

Curriculum Vitae

Julee Herdt

CU College of Architecture and Planning, 1250 14th St, Denver, CO 80202
755 Union Avenue. Boulder, CO 80304

Professor of Architecture

Licensed Architect

BioSIPs, Inc, CEO, Owner/Founder; a woman-owned, clean-tech start-up.

First-ever University of Colorado spin-off from the College of Architecture & Planning. Based on Professor Herdt's intellectual properties and green building technologies, and first-ever College of Architecture & Planning patents in CU history.

EDUCATION

Southern California Institute of Architecture, SCI-Arc, Los Angeles and Switzerland campuses.

Master of Architecture, M.Arch '89

Best Graduate Thesis Award: "Walking Buildings" project

Wolf Prix, Thesis Advisor. Coop Himmelblau Architects, Vienna, Austria + Los Angeles

Critiqued by: Thom Mayne; Michael Rotondi; Wolf Prix; Neil Denari; Paul Lubowicki; Tod Williams; Ray Kappe; Kenneth Frampton; Peter Cook; Hans Hollein; Michael Sorkin; Lars Lerrup; Marc Angelil; Fritz Neumeyer; Aaron Betsky; Craig Hodgetts; Robert Mangurian; Margaret Crawford;

University of Tennessee, College of Architecture. Knoxville

Bachelor of Architecture, '80

Chancellor's Citation for Extraordinary Professional Promise

Gamma Beta Phi Honor Society

Memphis Academy of Art. Tennessee

Fine art courses and drawing, non-degree, '80

College of Engineering, University of Louisville. Kentucky

Mathematics and Science, '77

Western Kentucky University, Industrial Technology Department

Bachelor of Science in Industrial Design. President's Scholar. '75

PROFESSIONAL EXPERIENCE

Present: University of Colorado

- **Full Professor, CU College of Architecture & Planning**
2007 to present
- **Associate Professor of Architecture, Owner**
2002
- **Assistant Professor of Architecture, University of Colorado**
1994-2002

Present: BioSIPs, Inc, CEO, a woman-owned clean-tech corporation and CU spin-off company

R&D fundraising to date: Over \$3M since 2011

Present: U.S. Department of Agriculture, Forest Products Laboratory research and patent partner

Research & development of biobased environmental building materials. 1992-present

Previous Experience

- **Technical Reviewer and Subject Matter Speaker** on biobased building materials.
U.S. Department of Agriculture, Alternative Agricultural Research & Development, Washington, DC
- **Architect. Coop Himmelblau Architects,** Vienna, Austria. 1992
- **Director of Environmental Building Product Development and Commercialization + Architect.**
Gridcore Systems International (now Ecor) Carlsbad/Long Beach, California. 1992-1995
- **Venice Biennale Project, Site Installation Architect, Venice, Italy.**
For SCI-Arc, Southern California Institute of Architecture. 1991
- **Architect. Morphosis Architects.** Los Angeles, California. 1989-1990
- **Project Architect, Gresham, Smith and Partners.** Birmingham, Alabama. 1984-1987
- **Architect, Godsey Associates Architects.** Louisville, Kentucky 1984
- **Architect, Tennessee Valley Authority.** Knoxville, Tennessee. 1981-83
- **Architecture Intern. Ryan, Cooke, and Zuern Architects.** Louisville, Kentucky. 1977-80

PATENTS: CU & IN PROFESSIONAL PRACTICE

- **U.S. Patent: Cut, Shape, Fold Technology for Engineered Fiberboard.** US 9,740,799 B2 2017
- **U.S. Patent: BioSIPs, Structural Insulated Panels.** US 9,010,054 B2 2016
- **Utility patent** filed based for BioSIP technology: “Structural Insulated Building Panel” 2014
- **Utility patent** filed on BioSIPs software and material science. 2011

PATENT LICENSING CU & IN PROFESSIONAL PRACTICE

- **Exclusive CU Option Agreement with CU Venture Partners** (formerly CU Tech transfer) for U.S. Patent: BioSIPs, Structural Insulated Panels. US 9,010,054 B2 2021

BUSINESS ACCELERATORS FOR BIOSIPS COMMERCIALIZATION

- **Venture for Climate Change** Boot Camp through global competition. Business accelerator program supporting climate tech innovators. 2022
- **Wells Fargo Innovation Incubator (IN²), Technology Incubator.** Selected for entrepreneurial training platform funded by the Wells Fargo Foundation, co-administered by the U.S. Department of Energy’s National Renewable Energy Laboratory (NREL). Mentorship and training through business and industry partners for BioSIPs intellectual property’s economic viability, low carbon capabilities, and positive social impacts. 2021
- **CU Venture Partners, Starting Blocks Customer Discovery program** for assisting CU scientists and engineers determine markets for their innovations. Accepted participant, summer session. Worked with business mentors and professionals on BioSIPs technology commercialization planning, customer discovery and interviews. 2021
- **Collaboration with Innovation Center of the Rockies** through CU Tech Transfer support for BioSIPs, Inc business developments, advisory group presentations, and interviews with professionals in establishing corporate team. 2012

RESEARCH AND CREATIVE SUPPORT

AUTHOR AND PRINCIPAL INVESTIGATOR:

Grants and Cooperative Agreements for environmental architecture and green building material technologies.

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|----------------|---|
| 2022 | Department of Energy, Bioenergy Technologies Office, Waste Feedstocks and Conversion. Submitted with National Renewable Energy, NREL, research partners. PI: “ <i>A High-Performance Structural Building System from 100% Diverted Waste Fibers and Plastics</i> ”. Advanced to full proposal. Pending \$900,000 |
| 2022 | National Science Foundation, NSF Convergence Accelerator. Sustainable Materials for Global Challenges. PI: “ <i>Sustainable Structural Insulated Building Panels, “BioSIPs-NIPU”, from Diverted Fiber & Plastic Wastes for Clean-Tech Manufacturing of Equitable Housing & a Circular Economy</i> ”. Submitting with NREL, research partners. \$750,000 |
| 2018-19 | EVOLVE Grant, University of Colorado. <i>A Newly-Invented Environmental Building System and its Application in Residential, Shipping Container Design.</i> \$10,000 |
| 2012 | CU Outreach Award. “ <i>Teaching Renewable Energy and Resource Conservation to Middle School Students using a Solar Station</i> ” project has received funding. \$7,900 |
| 2009 | CU College of Architecture and Planning, Research Incentive Award Allocation. \$2,149 |

- 2008-09** “Quantification and application of fundamental material properties for 3D-engineered fiberboard for BioSIP development”, CRADA, CU and USDA, Forest Products Laboratory through State of Colorado, Advanced Technology funds. \$44,550 (see entry below).
- 2011** State of Colorado, Advanced Technology Fund Research Grant: “Diverting Solid Waste into High Performance, Environmental Building Products.” \$245,000
- 2007** Heimbold Foundation Award in support of Professor Julee Herdt’s environmental architecture research at CU (unsolicited award based on recognition of work). \$7,000
- 2007** CU Faculty Grant Award. Principal Investigator: “Second Generation BioSIPs Finite Element Modeling, Design Application & Patenting.” \$5000.
- 2003** Request for Proposal, 2005 National Solar Decathlon with input by CU engineering. \$5,000
- 1999** Richard Crowther Environmental Grant Funding. \$7,000.
- 1998** United States Department of Agriculture, Alternative Agricultural Research and Commercialization Corporation. USDA AARC: Industrialized Agricultural Architecture; Energy Analysis and Public Relations. \$50,000.
- 1998** University of Colorado at Denver, Faculty Research Award, Research and Creative Activities Committee: Development of a Thermal Performance Toolkit Prototype for Measuring and Evaluating Industrialized Architecture. \$3,169.
- 1998** National Geothermal Heat Pump Consortium, Washington, D.C.: Geothermal Engineering for The Farmhouse. \$2,500
- 1996** University of Colorado President's Initiative Fund for Technology, Faculty Grant. Co-PI: A Toolkit for Technology Enhanced Design Education Grant. Total funding \$66,485 with \$3,500 toward Julee Herdt's project.
- 1994** USDA AARC: Development of Gridcore Products from Engineered Molded Fiber Technology. \$850,000.
- 1994** United States Department of Agriculture, Alternative Agricultural Research and Commercialization Corporation: Gridcore Panels from Kenaf. \$50,000.
- 1993** United States Department of Agriculture, Alternative Agricultural Research and Commercialization Corporation: Gridcore Panels from Kenaf. \$50,000

BIOSIPS RESEARCH AWARD LEADING STUDENT TEAM

2020 Anschutz-Denver campus-wide, Technology, Engineering, and Math, Research and Creative Award for “Mushrooms + Paper + Plants, The Making of Bio Renewable Construction Panels for Healthier Buildings, People & Environment” leading student team in BioSIPs work.

COLLABORATOR ON FUNDED GRANTS WITH OTHERS:

“Beyond Green Buildings: An integrated Holistic Design Approach.” Environmental Protection Agency, EPA. Principal Investigator: Anu Ranuswami, CU College of Engineering, Denver Campus. Julee Herdt, Co-Principal Investigator. \$10,000. 2004

CU Solar Decathlon project “Request for Proposal.” CU College of Engineering & Applied Science application with environmental architecture contributions by J. Herdt. \$5,000

USDA Small Business Innovation Research Grant SBIR. "Replacing Pulpwood and Solid Wood Residues with Wastepaper for Veneer and Fiberboard Panels": Phase II. Commercialization of fiber research and product development from Phase I grant. PI: Dr. Ben Bryant, Professor Emeritus, University of Washington, Seattle. \$179,000 1995-1997

USDA Small Business Innovation Research Grant SBIR. "Replacing Pulpwood and Solid Wood Residues with Wastepaper for Veneer and Fiberboard Panels": Phase I. Panel prototype and testing of Gridcore panels from lowest-grade waste paper sources. PI: Dr. Ben Bryant, Professor Emeritus, University of Washington, Seattle \$50,000 1995

REFEREED PUBLICATIONS: RESEARCH

- 2016** "Newly Invented Biobased Materials from Low-Carbon, Diverted Waste Fibers: Research Methods, Testing, and Full-Scale Application in a Case Study Structure." Oxford Press. International Journal of Low-Carbon Technologies.
- 2007** "Relationship between design and research in the Twenty-First Century." Work included in 2007 Cranbrook Teachers Conference proceedings.
- 2004** "Application of EcoSystems Services Criteria for Green Building Assessment" Co authored with Dr. Victor Olgay. Published by the International Solar Energy Society. Fourth most downloaded science publication on Science Direct in 2004.
- 2003** "How Green is My Building: An Energy and Material Assessment of the Bio-based Farmhouse." Co-authored with Dr. Victor Olgay. Published by The American Solar Energy Society and the American Institute of Architects in the "Solar 2003 Special Issue." Edited by J. Reynolds, R. Perez and D. Renne.
- "Environmental Design: Industrialized Agricultural Architecture, IAA & the Farmhouse" American Collegiate Schools of Architecture, ACSA National Conference Proceedings.

FUNDED RESEARCH POSITIONS FOR STUDENTS AND RECENT GRADUATES

BASED ON MY RESEARCH AND CREATIVE WORK

- 2019-20** EUReCA, Student Mentoring Program. Project Director, plus funding support, providing undergraduate work-study students with hands-on experience in green building material development and prototype fabrication.
- 2017-2020** Funding and mentorship for CU graduate and undergraduate students in research and development of green building materials.
- 2010/2009** BioSIP building material development and applications in design and construction.
1 Kellen Schauermaun, M.Arch, CU 2009 \$70,000
2 Nick McMunn, M.Arch, CU 2009 \$4000
3 Eric Doner, M.Arch, CU 2009 \$22,000 plus BioSIP stock
4 Simon Lin, University of Wisconsin (Madison), Master of Engineering \$6,500 (personal funds)

TECHNICAL WRITING AND REPORTS:

BASED ON MY RESEARCH AND CREATIVE WORK

Technical and research reports using American Society of Testing Materials (ASTM) and Universal Building Code (UBC) standards for material science and structural testing of full-scale BioSIP wall, floor, and roof inventions (axial compression, racking, and transverse bending). Results to be applied in BioSIP product certification. Testing by BioSIP team conducted through grant funding at CU Engineering and Applied Science lab. 2010

REFEREED AWARDS: RESEARCH

"US Green Building Council, USGBC, Colorado Public Interest Design Award", through nomination. Overall award for the "Products" category for BioSIPs: "In recognition of experimentation and commitment to visionary environmental and health-related impacts with projected economic impacts." A total of six statewide awards presented during the Rocky Mountain Green sustainability conference. April 26 in Denver. 2010

Excellence in Research and Creative Activities Award.

College of Architecture and Planning. 2008

AIA Latrobe Prize Finalist. One of five national finalists in the AIA's highest research prize competition for submittal: "Biobased Building Materials & the Eco-Education Schoolhouse Design and Curriculum." 2007

"Environmental Leadership Award" from the State of Colorado

Department of Public Health and Environment. Nominated by the Environmental Protection Agency, EPA, Denver office. 2004

"Research/Creative Activities Award"

College of Architecture and Planning. Faculty Awards Forum 2002

PRESENTATIONS OF REFEREED WORK: RESEARCH AND CREATIVE

- 2016 Pecha Kucha invited presenter for Denver start-up community.
- 2007 Invited speaker and panelist at the 2007 Cranbrook Teachers Conference. Bloomfield, Michigan. Member of the "Design and Research" panel on topic "Relationship between design and research in the twenty-first century."
- 2007 Invited speaker at the National AIA Convention, San Antonio. Topic: "Solar Decathlon: Learning Lab for Education and Practice." (I invited a CU engineering student to attend with me and to present.)
- 2007 Invited presenter to the AIA Latrobe Prize Committee and FAIA Members at AIA national headquarters, Washington, DC. "Biobased Building Materials & the Eco-Education Schoolhouse Design and Curriculum."
- 2005 CU Sustainable Energy Forum
- 2004 International Solar Energy Society Conference
- 2003
 - National American Solar Energy Society and American Institute of Architects, AIA
 - International Interior Design Society, Sustainable Design Event
 - Speaker US Green Building Council, Colorado Chapter, Fall 2003. Educational Program.
- 2002 American Collegiate Schools of Architecture National Conference Proceedings.

NON-REFEREED RESEARCH AND CREATIVE PUBLICATION

State of Colorado, Pollution Prevention Advisory Board Assistance Committee, Office of Environmental Integration and Sustainability, "Diverting Solid Waste into High Performance, Environmental Building Products." Presented at October 27th Colorado Department of Public Health and Environment 2011

The Farmhouse website, <http://thefarmhouse.org>. Featuring bio-based architecture from U.S. Department of Agriculture sponsored materials and salvaged sources integrated with geothermal systems and renewable energy. 2004

RESEARCH REVIEWED BY REPRESENTATIVES OF U.S. HOUSING AND URBAN DEVELOPMENT

US Housing and Urban Development funding: "BioSIPS, Strength Weakness Opportunities Threat Analysis". Presented at the National GreenBuild Conference in Denver, Colorado. November. 2007

WORK REVIEWED IN MEDIA, NON-REFEREED: CREATIVE

Colorado Public Radio Program. "Architect uses agricultural-products." 2015

U.S. Department of State, Office of Broadcast Services in Collaboration with the Embassy of Dushanbe, Tajikistan. Film for Jahonnamo television: "Alternative construction methods and alternative energy sources in the United States." 2011

Home and Garden Television. Dream Builder Program. "The Edible House." Program 911. 2004

Channel 2, Denver. "The Farmhouse from Recycled Materials." April 2004

Vietnam Urban Environmental Technology Exchange Project Video. "Colorado Technologies for a Sustainable World." 2003

RECOGNITIONS AND HONORS:

BASED ON MY REFEREED RESEARCH AND CREATIVE WORK

- 2005 "Colorado Green Leader"
Selected by Boulder Green Building Guild
- 2005 "Emerging Leaders Program" Appointed by Dean of the College of Architecture and Planning
- 2004 "Outstanding Faculty Member Recognition"
American Institute of Architects, CU Student Chapter, AIAS.

PATENT WORK PRESENTED AND EXHIBITED: RESEARCH

- 2011** **Presentation of BioSIP Research Structure and on-going research** to Technology Transfer administrators from CU-Denver, Boulder, and CU Anschutz Medical Campuses
- 2011** **"Informational building graphics and product marketing system."** Writing and development of State of Colorado waste diversion grant used as permanent building graphics system both on exterior building siding, interior walls, and as part of BioSIP product development. On permanent display.
- 2011** **BioSIPs, Inc, website development.** Writing, photography and design of developing website for CU spin-off company. Work underway for proposed website launch pending product commercialization.
- 2005** **CU Technology Transfer Awards.** "BioSIPs" selected and exhibited with 2004/2005 CU patent projects.

WORK REVIEWED IN PROFESSIONAL MAGAZINES AND NEWSLETTERS: RESEARCH

- 2016** CU on the Horizon. "Professor garners first patent for college, third for CU Denver. May 2016
- 2015** The Advocate, CU. "CU Professor turns trash into treasure." Oct. 20
- Colorado Public Radio. "CU Denver Professor: Build with Beer-Making Waste & Cow Dung." Oct 7
- CU Today Online. "First Patent for College of Architecture." Sept 15
- Denver Business Journal. "CU Denver tech turns waste into buildings." Sept 14
- Channel 7 News, Denver ABC Affiliate. "New technology creates strong, lightweight building materials from waste paper, weeds, and hemp." Sept
- AzoBuild. " Professor Obtains Patent for Eco-Friendly Construction System, First for CU Denver's College of Architecture and Planning." Sept
- Nature World News. "Waste re-use and tech: Patent awarded for recycled building materials." Spt
- Waste Dive Online. "CU Denver professor creates buildings out of waste." Sept
- Architectural Baanlaesuan Magazine. Thailand.

- 2010** * *Sci-Arc website article*. "SCI-Arc and CalTech enter international Solar Decathlon." Interviewed for article and cited as SCI-Arc alum and architecture faculty lead on back-to-back wins in the first two Solar Decathlons.
- 2010** "*The BioSIP Project*." Hafele International Professional Newsletter. Collaborative product developments between Hafele furniture company and CU BioSIP project developments described. Fall
- 2010** "BioSIPs: A conversation with Julee Herdt and Kellen Schaueremann." *Detours in Design*, on-line CU architecture student newsletter. Victoria Menchaca. April
- 2009** "Technology Transfer Tactics" national tech transfer newsletter, BioSIPs work cited under the title: "Innovation of the Week: Colorado University researchers turning trash into cash crop." March 30.
- 2008** *Sci-Arc website article*. "Julee Herdt receives a State of Colorado, Advanced Technology Fund Research Grant." Interviewed for SCI-Arc magazine as SCI-Arc alum.
- 2007** *Boulder County Home & Garden e-Magazine*. "Refining Recycling." Fall feature article.
- 2005** *In Business Magazine*. "Biobased Materials and Renewable Energy in CU Solar Home."
American Institute of Architects, AIA Newsletter. Interview. February
BioCycle Magazine. "Biobased Materials Team up with Renewable Power."
Automated Builder Magazine. "CU 2005 Solar Decathlon Features New, Leading Edge Technologies."
University of Dartmouth Newsletter. "Solar Homes for Americans with Disabilities."
- 2003** *Boulder County Home & Garden Magazine*. "Taking Green to a New Level."
- 2002** *Front Range Living, On-Line Magazine*. "The Farmhouse: Everything Old is New Again."
- 2001** *Solar Today Magazine*. "CRES Award Winners, Renewable Energy in Buildings 2001."
Building Systems Magazine. "Farmhouse is Environmental Model."

WORK CITED BY OTHERS IN U.S. GOVERNMENT AND UNIVERSITY PUBLICATIONS

- 2010** "**BioSIPs: From Egg Cartons to Eco-Panels, Green Design" Comes of Age**"
 Inside CU. CU faculty / staff E-Newsletter. Melanie O. Massengale, University Communications
- 2009** "**Issues in Green Building and the Federal Response: An Introduction**", Author: Eric A Fischer, Senior Specialist in Science and Technology, BioSIPs work at CU cited in "Congressional Research Service Report" for use by congressional members committee's research in green building technology.

RESEARCH PRESENTATIONS AT NATIONAL AND LOCAL CONFERENCES; REFEREED, INVITED

- 2004 CU Sustainable Energy Forum, September 13. USGBC, Colorado Conference Speaker, Sept.
- 2003 Representing the United States Department of Agriculture, Alternative Agricultural Research & Commercialization Corporation, Bio-Based Building Material Development:
- 2002 Environmental Protection Agency, Environmental Technical Evaluation Center, Building Materials Committee Work: Determining Methods for Evaluating and Comparing Green Building Materials to Standard Building Material Counterparts."
- 2003 International Solar Energy Conference and National American Solar Energy Society conference. "An Energy and Material Assessment of the Bio-based Farmhouse. Austin. June.
- 2003 International Interior Design Society, Sustainable Design Event, Speaker
- 2003 US Green Building Council, Colorado Chapter, Fall 2003. Educational Program Speaker
- 2002 Environmental Design: Industrialized Agricultural Architecture, IAA & The Farmhouse presented at the ACSA 2002 National Conference Proceedings.
 Speaker. United States Department of Agriculture, Alternative Agricultural Research & Commercialization Corporation, Annual Board of Director's meeting. Denver.
- 1998 Rural Housing Service: "Methods for bio-based building materials in housing."

- 1997 National Marketplace for the Environment Conference. Washington, D.C. Presentation: "The Farmhouse - A Bio-Based Project from USDA Sponsored Agricultural Materials."
- 1996 Thriving in the Green Building Marketplace Conference. U.S. Dept of Commerce, American Institute of Architects. Representative for USDA Alternative Agricultural Research & Commercialization Corporation at bio-based building material conference. San Diego.
- 1994 University of Kentucky, Kentucky Tobacco Research Board. Presentation: "Engineered Molded Fiber Technology as a New Use for Tobacco By-Products."
- 1994 USDA Agricultural Day. Washington, D.C. Video: "New Uses for Agricultural Products."
- 1994 First Annual New England ECO EXPO. Session Presentation: "Bio-based Building Materials as Alternatives to Petroleum-Based Products." Boston.
- 1994 Boulder Channel 8 Public Television, Greenpoints Program for education of energy and resource efficient everyday living. Production: "The Farmhouse Environmental Home."

PEER-REVIEWED RESEARCH RECOGNITIONS AND HONORS WITH STUDENTS

- 2020 **"MycoBioSIPs, Mushroom + Paper + Plants, The making of BioRenewable Construction panels for Healthier People, Environment, and Planet"**. CU Research & Creativity Symposium, RACAS, May 1, 2020. Technology, Engineering, and Math category, 3rd Place. Chris Pennick, Kenny Bercerril, Jan Peciak, Zoe Kowalczyk.
- 2006 **"Solar Powered Canopy Project."** Project Architect with students on design and construction of competition winning solar powered building addition. Budget estimated at \$140,000.
- 2001 -06 **Fundraising for the 2002 and 2005 Solar Decathlon Projects.** Approximately \$500,000 combined fundraising with students and engineering college on 2002 and 2005 projects.
- 2006 **"Campus Environmental Award."** Colleges of architecture and engineering for 2005 Solar Decathlon win. Presented by CU Chancellor P. DiStephano.
- 2005 **"ReWard for Environmental Leadership."** Colleges of architecture and engineering for 2005 Solar Decathlon win. Center for Resource Conservation, Boulder
- 2005 **"National Green Doll House Competition"**. Biobased and waste materials. First Place.
- 2003 **"Campus Environmental Award."** Solar Decathlon Team Award. CU.
- 2003 **"Wirth Chair Community Award."** Colleges of architecture and engineering for 2005 Solar Decathlon win.

INTERNATIONAL SOLAR DECATHON, BACK-TO-BACK WINS FOR WORK WITH STUDENTS & IN COLLABORATION WITH CU COLLEGE OF ENGINEERING & APPLIED SCIENCE

2005 International Solar Decathlon Competition for CU entry

First Place "Overall Winner"

First Place "Communications Event Winner"

First Place "Documentations Event Winner" with Special Recognition for excellence in Website, Branding, and Competition Publications"

First Place "Getting Around"

"Best Green Design" BP Solar Award

"Best Home Construction" Do It Yourself Network Award

"Energy Efficiency in Design Award, Second Place" Home Builders Association, HBA

**2002 International Solar Decathlon Competition:
First Place "Overall Winner"**

First Place "Website Event Winner"

"People's Choice Award, Second Place"

WORK WITH STUDENTS

PRESENTED TO PRESIDENT OF THE UNITED STATES; INCLUDED IN CONGRESSIONAL RECORDS

- 2006** **President George W. Bush and the U.S. House of Representatives.** (I was invited to attend but due to illness invited engineering student, Jeff Lyng to attend in my place.) 2005 CU project presented by Senator Ken Salazar. Entered into Congressional Record in November 2005.
- 2005** **U.S. House Committee on Science**
- 2002** **President George W. Bush and the US House of Representatives.** 2002 project presented by Congressman Mark Udall and entered into Congressional Record.

AWARD-WINNING AND CONSTRUCTED ARCHITECTURE PROJECTS WITH STUDENTS SOLD TO GREEN ARCHITECTS, ENGINEERS, AND OTHERS

- 2005** CU Solar Decathlon home (with students) sold to private owner in Iowa.
- 2002** CU Solar Decathlon home (with students) sold to Colorado solar energy professional.
- 2001** The Farmhouse residence, Boulder, CO sold to architect / developer.

REFEREED AWARDS: TEACHING

- Mentor of the Year Award** American Institute of Architects, Colorado North. 2005
- Educator of the Year Award** Masonic Lodges of Colorado. 2004
- National Faculty Design Award** American Collegiate Schools of Architecture, ACSA. 2002

RESEARCH AND CREATIVE WORK WITH STUDENTS: TELEVISION AND RADIO

- 2014** **Channel 7 News, Denver ABC Affiliate.** "CU Denver Architecture Students Design Homes for Vets and their Service Dogs." Nov 11. Veteran's Day.
- North Denver News.** "CU Denver Architecture Students Design Homes for the Disabled." Dec 12
- 2006** **Home and Garden Television. HGTV.** "I Want That!" Episode #305. Feature on BioSIPs.
- 2005** **ABC News.** "CU Wins Second Solar Decathlon. October 14.
- CBS Evening News.** "Colorado Team Wins Solar Decathlon". October 14.
- Channel 4 News, Denver.** "CU Team Builds Solar Home." September 15.
- National Public Radio.** Etown Radio program, Boulder Theater. December 4.
- KGNU.** "CU's second win in the international Solar Decathlon." November 21.
- Cable News Network, CNN.** Science and Space. October.
- Discovery Channel.** Solar Decathlon Story with feature of CU Team. October.
- CBS Evening News.** "Colorado Team Wins Solar Decathlon." October 14.
- Channel 4 News, Denver.** "CU Team Builds Solar Home." September 15.
- 1998 **Channel 9 News, Denver.** "Recycled Office Building in Boulder." March 4.

WORK WITH STUDENTS & CU ENGINEERING REVIEWED IN: JOURNALS, TRADE MAGAZINES, ACADEMIC NEWSLETTERS

- 2010** "Architecture Newswire"
"Boulder Daily Camera"
"Colorado Daily". "CU-Boulder architecture students selling midterm projects, Green design class learns business skills through holiday market." November 15.
- 2006** *Architect Colorado, AIA Magazine*. "A Recipe for Organic Living." Fall 2006
Boulder County Business Report. April.
Architectural Record. "International Solar Decathlon." February, 44.
Dwell. "Let the Sun Shine In." Vol. (6), 87-90.
Natural Home & Garden Magazine. "A Place in the Sun."
- 2005** *Photon International*. "Solar Decathletes flex their power." 36-41.
Environmental Building News. "Second Solar Decathlon Held on National Mall." November.
"Solar Decathlon." *Popular Mechanics*. November.
AIA Architect Internet Newsletter. February. "Here Comes the Sun, Decathlon Heats Up Solar Awareness."
Engineered Housing Technology Transfer Magazine. July. Edition No. 4.
- 2003** *Solar Today Magazine*. October/November. "Taking Solar Design Mainstream." Cover story.
Home Power Magazine. "Solar Houses for Today." March/April. Cover Story, 36-44.
Boulder County Business Report. "Local Solar Project Gains National Attention." April
- 2002** *Architectural Record*. "University of Colorado Boulder Wins Solar Decathlon." November.
Metropolis Magazine. University of Colorado wins Solar Decathlon." January 2003.
American Collegiate Schools of Architecture ACSA Newsletter. "CU Wins Solar Decathlon."
Solar Today Magazine. "Celebrating Colorado's Best Buildings." April/May (1).

CONSTRUCTED ENVIRONMENTAL ARCHITECTURE PROJECTS FROM: REFEREED CU RESEARCH, CREATIVE DEVELOPMENTS, AND INVENTIONS

- 2009 - 2011** **BioSIP Research Structure + Accessory Dwelling Unit Prototype**
Constructed through State of Colorado State of Colorado, Advanced Technology Fund Research Grant for project entitled: "Diverting Solid Waste into High Performance, Environmental Building Products." Construction based on a range of BioSIP and EMF fiberboard furniture, ceiling board, and other inventions.
- 2005** **CU Solar Decathlon, Solar Home Design**. Constructed using first generation "BioSIPs" sandwich panels invented by Professor Julee Herdt. Principal Investigator; with students.
- 2001** **The Farmhouse residence, Boulder, CO** constructed using Gridcore engineered molded fiber biobased waste panels as wall and ceiling system, and furniture.

COURSES TAUGHT

Sustainability Teaching on-going. Developed CU Denver's first official architecture sustainability course in 1996 and CU's first green Design-Build Studio in 1997

Asterisk* indicates courses developed at CU

Architecture Design Studios with M.Arch Students. On-going.

- * A Clean-Tech Manufacturing Facility for Sustainable Building Products. Spr 2022
- * Architecture and Green Building Material Invention Studio. Spr 2021
- * Pre-Fab_Small Scale Green Residential 2020
- * Design Studio, Shipping Container_Residential Fall 2019
- * The Big Small Home, Green-Build Competition Studio, Fall 2018, Self-funded
- * Design Studio Freedom Service Dog_Disabled Vet Home Fall 2017

Sustainability Seminars and Green Build Courses with M.Arch and Undergrads. On-going.

- * Green Building Design & Construction. Spr 2022
- * Green Technology, on-going
- * EcoFab, 2018
- * Small Eco Home Design and Fabrication Seminar, Fall 2017
- * Solar Station and Science Facility with Platt Middle School
- * Small Eco Home Design & Fabrication
- * CU Solar Decathlon Studio, 2005
- * CU Solar Decathlon Studio, 2001
- * Green Technology (B.ENVD)
- * Green Tech Competition with the Dairy Center for the Arts 2012
- * Green Tech Competition with the Boulder Humane Society, Fall 2011
- * 2005 CU Solar Decathlon Green Tech
- * 2001 CU Solar Decathlon Green Tech

On-going

Independent Studies, Environmental Architecture (M.Arch)
Environmental construction from waste and salvage

Pre-Fab Solar Mobile

- * Green Build Architecture Studio with ReSource Boulder (M.Arch) 1996
- * Rocky Mountain Masonry Institute Design Competition Studio (M.Arch) 1997
- * Special Topics Architecture Design Studio (M.Arch) 1994

Architecture Design Studio Seminar (M.Arch), 1994-1996

Architectural Technology I (M.Arch)

Architectural Technology II (M.Arch)

Independent Studies, Environmental Architecture (B.ENVD)

* BioSIP Research Structure Construction, 2007-2011

* CAP-Business School Independent Studies with MBA Students, Spr '13 thru Fall 14 * ARC Independent Studies, Green Construction Techniques, Fall '13 thru Spr '15

WORK WITH STUDENTS IN:

POPULAR PRESS; PROFESSIONAL NEWSLETTERS; ONLINE

2015 "Home design for disabled vet and service dog tackles accessibility." January 30. Denver Post on-line and print. Emilie Rusch

2014 "Green Design: CU Student Projects at Revamp." 5280 Magazine Blogspot. March 21
"Repurposed: Elegant, imaginative furniture born of salvage." Boulder Daily Camera. Jan 1

- 2013** "Repurposed: Elegant, imaginative furniture born of salvage." *Denver Post*. Dec 14
 "CU Green Tech course results in eco-friendly, functional art." *Boulder Daily Camera*. July 9
 "From Scraps to Sublime: Design students transform salvaged material." *Denver Post*. Apr 20
 "CU Green Tech students find inspiration in salvage." *Denver Post*. Apr 19
- 2012** "Dairy Center hosts CU design projects: Furniture made of salvaged material." *Colorado Daily*.
- 2011** "CU Boulder students get graded for giving." *Boulder Daily Camera, Colorado Daily*. December 7.
 "Green Goods." *Boulder Daily Camera, and Colorado Daily*. August 15.
 "Sustainable Pet Projects to benefit Boulder Humane Society" *Boulder Camera, Colorado Daily*.
 "CU-Boulder senior to wear homemade, recyclable dress." *Boulder Daily Camera, Colorado Daily*.
- 2010** "Where art and green practices meet." *Boulder Daily Camera, Essentials Section*. January 13.
- 2009** "CU-Boulder architecture students selling midterm projects". *National Architecture Newswire Service; Boulder Daily Camera, "Colorado Daily"*
- 2006** "Bright Lights. CU Home in...TV Spotlight." *Longmont Daily Times*. June 30.
 "Flying Into Orbit. Solar Powered Sun Wing." *Colorado Daily*. June 27.
 "In Da' House. HGTV...visits CU Solar Decathlon Home." June 23.
 "Green features helped CU team capture Solar Decathlon." *Boulder County Business Report*.
 "Rehab for Prefab." *Colorado Daily*. 19, March.
- 2005** "Green Tech." *Boulder Daily Camera*. December.
 "Solar Homes Showcase Alternative Energy." *CNN.com, Science and Space*, 25, Oct.
 "Solar Home Finds a Home." *Boulder Daily Camera*. 19, Nov.
 "Solar Win Energizes Plans for CU Center." *Boulder Daily Camera*. 19, Nov.
 "Competition Shows How Houses Can Harvest the Sun." *Washington Post*. 19, Nov.
 "Coming Home." *Longmont Times Call*. 13, Nov.
 "Got Energy?" *Campus Press*. Boulder, Colorado. 15-23, Nov.
 "Solar Decathlon Student Testifies Before House Subcommittee." *The Pulse*. 2, Nov.
 "House Aglow with Solar Energy." *Rocky Mountain News*. 22, Oct.
 "Fun Under the Sun." *Washington Post*. 30, Sept.
 "CU Team Clinches Second Solar Win." *Boulder Daily Camera*. 15, Oct.
 "Solar Decathlon Future Cloudy." *Boulder Daily Camera*. 13, Oct.
 "100% Solar Powered." *Boulder Daily Camera*. 15, Sept.
 "CU Solar Decathlon Team Taking Project to Competition." *Silver & Gold*. 1, Sept.
 "CU Students Design Eco-Friendly Home." *CU Alumni Association*. 26, Aug.
 "CU Solar Decathlon Team Reaches for the Sun." *INSIDE, CU-Boulder*. 9, Aug.
 "Solar Home Plans Revealed." *Colorado Daily*. 13, July.
 "Homing In On Solar Trophy." *Denver Post*. 6, July.
 "Students Stoke Up Solar Home." *Boulder Daily Camera*. 14, June.
- 2005** "Going for the Gold, CU Solar D Team Ready for Repeat Win." *Colorado Daily*. 23, Mch.
 "Solar Decathlon takes eco-friendly building to extreme." *Boulder Daily Camera*. 23, Mch.
 "Pure Energy. Petroleum out, buckwheat in..." *Longmont Daily Times Call*. 23, March.
- 2004** "Solar Decathletes Want a Repeat." *Boulder Daily Camera*. 8, July.
- 2003** "Students create living breathing house." Katherine Crowell. *Campus Press*. 20-26, Nov.
 "From Refuse to Riches." Julie Marshall, *Boulder Daily Camera*. 24, April.
 "Building Blocks." Sandra Fish, *Boulder Daily Camera*. 8, Aug.

- 2002** "Salvage Décor, Ready for Its Close-Up." Hillary Rosier, *New York Times*. 5, Dec.
 "From Trash to Treasure." Betsey Lendorf, Scripps-Howard national w/*Rocky Mountain News*.
 "Architect's Credo: Reuse, Recycle, Renew." Katherine Salant, *Washington Post*. 7, July.
 "Creativity, Idealism meets at home." Esther Chou, *Lexington Herald Leader*. 12, July.
 "Panel Vision." Julie Marshall, *Boulder Daily Camera*. 3, May.
 "Old is New Again in Earth-friendly home." Kristi Arellano, *The Denver Post*. 21, March.

WORK BY STUDENTS SELECTED FOR REFEREED CU HONORS JOURNAL

- 2011** CU Honors Journal, Patricia DiMario, ENVD Architecture Studio 4710, Green Tech work published.
- 2010** CU Honors Journal, Juan Barrios, ENVD spring 2010 Green Tech work published
 CU Honors Journal, Patrick Westfeldt, ENVD Spring 2010
 CU Honors Journal, Erik Jorgenson, ENVD Spring 2010 Architecture Studio 4710

DONATION OF SALES FROM STUDENT WORK CREATED IN MY COURSES FOR SUPPORT OF NON-PROFITS, STUDENT SUPPORT

- 2012** Dairy Center for the Arts, Boulder, by invitation, Green Tech student projects. April
- 2011** Green Technology student projects exhibited and sold at HW Home Boulder to raise money for the Boulder Humane Society. Over \$2,000 raised and donated.
- 2010** Dairy Center for the Arts, Boulder, by invitation, Green Technology student projects. April Over \$2,000 raised.

SERVICE: STUDENTS AT COLLEGE OF ARCHITECTURE AND PLANNING

On-going Architectural Licensing Program, IDP faculty sponsor and advisor for Intern Development Program (IDP) students as they complete their National Council of Architectural Board Licensing (NCARB) licensing processes

Advising prospective and new graduate and undergraduate students; provision of recommendation letters for CU students and grad regarding school, employment, scholarship applications; portfolio; professional internships; research advisor for independent studies; and other.

SERVICE: COLLEGE OF ARCHITECTURE AND PLANNING

On-going Search Committees: Tenure Track, Justice, Equality, Diversity, Inclusion (JEDI)

2020-21 Graduate Admissions Committee

2014-20 Dean's Level Committee for RTP review of four separate advancement cases

2019 \$2,500 donation to architecture student winners of professionally judged competition

2013 Dean's Level Committee for RTP review of three separate advancement cases

2011-13 CU Environmental Architecture (ENVD) Program. Graduation exhibition coordination. Fall and spring semester.

- 2007-13** ENVD Green Tech Market for sales of student projects and designs at CU and to public.
- 2005-13** ENVD Scholarly Report Review Committees.
- 2007-13** RTP Committees.
- 2004-13** ENVD 4400 Studio Coordinator.
- 2010-2011** Raised over \$200,000 through grants and private donations to pay students and graduates for research work based on my research and creative activities at CU.
- 2010** ENVD Scholarship Review Committee.
- 2010** Tenure review committee
- 2008** Personally funded over \$10,000 in CU research and student research stipends for their work on CU-based BioSIPs environmental architecture projects that will directly benefit CAP.
- 2007** Elected Dean's Level Committee, RTP Committee
- 2006-2007** **Green Build Project at ENVD** for the Center for Children, Youth, and Environments, "Green Wall" conference room design-build project. ENVD
- 2005** Fundraising for "Center for Emerging Technology and Design" Scholarly Report Review Committee.
- College Public Relations, Marketing, and Fundraising for the 2005 CU Solar Decathlon with Lipman-Hearne, Washington, DC.
- Environmental architecture advising by request for university students, professionals and the public from around the country and internationally following second Solar Decathlon win.
- Personal financial donation to the 2005 Solar Decathlon project. \$4500.
- Contributing photographer for PR/marketing of college's environmental design projects.
- Graduate and Undergraduate Advising.
- 2004** Invited speaker for: Incoming Students and Parents, Fall.
- 2004** AIAS. Selected: Outstanding Faculty Member.
- 2003** Dean Search Committee. Orientation Speaker presenting to Incoming Students and Parents, Advisory Board Presentation, CU Solar Decathlon Project, April.
- 2002** Guest Lecturer speaking on environmental design in engineering and architecture seminars.
- 2002-2003** Dean Search Committee
- 1996-2004** Architecture Graduate Admissions Committee
- 1998-2000** Commencement Faculty Marshall

Department Chair's Advisory Committees
Scholarship Committee

- 1998** National Architectural Accrediting Board Committee
Studio Teaching Advisory Committee
Building Technology Advisory Committee
Fund-raising Breakfasts, new building for the college
"Kid's in the City" Public Relations Coordination
- 1999-2004** International Student Organization Potluck Dinner, yearly contributor
- 1997-1998** Search Committee
Advisory Board Committee Meeting
All-School Meeting, Host
Curriculum Development Committee
- 1994-2004** Jury committee, responsible for bringing Thom Mayne, Wolf Prix, Eric Moss to CU.

SERVICE: UNIVERSITY

- 2009 - 2012** Committee on University Discoveries. 3-year appointment by nomination of Technology Transfer and approved by CU Provost and Campus Faculty Assembly. Committee reviews university patent policy-, issues-, and changes, inventor grievances, court decisions affecting university patent policies.
- 2007-2008** Vice Chancellor for Academic and Student Affairs Search Committee by invitation. Service during transitional time when university was gaining a new President and organizing a broad cross-campus restructuring.
- 2008** Provost Search Committee by invitation. Nominated by CU administration
- 2007** Donation through CU Foundation for College of Architecture and Planning fund for "CINC Center Solar Tracking Project." \$3000
- 2007** Elected by College of Architecture and Planning to Sustainability Task Force
- 2007** Elected by college to Chancellor's "Institutional Image and University Communications Task Force."
- 2006-2007** Contributor, through payroll, to President Hank Brown's "Diversity Scholarship Initiative
- 2001-present** Representing the University in local, national, and international press regarding environmental architecture research, design, and teaching.
- 2005** Emerging Leaders Program by nomination.
Principal Investigator and Faculty Advisor for the 2005 International Solar Decathlon Team, a university-wide project.
Presentation of the 2005 CU Solar Decathlon with the Team, presented to the CU Board of Regents. December 13.
Presentation with 2005 CU Solar Decathlon Team to Provost Susan Avery and Chancellor DeStefano followed by Public Open House. November 18.
Environmental Center and the Energy & Environmental Security Initiative (EESI) with introduction by Regent Cindy Carlisle
- 2004** Faculty Advisor by request for newly formed, CU Student Energy Research Club, CURE

- 2003** Faculty Sponsor by request. American Solar Energy Society, ASES, newly formed CU student chapter. Tenure Notebooks requested by CU for display as tenure prototype.
- 2002** Faculty Advisor by request for the 2002 International Solar Decathlon Team, a university-wide project. National Solar Decathlon Project, Washington, D.C.
- 2003** RTP Notebooks requested by CU for display as tenure prototype.
- 2002** National Solar Decathlon Project, Washington, D.C. Faculty representative for CU project to competition and public visitors.
- 1998** CU Chancellor's Scholars and Leaders Panelist. One of five panelists.
- 1997** CU Chancellor's Public Relations and Media Luncheon, Brown Hotel

**SERVICE TO UNIVERSITY AND COLLEGE:
PRESENTATIONS & TOURS OF RENEWABLE ENERGY ARCHITECTURE WITH STUDENTS & IN
COLLABORATION WITH CU ENGINEERING, BY INVITATION**

- 2006** Angevine Middle School
American Solar Energy Society, Board of Directors
Engineering Graduate Student Visit Day
University of Colorado Women's Club
Henry Middle School
National Renewable Energy Laboratory and Department of Energy Field Office
Central Asian Energy Alliance
College of Engineering Advisory Council
College of Architecture and Planning, Faculty and Staff
Colorado Energy Science Center Students
Multicultural Engineering Program (MPE). High school students who have been accepted to CU's College of Engineering and Applied Science.
CU Alumni Club
Tours for private individuals, first Saturday of each month
- 2005** Morey Middle School
CU Alumni Association
CU Business School Students
Boulder Green Building Guild
American Institute of Architecture, Colorado North
Tours for private individuals, first and third Saturday of each month
University of Denver. Guest Lecturer speaking on the subject of green design.
Naropa University. Guest Speaker presenting The Farmhouse Environmental Home
- 2004** The Colorado Renewable Energy Society
The American Institute of Architects, Professional Chapter
The Colorado Environmental Business Alliance and COPIRG
- 2003** Tours of The Farmhouse, energy and resource-efficient home
Naropa Institute Environmental Design Course, Boulder
Associates 111 Incorporated

Architectural Laboratory, Denver.
Environmental Protection Agency, EPA, Denver office

- 2002** National Tour of Solar Buildings. American Solar Energy Society
American Society of Interior Designers, Colorado Chapter
Vietnam Urban Environmental Management Exchange Project
Colorado Environmental Business Alliance
Colorado Interior Design Coalition
Earth Day Public Open House
- 2001** Designs on the Front Range Colorado Architecture Tour, CU Boulder Art Galleries
Poudre Valley School District, Construction Administration Team
Rocky Mountain College of Art and Design. Environmental Design Course
Naropa Institute Environmental Design Course, Boulder
Ecole Des Mines, Paris
The American Institute of Architects Annual National Convention
National Tour of Solar Buildings. American Solar Energy Society

SERVICE: COMMUNITY AND PUBLIC OUTREACH

- 2009-on-going** Personal financial support of environmental, social, and animal non-profits. \$10k
- 2014** Collaboration with Freedom Service Dogs, a non-profit training rescue dogs as Service Dogs for U.S. Vets and children with autism. Professor Herdt and students designing homes for Vets with Service Dogs for future fundraising and construction.
- 2004, ongoing** Boulder Channel 8 Public Television, Environmental Education Documentary, "The Farmhouse Environmental Home."
- 2002-present** Volunteer consultant for local environmental groups providing environmental building information.

SERVICE: PROFESSIONAL

- 2013** AIA SCI-Arc Alumni party co-host for AIA Denver Convention event, by invitation.
- 2011-13** Elected, by invitation, to Southern California Institute of Architecture, SCI-Arc, Alumni Council, Regional Committee for Rocky Mountain States
- 2008** Invited peer-reviewer for annual review of Dr. John Hunter, Scientific Team Leader, USDA Forest Products Laboratory
- 2007** Invited Professional Juror for the American Solar Energy Society "Natural Talent" architecture design competition
- 2005** Professional Juror for the Pangea Corporate Headquarters Competition.
- 2004** United States Green Building Council, Colorado Conference Speaker, September.
- 2003** Environmental Protection Agency, EPA, Denver office.
International Interior Design Association and Rocky Mountain Chapter Associates 111 Incorporated.
Architectural Laboratory, Denver.

- 2002** National Tour of Solar Buildings. American Solar Energy Society.
American Society of Interior Designers, Colorado Chapter.
Vietnam Urban Environmental Management Exchange Project.
Colorado Environmental Business Alliance.
Colorado Interior Design Coalition.
- 2001** Designs on the Front Range Colorado Architecture Tour, CU Boulder Art Galleries.
Ecole Des Mines, Paris.
The American Institute of Architects Annual National Convention.
National Tour of Solar Buildings. American Solar Energy Society