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## Education

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- Ph.D. in the Built Environment** Anticipated Fall 2014  
College of Built Environments, University of Washington, Seattle, Washington  
Dissertation Topic: The impact of 3D visualization on discovery of coordination items in building information models  
Committee: Carrie Sturts Dossick (Chair), Thomas Furness, Ken-Yu Lin, Gina Neff, John E. Taylor
- M.S. in Civil Engineering** 1994  
College of Engineering, University of Washington, Seattle, Washington
- B.S. in Civil Engineering** 1991  
College of Engineering, Oregon State University, Corvallis, Oregon

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## Research

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- Copresence in Global Virtual Teams** Summer 2010 – Spring 2013  
Studied how copresence established through avatar/avatar and avatar/object interactions improves collaboration effectiveness in geographically distributed teams using a 3D virtual environment called the CyberGRID. This research was funded by the National Science Foundation.
- BIM Collaboration in Virtual Worlds** Summer/Fall 2012  
An exploration, using a case study, of how geographically distributed teams in the construction industry leverage the ability to explore Building Information Models as avatars present with other avatars in virtual worlds. This research was funded by Skanska USA Building through their Innovation Grant Program.
- BIM for Facilities Management** Summer 2011 – Spring 2012  
Studying how building information supplied by the contractor is used by Facilities Management as a newly constructed building at the University of Washington is handed over with COBie data supplied in two ways: (1) in a BIM and (2) incorporated into their Computerized Maintenance Management System (CMMS). This project was funded by the University of Washington's Capital Projects Office as part of the COAA COBie Pilot Project for Foster School of Business Phase II.

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## Publications

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*Peer-reviewed Journal Paper*

- Dossick, C. S., **Anderson, A.**, Azari, R., Iorio, J., Neff, G., and Taylor, J. E. (2014). Messy Talk in Virtual Teams: Achieving Knowledge Synthesis through Shared Visualizations. *Special issue of ASCE Journal of Management in Engineering on "Information and Communication Technologies (ICT) in AEC Organizations: Assessment of Impact on Work Practices, Project Delivery and Organizational Behavior.*

**Anderson, A.,** Dossick, C. S., Azari, R., Taylor, J. E., Hartmann, T., & Mahalingham, A. (2014) Exploring BIMs as Avatars: Using 3D Virtual Worlds to Improve Collaboration with Models. *In Construction Research Congress 2014@ Construction in a Global Network (pp. 179-188). ASCE.*

**Anderson, A.,** Dossick, C. S., and Taylor, J. E. (2013). Exploring the Impact of Individual User Navigable Virtual Worlds on Coordination Latency in Distributed CEM Work. *Proceedings of the Engineering Project Organizations Conference, Devil's Thumb Ranch, CO, USA, July 9-11, 2013.*

**Anderson, A.,** Lin, K.Y., Dossick, C.S. (2012), BIM Supported Data Visualization Strategies for Facility Management. *Proceedings of the 12th International Conference on Construction Applications of Virtual Reality (CONVR 2012), Nov. 2012, Taipei, Taiwan.*

**Anderson, A.,** Dossick, C., & Neff, G. (2012). Seeking New Social Norms: Facilities Services Organizational Isolation in the University of Washington's Digital Transition. *Proceedings of the Engineering Project Organizations Conference, Rheden, The Netherlands, July 2012.*

Dossick, C., **Anderson, A.,** Iorio, J., Neff, G., & Taylor, J. (2012). Messy talk and mutual discovery: exploring the necessary conditions for synthesis in virtual teams. *Proceedings of the Engineering Project Organizations Conference, Rheden, The Netherlands, July 2012.*

**Anderson, A.,** Marsters, A., Dossick, C., and Neff, G. (2012) Construction to Operations Exchange: Challenges of Implementing COBie and BIM in a Large Owner Organization. Published electronically, *Proceedings of Construction Research Congress 2012, West Lafayette, IN, USA. May 2012.*

**Anderson, A.,** Dossick, C.S., Iorio, J., Taylor, J. E., and Neff, G. (2011). Avatars, text, and miscommunication: The impact of communication richness on global virtual team collaboration. *Proceedings, Annual Conference - Canadian Society for Civil Engineering, 4, 2767-2775.*

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## Conference Presentations

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"The Impact of 3D Visualization and Copresence on Communication of Issue Discovery in Building Information Models," presentation, Engineering Project Organizations Conference, Devil's Thumb Ranch, CO, USA, July 28, 2014.

"Exploring the Impact of Individual User Navigable Virtual Worlds on Coordination Latency in Distributed CEM Work," presentation, Engineering Project Organizations Conference, Devil's Thumb Ranch, CO, USA, July 11, 2013.

"2013 CyberGRID Global Team Project," poster presentation, 2013 Construction Industry Research Conference, Seattle, Washington, USA, April 19. 2013.

"BIM Supported Data Visualization Strategies for Facility Management," presentation, 12<sup>th</sup> International Conference on Construction Applications of Virtual Reality, Taipei City, Taiwan, November 1, 2012.

"Construction to Operations Exchange: Challenges of Implementing COBie and BIM in a Large Owner Organization," presentation, Construction Research Congress 2012, West Lafayette, IN, USA, May 22, 2012.

"Copresence in Global Virtual Teams," poster presentation, Construction Research Congress 2012, West Lafayette, IN, USA, May 21, 2012.

"Avatars, text, and miscommunication: The impact of communication richness on global virtual team collaboration," presentation, 2011 Canadian Society for Civil Engineering Conference, Ottawa, Ontario, Canada, June 16, 2011.

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## Academic Appointments

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**Washington State University**, Pullman, WA  
Assistant Professor

Fall 2014

**University of Washington**, Seattle, WA  
Graduate Teaching and Research Assistant

2009-2013

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## Teaching Experience

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**Instructor, Construction Graphics with Revit Lab (CSTM 254)**  
Construction Management Program, Washington State University

Fall 2014

**Teaching Assistant, Virtual Construction (CM 414)**  
Construction Management Department, University of Washington

Fall 2013

**Instructor, Virtual Construction (CM 414)**  
Construction Management Department, University of Washington

Fall 2012

**Teaching Assistant, Special Topics: CyberGRID (CM 598)**  
Construction Management Department, University of Washington

Winter/Spring 2012 & 2013

**Teaching Assistant, Innovative Project Mgmt. Concepts (CM 515)**  
Construction Management Department, University of Washington

Winter/Spring 2011

**Instructor, Engineering Statics (ES A209)**  
School of Engineering, University of Alaska Anchorage

Fall 2006

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## Service at Washington State University

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**Computer/Software Committee Member**  
Washington State University

Fall 2014

**Scholarship Committee Member**  
Washington State University

Fall 2014

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## Service to the Profession

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**Session Chair**, Engineering Project Organizations Conference, Tabernash, CO, USA

July 2014

**Reviewer**, Engineering Project Organizations Journal, Taylor & Francis

2014

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## Service to the Community

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**Presenter**, AGC Construction Career Day, Virtual Construction Lab at the Pacific  
Northwest Center for Construction Research and Education

2012-2013

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## Industry Experience

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**Skanska USA Building**, Cupertino, CA 2014  
VDC Specialist

- **Confidential Client, South Bay, California.** Providing construction coordination for a multi-billion dollar building project using BIM tools such as Autodesk Revit and Navisworks.

**BBFM Engineers**, Anchorage, AK 2006 – 2009  
Structural Engineer

Performed structural engineering and design work for a variety of commercial and residential projects. Retained and coordinated assistance from contractors and sub-consultants. Representative projects include the following:

- **Barrow Replacement Hospital, Barrow, Alaska.** Provided the structural design of a two-story 100,000 square foot hospital. Construction was steel framing with concrete slab on steel deck supported above-ground on driven steel pipe piles.
- **Haines School, Haines, Alaska.** Served as project engineer for a 40,000 square foot K-8 addition to an existing school. Construction was steel framing with braced frames and concrete foundation. Provided structural calculations and prepared construction documents and technical specifications.

**AK2 Engineering, LLC**, Boise, ID 2001 – 2005  
Structural Engineer/ Owner

Performed structural engineering and design work for a variety of residential, industrial and commercial projects. As owner, developed an all new business and managed client relationships. Responsible for all daily and long term activities of the firm including marketing, scheduling, report generation and invoicing. Representative projects include the following:

- **Residence, Lot 9, Tamarack Resort, Donnelly, Idaho.** Responsible for the structural design of a 12,000+ square foot single-family home. Construction materials used were heavy timber and light timber framing, plywood shearwalls, steel moment frames, and concrete foundations.
- **River Place One, Hailey, Idaho.** Responsible for the structural design of a 6800 square foot duplex, 4300 square foot residence, and 900 square foot guest house. Construction materials used were timber framing, concrete foundations, and plywood shearwalls.

**POWER Engineers**, Hailey, ID 2000 – 2002  
Structural Engineer

Performed structural engineering and design work for a variety of industrial and commercial projects and reviewed structural design work of others. Retained and coordinated assistance from contractors and sub-consultants. Also monitored project budgets, tracked production, performed marketing and prepared proposals for professional services. Representative projects include the following:

- **Alcatel Cell 8, Claremont, North Carolina.** Served as lead structural engineer for an eight-story, steel moment frame, optical fiber processing facility. Provided structural calculations and prepared construction documents and technical specifications.
- **Olkaria II, Kenya, Africa.** Provided structural design for vessel and pipe supports and equipment access catwalks and platforms for a two-unit 64-Megawatt geothermal power plant.

**Stapley Engineering**, Boise, ID 1998 – 2000  
Structural Engineer

Performed structural design and analysis of commercial, governmental and residential buildings. Representative projects include the following:

- **Ada County Courthouse, Boise, Idaho.** Provided structural calculations for a three-story steel-framed courthouse with penthouse, which comprised a steel moment frame and braced frame lateral system, and concrete slab-on-deck floors.

- **Anderson Eye Clinic, Boise, Idaho.** Prepared structural calculations and construction documents using timber construction.

**Anderson Renovations, Portland, OR**

1996 – 1998

President / Owner

Owner and operator of a residential general contracting business. Performed engineering design work and general contracting services for additions and remodels of single-family homes. Performed all daily and long term activities of the business including marketing activities, client relationships, project development and proposal preparation. Representative projects include the following:

- **Harvey Residence, Portland, Oregon.** Prepared structural calculations and construction documents for a residential remodel using timber construction.
- **Kremer Residence, Portland, Oregon.** Responsible for construction of a two-story addition to a single-family home. Construction materials used were timber framing and plywood shearwalls.

**KPFF Consulting Engineers, Portland, OR**

1994 – 1996

Structural Engineer

Performed structural design and analysis of a variety of commercial and residential buildings.

Representative projects include the following:

- **Portland Community College Workforce Training Center, Portland, Oregon.** Performed structural calculations and prepared construction documents for a three-story adult education facility consisting of steel framing with concrete slab on deck, braced frames and masonry shearwalls.
- **Multnomah County Central Library, Portland, Oregon.** Prepared structural calculations and details for a seismic retrofit and remodel of a large metropolitan library.

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**Professional Licensing**

Professional Engineer, Washington #39224 (active)	2002
Professional Engineer, Idaho #9670 (retired)	2000
Professional Engineer, Oregon #19127PE (retired)	1997