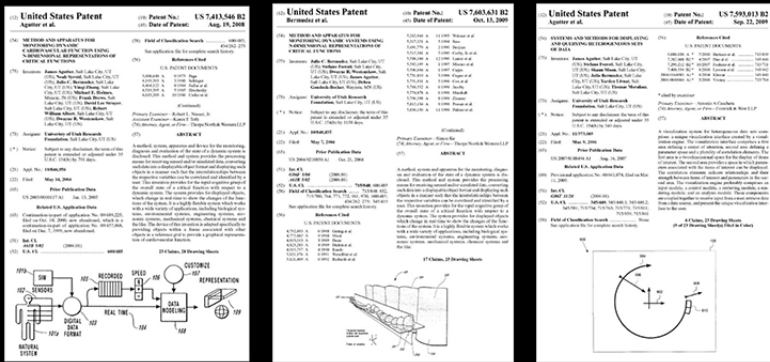
Interdisciplinary Research/Design Methodology



Art Performances



Patents



I conducted innovative **Information Visualization Research** using architecture and design to guide work in multiple domains including the health sciences, finance, defense, computer science, and the performing arts. I co-founded and was one of the leaders of **CROMDI** (Center for the Representation of Multi-Dimensional Information), a high profile research hub at the University of Utah that brought together a large interdisciplinary team, raised over \$5 M in funding (grants and contracts), spawned over 50 articles across 4 fields, received good media attention, generated 4 U.S. patents (I am a co-inventor in 3), produced 3 commercial licenses, created

a spin-off company, developed curricula, and staged 20 live performances in 3 continents. As far as I know, this record remains unique among schools of architecture in the U.S. and abroad. This work received many recognitions including the 2004-05 ACSA Creative Achievement Award (with Jim Agutter), the 2005 Arturo Montagu SIGraDi Prize, being ranked in the top 10 architecture research programs in U.S. universities by the AIA (2005), and declared "Graduated Center of Excellence" by the State of Utah (2005). Eventually, this success led to the creation of the Multi-disciplinary Design Program at the University of Utah College of Architecture + Planning.

Research & Scholarship

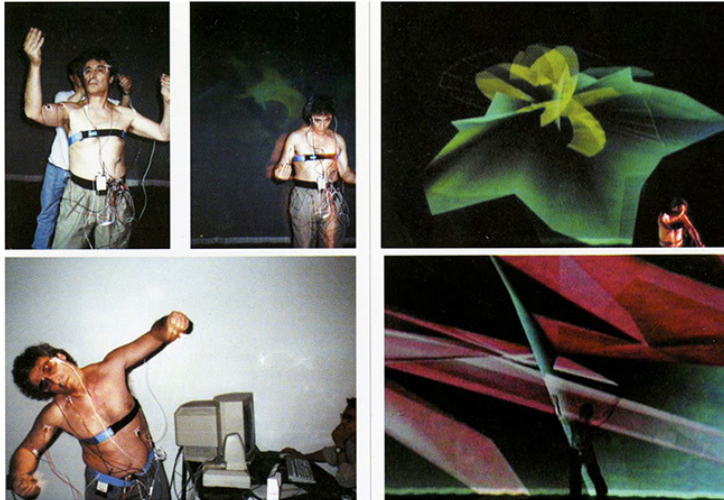


Information

Visualization

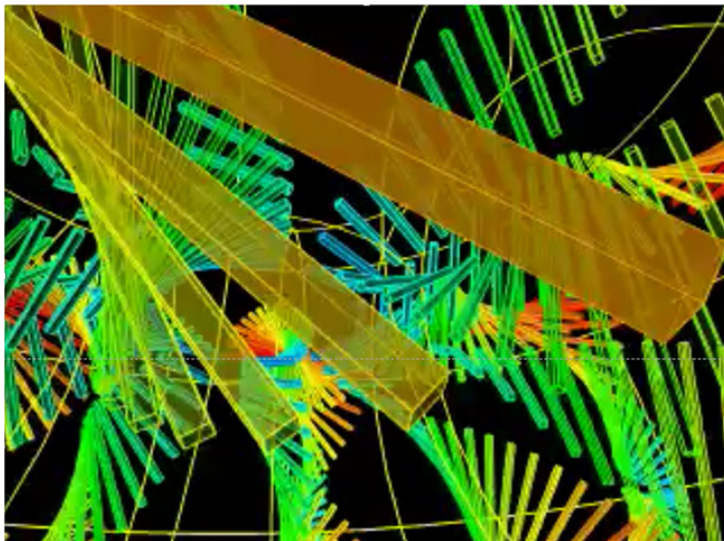
Design

Co-founder
and leader
(PI or Co-I)
1995-2005



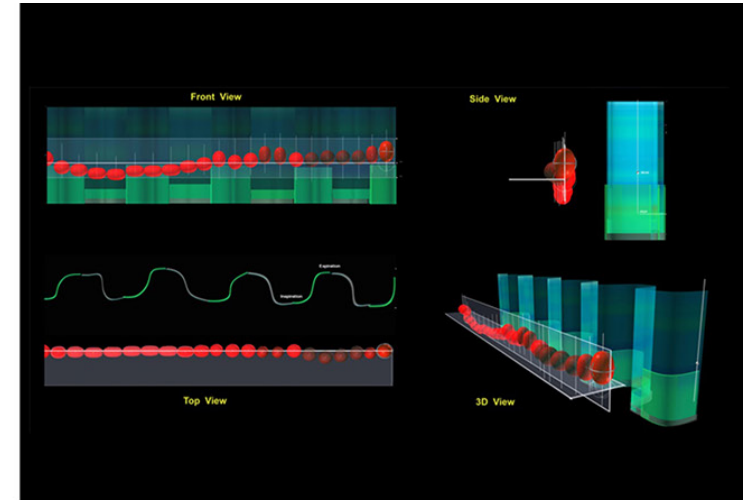
The cyberPRINT: bio-data driven Virtual Reality architectures for live art shows.

Financial visualization of stock performance in various time frames.



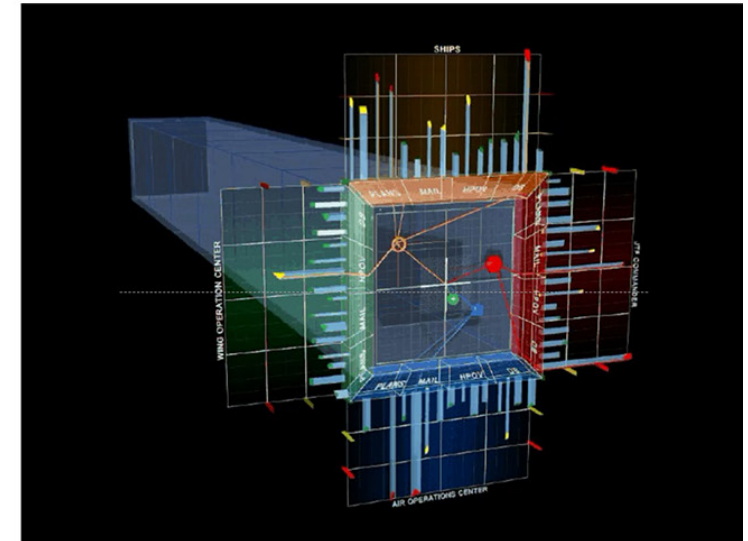
Four projects developed by CROMDI. On the top left is the **cyberPRINT**, an “architecture of being” that is generated by drawing biological data from a human body and transforming them into an “inhabitable” virtual reality environment in real time. In the pictures, University of Texas Choreographer and dancer Yacov Sharir tests and then performs the cyberPRINT at the Repertoire Dance Theater in Salt Lake City, UT, in May 2000.

On the top right-hand corner is one of our **anesthesia graphic displays** presenting ordinary patient data in ways that speed up diagnosis and reduced decision making errors. Several information visualization systems for a variety of medical applications were developed through the years. An



Anesthesiology display to improve critical decision making (diagnosis).

DARPA-funded data visualization to detect cyber-attacks.



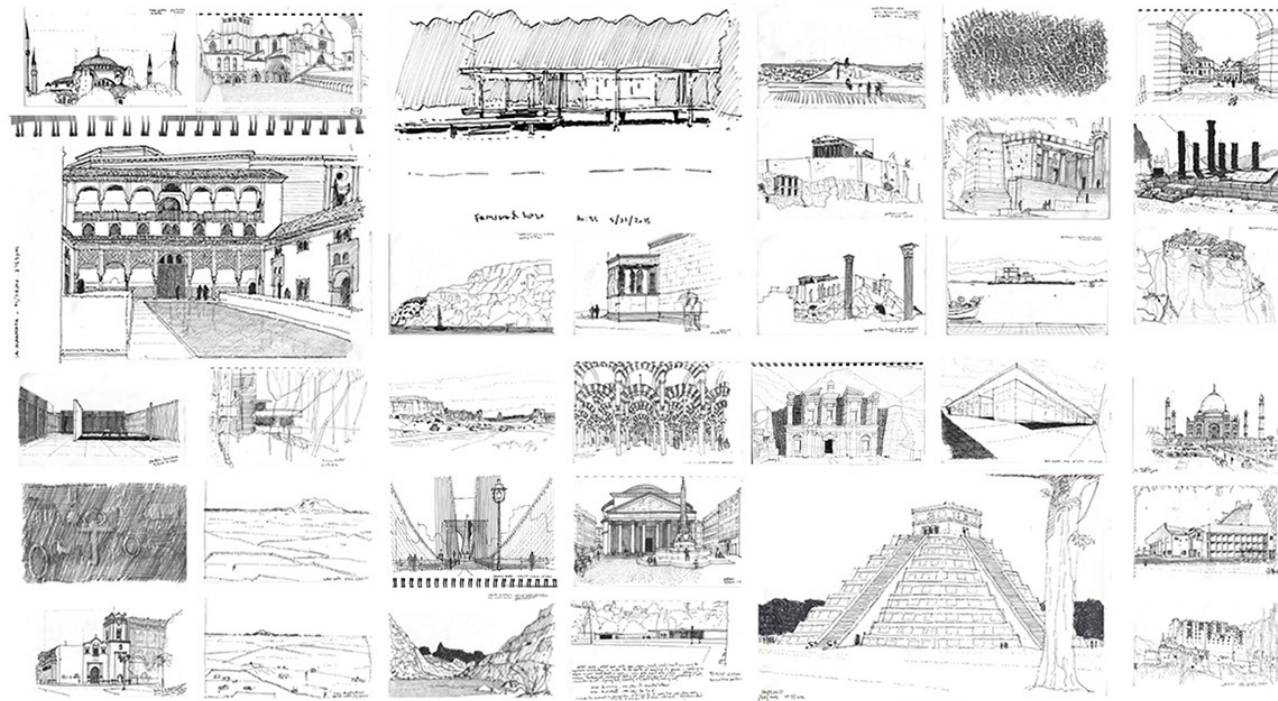
intuitive 3D model to display **company shares within the stock market** is offered on the bottom left-hand corner. Lastly, a sophisticated **cybersecurity visualization** to detect potential data breaches in real time is presented on the bottom right.

My information visualization work demonstrates the natural leadership that architecture may play in interdisciplinary endeavors. Using four core architectural competencies (i.e., representation, formal semiotics, organizational leadership, and design thinking) two architecture faculty (Jim Agutter and myself) became the leaders of a collaborative assembly of 5 disciplinary teams with over 25 individuals.

Research & Scholarship

Usus In Præsens

Sketching, workshops, and teaching (1994-now)



Usus in Præsens in Tibet (2005)



in Amsterdam (2009)



in Guatemala (2015)



in Istanbul (2018)



in Cusco, Peru (2005)



in Fallingwater, PA (2004)

Sketching architecture is investigated as a practice of being present, or “*Usus in Præsens*” in Latin. Drawing an architectural scene teaches us to dwell in the perfection of the moment mindfully. A moment that is not just objective but also irremediably subjective. When done wholeheartedly, such effort offers us the potential of profound and transcendental insights. Thus practiced, sketching becomes a contemplative act.

I have drawn some 600 sketches since 1994. The majority of these drawings occurred during trips abroad. These ~600 times that I sat to sketch have deepened my understanding of and ability to do *Usus in Præsens*. I have codified my insights into guidelines that facilitate a contemplative

practice via architecture (primary goal), good sketching (secondary objective), and studying architecture (third goal). The result has been the development of a workshop termed “*Usus in Præsens*” that teaches people how to turn drawing into a contemplative practice. I have offered this workshop in the United States (2007-09), Argentina (2008), Peru (2014), and Guatemala (2015), and now regularly in one of my graduate seminars.

Selected sketches from my *Usus in Præsens* were shown in an exhibit hosted by the AGArte Art Gallery in Santa Fe, Argentina, during February-March 2008. I plan to develop a traveling exhibition of my drawings directed to Schools of Architecture in the United States.

Research & Scholarship



Lectures

Workshops

Guest Critic

Media

Full career

I have lectured about my scholarship, research, or teaching at many schools and universities in the U.S. and abroad. Often, some of the same institutions invited me back for more talks, to participate in reviews, or to offer a workshop. These extramural activities have allowed me not only to share my work (and perhaps influence the discourse in our discipline) but also to remain up to date with what is happening beyond my immediate milieu.

Some lectures have been delivered at other scientific, scholarly, and public settings. I feel especially proud to have lectured 3 times at *ANFA*



LECTURES

University of Illinois, Urbana-Champaign, IL
University of Pennsylvania, Philadelphia, PA
Miami University, Oxford, OH
Universidad Católica de Santa Fe, Santa Fe, Argentina
2017 Chicago Humanities Festival, Chicago, IL
Universidad Nacional de Cuyo, Mendoza, Argentina
2016, 2014, 2012 Academy of Neuroscience For Architecture (ANFA) Conferences, La Joya, CA
Universidad Nacional de San Juan, San Juan, Argentina
University of Hartford, Hartford, CT
California Baptist University, Riverside, CA
North Carolina State University, Raleigh, NC
Universidad de Mendoza, Mendoza, Argentina
Mississippi State University, Starkville, MS
Universidad Católica de Santa María, Arequipa, Perú
University of Utah, Salt Lake City, UT
Universidad Nacional de Tucumán, Tucumán, Argentina
Harvard Divinity School, Boston, MA
Pontificia Universidad Católica del Perú, Lima, Perú
University of Texas at Austin, TX
Salt Lake Art Center, Salt Lake City, UT
University of Colorado at Colorado Spring, CO
Universidad Nacional del Litoral, Santa Fe, Argentina
Ryerson University, Toronto, Canada
Blessed Sacrament Church, Washington, DC
Univ. Nacional de Mar del Plata, Mar del Plata, Argentina
Universidad Nacional de Rosario, Rosario, Argentina
Univ. Francisco Marroquín, Guatemala City, Guatemala
Univ. Nacional de Buenos Aires, Buenos Aires, Argentina
Universidad del Bío-Bío, Concepción, Chile
University of New Mexico, Albuquerque, NM
Brigham Young University, Washington DC Campus
Colegio de Arquitectos de Entre Ríos, Paraná, Argentina
Universidad de la República, Montevideo, Uruguay

Texas Tech University, Lubbock, TX
Univ. Argentina de la Empresa, Buenos Aires, Argentina
Various architecture firms in Salt Lake City, UT
Cranbrook Academy of Art, Bloomfield Hills, MI
Ball State University, Muncie, IN
1995 AIAS FORUM, Portland, OR
Montana State University, Bozeman, MT

WORKSHOPS

Univ. Francisco Marroquín, Guatemala City, Guatemala
Universidad Nacional de Tucumán, Tucumán, Argentina,
Cal Poly State University, San Luis Obispo, CA
Universidad Nacional de Cuyo, Mendoza, Argentina
AIA-DC, Washington, DC
Universidad Católica de Santa María, Arequipa, Perú
Universidad del Bío-Bío, Concepción, Chile.
Universidad Nacional de Rosario, Argentina.
Universidad Nacional del Litoral, Santa Fe, Argentina
University of Colorado, Denver, CO
Univ. Nacional de Mar del Plata, Mar del Plata, Argentina

GUEST CRITIC

Georgia Institute of Technology, Atlanta, GA
North Dakota State University, Fargo, ND
North Carolina State University, Raleigh, NC
Virginia Tech University (WAAC), Alexandria, VA
University of Illinois, Champaign-Urbana, IL
University of Maryland, College Park, MD
Miami University, Oxford, OH
University of Colorado, Denver, CO
University of Colorado, Boulder, CO
University of New Mexico, Albuquerque, NM
University of Minnesota, Minneapolis, MN

(*Academy of Neuroscience For Architecture*) Conferences and delivered the *Richard H. Driehaus Foundation Lecture on Architecture* at the **Chicago Humanities Festival** in 2017. In terms of media, my neuroscience work has attracted much attention (particularly in social media) but last year, due to the burning of the Cathedral of Notre Dame in Paris, I was interviewed several times. My most fun and certainly highest-profile media engagement has been participating in *The Story of God with Morgan Freeman* aired in the National Geographic Channel (third episode of the third season, 2019).

Service

ACSF Architecture, Culture, and Spirituality Forum

Co-founder,
leader,
and president
(2007-now)



Thomas Barrie and Julio Bermudez are CEO and President of the *Architecture Culture and Spirituality Forum* (incorporated in Oct 2015, and 501c organization since March 2016)



250 peer-review papers published in symposium proceedings, 4 guest edited international journal issues, and one book (Ashgate, 2015)



ACSF 9 at Haystack School of Crafts (May 2017)



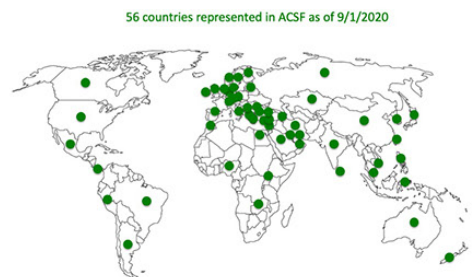
ACSF 11 at Taliesin West (May 2019)



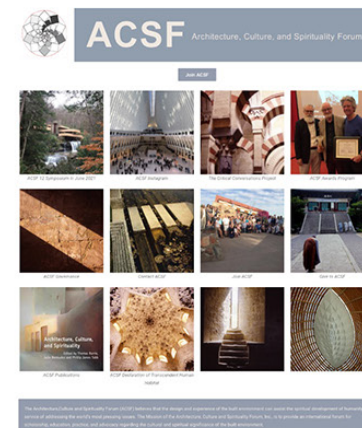
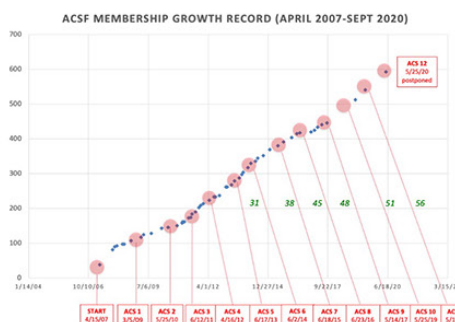
Juhani Pallasmaa receiving the ACSF Outstanding Achievement Award in May 2019



Rina Swentzell, Keynote speaker, ACSF 7, Ghost Ranch, NM, June 2015



Argentina, Australia, Austria, Belgium, Brazil, Canada, China, Costa Rica, Cyprus, Denmark, Egypt, Finland, Germany, Greece, India, Hungary, Indonesia, Iran, Ireland, Israel, Italy, Japan, Jordan, Kazakhstan, Korea, Kosovo, Kurdistan, Lithuania, Malaysia, Mexico, Morocco, New Zealand, Nigeria, North Cyprus, Norway, Oman, Peru, Philippines, Portugal, Qatar, Russia, Saudi Arabia, Singapore, Slovakia, Slovenia, Spain, Sri Lanka, Sweden, Switzerland, Taiwan, The Netherlands, Turkey, Uganda, UAE, UK, USA, Zambia.



| | | |
|-----------------------------|----------|-------------------------|
| ACSF 12 • Fallingwater | 6 / 2021 | Fallingwater, PA |
| ACSF 11 • Taliesin West | 5 / 2019 | Taliesin West, AZ |
| Tenth ACS Symposium | 5 / 2018 | Coral Gables, FL |
| ACSF 9 Symposium | 5 / 2017 | Deer Isle, ME |
| ACSF 8 Symposium | 6 / 2016 | New Harmony, IN |
| Seventh ACS Symposium | 6 / 2015 | Ghost Ranch, NM |
| ACSF 6 Symposium | 6 / 2014 | Toronto, Canada |
| ACSF 5 Symposium | 6 / 2013 | Harvard/Glastonbury, M. |
| ACSF 4 Symposium | 4 / 2012 | Chichen Itza, Mexico |
| Third Annual ACS Symposium | 6 / 2011 | Serenbe, GA |
| Second Annual ACS Symposium | 6 / 2010 | St. John's, MN |
| inaugural ACS Symposium | 3 / 2009 | Mount Angel, OR |

I co-founded the *Architecture, Culture and Spirituality Forum* (ACSF) in April 2007, after a year-long preparatory work with Professors Thomas Barrie (North Carolina State University), Anat Geva (Texas A&M University), and Randall Teal (University of Idaho). We created ACSF to provide a forum for scholarship, education, practice, and advocacy regarding the cultural and spiritual significance of the built environment. ACSF's main objectives are to (1) support a community of scholars, educators, and practitioners, (2) organize symposia, (3) foster peer-reviewed publications, and (4) promote ACSF values, activities, and awareness.

Starting with 40 people, ACSF has grown to nearly 600 members

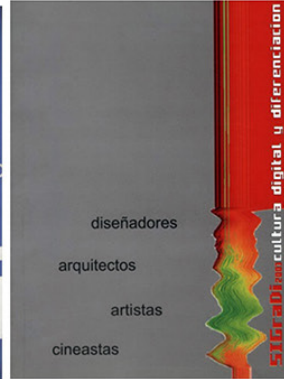
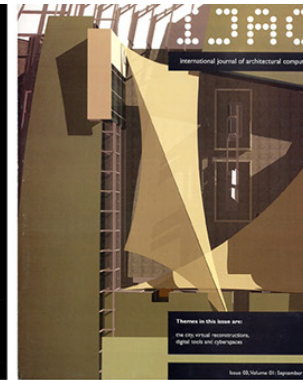
of multiple ethnicities, faiths, cultures, and disciplines from 56 countries. ACSF was incorporated in Oct 2015 and received its non-profit/tax-exempt status in March 2016. This new phase opened remarkable opportunities for growth as more funding and support became available. New collaborative partnerships are being established (e.g., with Princeton's Center of Theological Inquiry, F.L. Wright Foundation) along with a more expanded vision, strategic plan, and initiatives (e.g., awards program, the Transcendent Human Habitat Declaration). I have shared the leadership of ACSF with Thomas Barrie since its beginning. In addition to being its current president since 2015, I have co-chaired 6 of its past 11 annual symposia.

Service

SIGraDi

**Sociedad
Ibero-
americana
de Gráfica
Digital**

**Co-founder,
VP, and leader
(1997-2005)**



FAUG será la nueva sede de SIGRADI



It was at the Universidad de Buenos Aires, Argentina, in 1997 when I joined 6 recognized Latin American researchers in architectural computing to co-found **SIGraDi**, the *Sociedad Iberoamericana de Gráfica Digital* (Ibero-American Society of Digital Graphics). Over the next 8 years, I co-lead SIGraDi's development, promotion, and management, co-edited two conference proceedings, and represented it in the United States. I also facilitated its communication with 3 other international associations covering architectural computing (ACADIA, ECAADE, and CAADRIA – see next exhibit). From its humble origins, SIGraDi has grown into today's 800+

member organization that includes professionals and investigators from an array of design disciplines, all interested in the impact of digital media and technology in their fields.

After 23 annual conferences held in different countries and many hundreds of papers, SIGraDi has become an influential force in the academic and professional world of design and computing well beyond the Americas. I want to say that this is not another item in this portfolio. Starting and governing SIGraDi took much work, commitment, and love, not to mention cultural and interdisciplinary collaboration.

Service



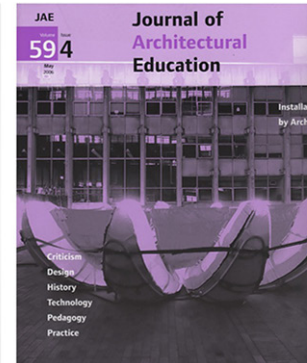
1998-2007

2003-2008

J

A

E



2006-2009

LEONARDO
The MIT Press

**INTERNATIONAL SOCIETY
FOR ARTS SCIENCES AND
TECHNOLOGY, INC.**

2003-2006



2015-now

**Executive,
advisory,
and editorial
board member
(1998-now)**

My work in digital media and *SIGraDi* leadership impelled me to join the boards of **ACADIA** (Association for Computer-Aided Design in Architecture) and the renowned MIT Press published journal *Leonardo* along its parent organization: the *International Society for the Arts, Sciences, and Technology*. The former appointment made the operational coordination between SIGraDi and ACADIA possible and, eventually, of these two with ECAADE (Education and research in Computer Aided Architectural Design in Europe) and CAADRIA (Association for Computer-Aided Architectural Design Research in Asia). Thus, the four 'sister' organizations covering architectural computing research worldwide were able to coordinate their activities for the first time. This effort secured the creation of the *Interna-*

tional Journal of Architectural Computing (IJAC) in 2003. From 2003 to 2008, I served on its Editorial Board and edited/co-edited three quarterly issues (Falls 2003, 2004, and 2005). All these activities and my own work led to my receiving the prestigious **2010 Sasada Award** from CAADRIA.

A highlight of my academic career has been my three-year of service in the *JAE Editorial Board*. The discussions that took place and the work published during that time still resonate in me and, I hope, our discipline. Finally, it is an honor to be in the Executive Advisory Board of the *International Arts & Mind Lab* since its creation in 2015. This multidisciplinary center from the *Brain Science Institute at Johns Hopkins University* seeks to accelerate the field of *neuroaesthetics* to amplify human potential.

Service

International

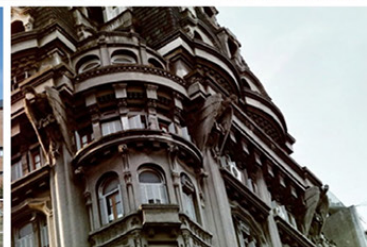
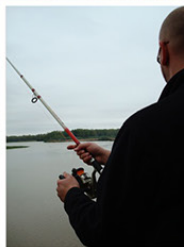
Academic

Exchange

Program

U of U & UNL
(U.S.–Argentina)

Co-founder
and co-director
(1995-2010)



In close association with Professor Julio Arroyo from the Universidad Nacional del Litoral (Santa Fe, Argentina), I created and directed the *International Academic Exchange Program between the Colleges of Architecture at my then University of Utah and Arroyo's UNL in Argentina*. From 1995 until 2010, we oversaw 39 exchanges involving dozens of individuals (students, faculty, and administrators). At least another 10 projects indirectly sprang out of these interactions. The impact of these experiences transcended the purely cultural, academic, and individual. The longevity of the program, the visitors' immersion in the host school, and the events associated

with the exchange produced a lasting impact on the life of both institutions. From an American perspective, the strength of this program was that, unlike traditional study-abroad architectural programs focused in Europe, buildings, and urbanism, our effort looked South and sought learning experiences about the cultural and social foundations of architecture. This emphasis, along with its small-scale operation (we never accepted more than 3 students per exchange) and personal attention/support that each participant received (from Arroyo or myself), resulted not only in the participants' reconceptualization of architecture but, often, in transformative experiences.