

Zack L. Rogers

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Education

8/96 – 5/00 **Bachelor of Science in Architectural Engineering**, University of Colorado, Boulder
Focus on Lighting and Sustainable Design.

Professional Experience

1/12 – Current **University of Colorado, Boulder**
Adjunct Professor – Responsibilities include developing and teaching a graduate level daylighting course in the Architectural Engineering department.

10/10 – Current **Daylighting Innovations, LLC**, Lafayette, CO – www.daylightinginnovations.com
President - Responsibilities include running day-to-day business operations, marketing, business development, project management, lighting and daylighting design and analysis, daylighting research, daylight product development, and lighting control system consulting and commissioning.

2/04 – Current **LightLouver LLC**, Boulder, CO – www.lightlouver.com
Partner, Director of Engineering - Responsibilities have included running day-to-day business, business development, project management, and marketing. Past and current responsibilities include providing technical support to potential clients, training of sales representatives, development of technical information and tools, optical design, product development and manufacturing support.

8/08 – 9/10 **Integrated Design Associates, Inc.** Longmont, CO – www.ideasi.com
Associate - Responsibilities included initiating and co-managing a Colorado office, business development, project management, daylighting and lighting design and analysis, and electrical system design.

2/00 – 7/08 **Architectural Energy Corporation**, Boulder CO – www.archenergy.com
Daylight Analysis Group Leader, Staff Engineer - Responsibilities included managing a daylighting analysis team, project management of sustainable design projects (energy and daylighting design assistance and modeling), business development, Sustainable Design Assistance team co-management, daylight and electric lighting modeling and analysis, daylighting software development and daylight responsive electric lighting control design and analysis.

Professional Affiliations

2009 **CHPS Colorado Committee Member** – focus on daylight metric

2008 – 2010 **PIER Lighting California's Future Advisory Committee Member**

2008 **CU Lighting Advisory Committee Member**

2007 – Current **IESNA Daylighting Committee Member**

2007 – Current **IESNA Daylighting Metrics Committee Member**

2006 – Current **Professional Engineer** – licensed in Colorado

2000 – Current **LEED Accredited Professional – Building Design and Construction** – US Green Building Council (USGBC)

1999 – Current **IESNA Member** – Illumination Engineering Society of North America (IESNA)

Notable Achievements / Awards

2010 **Judges Citation Award, LightFair 2010** – LightLouver Daylighting System 2.0

2008 **Most Innovative Product of the Year, LightFair 2008** – Sensor Placement + Optimization Tool v4.0

2006 **2006 Crystal Achievement Award, Most innovative technical article, Glazing Magazine** – LightLouver

2005 **Energy Award/Best New Software, LightFair 2005** – Sensor Placement + Optimization Tool v2.0

2004 **Boulder County Innovation Quotient (IQ) Award** – LightLouver Daylighting System

2004 **United States Patent** – for the LightLouver Daylighting System Optical Design

Publications

7/12 **Building and Environment**
“BIM-Centric daylight profiler for simulation (BDP4SIM): A methodology for automated product model decomposition and recomposition for climate-based daylighting simulation” Co-Authored with Ben Welle

9/11 **Building Simulation Journal**
“ThermalOpt: A methodology for automated BIM-based multidisciplinary thermal simulation for use in optimization environments” Co-Authored with Ben Welle (Stanford)

7/06 **LUEKOS July 2006, IESNA Journal**
“Dynamic Daylight Performance for Sustainable Design”
Co-Authored with Cristoph Reinhart (NRC Canada) and John Mardaljevic (De Montfort University, Leicester, UK)

7/05 **Glass Magazine**, “An Easy to Install Daylighting System”
Co-Authored with Michael Holtz, FAIA

Professional Experience

Following is a list of my various speaking engagements and relevant project experience. The listings are intended to give an idea of the breadth of work in which I have been involved; copies of any or all of my presentations or project work can be provided upon request to exemplify the quality of work. References for any of the presentations or project work can also be provided upon request.

Speaking Engagements

- 6/02 **CRES Conference**, Colorado College, Colorado Springs, CO
“Daylighting Design with Radiance”
“Xilinx Office Building” (case study)
- 9/02 **Introduction to Architectural Engineering Class**, CU Boulder, CO
- 9/03 **2nd Annual Radiance Conference**, Berkeley, CA
“Experiences with Radiance in Daylighting Design”
- 7/04 **CRES Conference**, University of Denver, CO
“Daylighting Design in Commercial Buildings”
- 8/04 **USGBC Colorado Chapter Conference**, Denver, CO
“LEED Daylighting Metrics”
- 8/04 **Simbuild 2004**, Boulder, CO
“Using Radiance to Simulate Daylighting Performance”
- 5/05 **SPOT 2.0 Daylighting Workshop**, Customer Technology Application Center, Irwindale, CA
- 8/05 **4th Annual Radiance Conference**, Montreal, Canada
“Experiences with Radiance in Daylighting Design, Part II”
- 11/05 **SPOT 2.0 Daylighting Workshop**, Pacific Energy Center, San Francisco, CA
- 3/06 **LightFair International 2006**, Las Vegas, NV
“Daylight Simulation Tools (Physical & Digital Modeling)”
- 10/06 **New Views on Daylighting – Business Environmental Program**, Fort Collins, CO
“Daylight Responsive Lighting Controls”
- 11/06 **Greenbuild 2006**, Denver, CO
“Taking Daylighting Metrics to the Next Level”
- 11/06 **Steed|Hammond|Paul Daylighting Workshop**, Cincinnati, OH
“Daylighting Design and Analysis”
- 3/07 **SPOT 3.1 Daylighting Workshop**, Pacific Energy Center, San Francisco, CA
- 4/07 **SPOT 3.1 Daylighting Workshop**, Customer Technology Application Center, Irwindale, CA
- 4/07 **Architectural Engineering Class**, CU Boulder, CO
“Daylighting Consulting Services”
- 5/07 **VELUX 2nd Daylighting Symposium**, Bilbao, Spain
“Overview of Daylight Simulation Tools”
- 9/07 **Greentools for Healthy Schools CHPS Conference**, San Francisco, CA
“Daylight Credit and Software Demonstration”
- 10/07 **6th Annual Radiance Conference**, Minneapolis, MN
“Experiences with Radiance in Daylighting Design, Part III”
- 11/07 **Architectural Daylighting Class**, College of Architecture and Planning, CU Boulder, CO
“Daylighting Simulation Tools (Physical & Digital Modeling)”
- 4/08 **SPOT 4.0 Daylighting Workshop**, Pacific Energy Center, San Francisco, CA
- 11/08 **Advanced Facilities Management and Engineering Conference 2008 (AFEC)**, Denver, CO
“The Why, What, When and How of Daylighting”
- 11-12/08 **AREN 4850 / CVEN 5830 Daylighting**, CU Boulder, CO – Guest Lecturer
- 5/09 **LightFair International 2009**, New York, NY
“Daylighting Simulation Tools and Methods”
- 10/09 **USGBC CO Green Schools Summit** – Denver, CO
“Evolving Green: Sustainable Design in the Poudre School District”
- 10/09 **Sustainable Construction Class**, CSU Fort Collins, CO – Guest Lecturer
“Daylighting Process and Construction”
- 10/09 **8th Annual Radiance Conference**, Harvard, Boston, MA
“Experiences with Radiance in Daylighting Design, Part IV”
“SPOT on!” SPOT updates and Radiance backbone information
- 10/09 **Pacific Energy Center**, San Francisco, CA
“Daylighting Design Strategies and Products”

7/11	SPOT 4.2 Daylighting Workshop , Customer Technology Application Center, Irwindale, CA
10/11	10th Annual Radiance Conference , Berkeley, CA “Experiences with Radiance in Daylighting Design, Part V”
2/12	Boise AIA+2030 , Boise, ID “Daylighting and the Design Process”, “What is Daylight?”
3/12	Advanced Lighting Controls Workshop , Vancouver, BC “Daylighting and Lighting Design for a Net-Zero Office Building – NREL Research Support Facility (RSF)”
5/12	IESNA Rocky Mountain Section , Denver, CO “Daylighting and Lighting Design for a Net-Zero Office Building – NREL Research Support Facility (RSF)”

Relevant Project Experience

Daylighting Design Assistance

Schools (K-12)

- Fossil Ridge High, Kinard Middle, Bethke Elementary, Bacon Elementary, and Kruse Elementary
Poudre School District, Fort Collins, CO
- Elementary #30, 31, 32, and McElwain Elementary School
Adams 12 Five Star School District, North Denver Metro, CO
- Prototype Elementary Schools
Douglas County School District, South Denver Metro and Castle Rock, CO
- Dunstan Middle School and Bear Creek High School
JeffCo Public Schools, Southwest Denver Metro, CO
- Glenwood Springs High School, Carbondale High School
Roaring Fork School District, Basalt, Carbondale and Glenwood Springs, CO
- Strawberry Park Elementary School
Steamboat Springs School District, Steamboat Springs, CO
- Edith Wolford Elementary School
Academy School District 20, Colorado Springs, Monument, Black Forrest, CO
- Westminster Replacement High School
Adams School District #50, Northwest Denver Metro, CO
- Aspen High School and Aspen Middle School
Aspen School District, Aspen, CO
- Prairie School Field House, Racine, WI
- North and East Guilford High School, Guilford County, NC
- Alternative High School, Albuquerque, NM
- Downtown Educational Complex
Oakland Unified School District, Oakland, CA
- Arapahoe Elementary School, CY Middle School, Casper, WY
- Casey Middle School
Boulder Valley School District, Boulder, CO
- Sequoia High School Gymnasium, Redwood City, CA
- Kemmerer High School, Kemmerer, WY

Schools (Higher Education)

- Victor Valley Community College, Victorville, CA
- Cuyamaca Community College, El Cajon, CA
- University of Wisconsin Healthstar Interdisciplinary Research Center, Madison, WI
- Colorado School of Mines Recreation Center, Golden, CO
- University of Colorado Visual Arts Center, Boulder, CO
- Auraria Science Building - Auraria Higher Education Center, Denver, CO
- Colorado State University Transit Center, Fort Collins, CO
- CalTech Linde+Robinson Lab for Global Environmental Science, Pasadena, CA

Laboratories

- Center for Disease Control Building 18 and 23, Atlanta, GA
- National Renewable Energy Laboratory – Science and Technology Facility, Golden, CO
- USDA Consolidation Laboratories, Ames, IA
- Denver Crime Lab, Denver, CO
- National Renewable Energy Laboratory – Research Support Facility (Phase 1 and 2), Golden, CO

- National Renewable Energy Laboratory – Campus Cafeteria, Golden, CO
- J Craig Venter Institute, La Jolla, CA

Airports

- Indianapolis Airport Midfield Terminal, Indianapolis, IN
- San Diego Airport, San Diego, CA
- Los Angeles International Airport (LAX), Los Angeles, CA
- Raleigh Durham International Airport, Raleigh, NC
- Kuala Lumpur International Airport, Kuala Lumpur, Malaysia

Miscellaneous

- Sams Club / Walmart Prototypes, National
- Las Cruces Recreation Center, Las Cruces, NM
- Wrigley Global Innovation Center, Chicago, IL
- Shumei International Institute, Crestone, CO
- Phipps Conservatory, Pittsburg, PA
- US Marine Corps Heritage Museum, Triangle, VA
- Boston Museum of Science, Boston, CO
- Chicago Institute of Art (assistance to Steve Hefferan Lighting Design), Chicago, IL
- Yale Galleries (assistance to Steve Hefferan Lighting Design), New Haven, CT
- Sorouh Tower 1 and 2, Dubai, United Arab Emirates
- Live Oak Resource Center, Santa Cruz, CA
- Hanover & Page Mill Office Building, Stanford, CA
- Army National Guard Readiness Center, Windsor, CO

Software Development

Sensor Placement + Optimization Tool – Inception, design and programming for all versions

www.archenergy.com/SPOT

Numerous in-house software tools

Radiance Parametric Design Optimization (PIDO) Tool

Optical Daylighting Design

LightLouver Daylighting System – www.lightlouver.com

Solar Tracking Skylights, new generation product design – www.solar-track.com

Project Management (Management of Energy and Daylighting Design Assistance and LEED Certification)

Auraria Science Building, Auraria Higher Education Center, Denver, CO

Las Cruces Recreation Center, Las Cruces, NM

Colorado School of Mines Recreation Center, Golden, CO

Double-Eagle II Airport Airfield Maintenance Facility, Albuquerque, NM

Center for Disease Control Building 23, Atlanta, GA

Indianapolis Airport Midfield Terminal, Indianapolis, IN

USDA Ames Consolidation Laboratories, Ames, IA

University of Wisconsin Healthstar Interdisciplinary Research Center, Madison, WI