

# Powell Draper | Curriculum Vitae

## Professional Experience

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### **schlaich bergemann partner**, New York, New York

Director of Operations, 2016-Present

- International Airport Pedestrian Bridge / Skidmore, Owings & Merrill
- Winning entry, Northern Avenue Bridge design competition, Boston / Höweler + Yoon

Project Manager, 2015-2016

- Moynihan Station Gridshell Skylights, New York / Skidmore, Owings & Merrill
- Large scale international architectural research project / Grimshaw

### **Robert Silman Associates**, Washington, DC

Structural Engineer, 2012-2014

- Smithsonian Institution South Campus Master Plan / Bjarke Ingels Group
- National Gallery of Art East Building Stone and Curtain Wall Repair
- National Air and Space Museum Building Envelope and Seismic Investigation / Quinn Evans
- 11<sup>th</sup> Street Bridge Park Design Competition / Stoss, Höweler + Yoon

## Academic Experience

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### **The Cooper Union**, New York, New York

Associate Professor, the Irwin S. Chanin School of Architecture, 2016-Present

### **University of Maryland**, College Park, Maryland

Assistant Professor, School of Architecture, Planning and Preservation, 2011-2015

### **Johns Hopkins University**, Baltimore, Maryland

Lecturer, Department of Civil Engineering, 2014-2015

### **Manhattan College**, Bronx, New York

Assistant Professor, Civil and Environmental Engineering Department, 2008-2011

## Education

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### **Princeton University**, Princeton, New Jersey

Ph.D., Structural Engineering, 2008

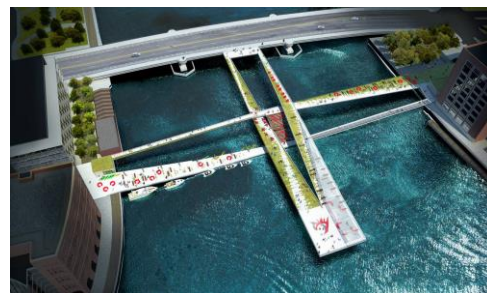
M.S.E., Structural Engineering, 2006

### **University of Virginia**, Charlottesville, Virginia

B.S., Civil Engineering, With Highest Distinction, 2000

### **Wake Forest University**, Winston-Salem, North Carolina

B.A., History, minor in Politics, 1994



## **Awards, Grants, Fellowships and Honors**

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University of Maryland Architecture, Planning & Preservation Outstanding Teaching Award, 2014  
 University of Maryland Center for Teaching Excellence Summer Grant, 2012  
 Manhattan College Summer Research Grant, 2010  
 Association of Princeton Graduate Alumni Tribute to Teaching Award, 2007  
 Princeton Engineering Commendation for Outstanding Teaching, 2007  
 University Fellowship, Princeton University, 2003  
 Rader Award, Outstanding Civil Engineering Student, University of Virginia, 2000

## **Professional Service and Memberships**

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Program Leadership Council, Van Alen Institute, 2016-present  
 Secretary, Technical Committee on Optimal Structural Design, American Society of Civil Engineers  
 Structural Engineering Institute, 2014-present  
 ASCE Metropolitan Section History and Heritage Committee, 2010-present  
 International Association for Shell and Spatial Structures  
 Society for the History of Technology  
 Building Technology Educators' Society  
 Tau Beta Pi, National Engineering Honor Society

## **Academic and Professional Activities**

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### ***Invited Talks/Guest Critic***

Johns Hopkins University, Civil Engineering Seminar Series, Spring 2013 and Spring 2014  
 Johns Hopkins University, Preservation Engineering Program, Spring 2014  
 Worcester Polytechnic Institute, Architectural Engineering Department, November 2012  
 Morgan State University, School of Architecture & Planning, October 2012  
 Princeton University, International Network for Structural Art, June 2012  
 Syracuse University, School of Architecture, May 2011  
 University of Delaware, History of Technology Honors Colloquium, March 2008

### ***Public Interest Design***

Director, design and installation of playground bridge and slide, Center for Young Children, College Park, Maryland, 2015

### ***Museum and Gallery Exhibitions***

Co-designer/Builder, "The Bearable Lightness of Being," Smartgeometry, Hong Kong, July 2014  
 Director, "Crossing the Potomac: The Bridges of Washington, DC," University of Maryland School of Architecture Linear Gallery, May 2012-October 2012  
 Designer, "Felix Candela: Engineer, Builder, Structural Artist," Princeton University Art Museum, October 2008 – February 2009

### ***Preservation and Landmark Status***

National Historic Civil Engineering Landmark Status for Grand Central Terminal, New York City, February 2013 (prepared nomination with committee)

### ***Outreach***

Instructor, Summer Engineering Program for Minority and Women Students, 2008-2010  
 Creator and Organizer, Structural Scavenger Hunts, New York City, 2007-2011

## Publications

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### *Book Chapters*

Powell Draper and Edward Segal, “The Fourth ‘E’: The Environmental Dimension of Structure,” *Festschrift in Honor of David P. Billington*, 2012.

Powell Draper, Edward Segal, and Allaire O’Connor, “Site and Sight: Examining the Forms of Hudson River Bridges,” *Modern Techniques in Bridge Engineering*, Taylor & Francis, 2011.

Maria M. Garlock, David P. Billington, and Powell Draper. “Chapel Lomas de Cuernavaca,” *Felix Candela: Engineer, Builder, Structural Artist*, Yale University Press, 2008. (Named one of the “Best Architecture Books of 2008” by ArchNewsNow.)

### *Journal Articles*

James K. Guest, Powell Draper, and David P. Billington. “Santiago Calatrava’s Alamillo Bridge and the Idea of the Engineer as Structural Artist,” *American Society of Civil Engineers Journal of Bridge Engineering*, October 2013.

Powell Draper, Maria E. Moreyra Garlock, and David P. Billington. “Structural Optimization of Felix Candela’s Hyperbolic Paraboloid Umbrella Shells,” *Journal of the International Association for Shell and Spatial Structures*, March 2010.

Powell Draper, Maria E. Moreyra Garlock, and David P. Billington. “Finite Element Analysis of Felix Candela’s Chapel of Lomas de Cuernavaca,” *American Society of Civil Engineers Journal of Architectural Engineering*, June 2008.

### *Conference Papers*

James Guest and Powell Draper, “Optimization of hyperbolic paraboloid shell structures and the works of Felix Candela,” *Sixth M.I.T. Conference on Computational Fluid and Solid Mechanics*, Cambridge, Massachusetts, June 2011.

Seamus Freyne, James P. Abulencia, Powell Draper. “Engineering and Non-engineering Students’ Perceptions of Contemporary Ethical Issues,” *2011 American Society for Engineering Education Conference*, Vancouver, British Columbia, June 2011.

Powell Draper, Edward Segal, Robert Sicurelli. “Introductory Structural Engineering Education through Computational and Physical Model Building,” Architectural Engineering Division, *2010 American Society for Engineering Education Conference*, Louisville, Kentucky, June 2010. (Named Best Presentation of Architectural Engineering Division.)

Powell Draper, Maria E.M. Garlock, David P. Billington. “Optimization of concrete hyperbolic paraboloid umbrella shells,” *Sixth International Conference on Computation of Shell and Spatial Structures*, Ithaca, New York, May 2008.

D.P. Billington and P. Draper. “The creative response to concrete cracking,” Plenary paper, *FraMCoS-6, Fracture Mechanics of Concrete and Concrete Structures*, Catania, Italy, June 2007.

Maria E. Moreyra Garlock and Powell Draper. “The Response of Steel Perimeter Columns in a Fire,” *Third International Workshop of Structures in Fire*, Ottawa, Canada, May 2004.