

# PENG ZHOU

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## Education

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<b>University of Illinois at Urbana-Champaign (GPA: 3.89/4.0)</b> • PhD in Construction Management, Civil and Environmental Engineering	August 2012-August 2016 (Expected)
<b>University of Illinois at Urbana-Champaign (GPA: 3.95/4.0)</b> • Master of Science in Construction Management, Civil and Environmental Engineering	August 2011-July 2012
<b>Shandong University (top 10% among classmates) (GPA: 87.03/100)</b> • Bachelor of Management in Engineering Management	September 2007-July 2011
<b>Chongqing University (top 5% among classmates) (GPA: 87.58/100)</b> • Exchange Degree in Construction Management	September 2008-July 2009

## Research Interests

Sustainable Infrastructure System, Data Analytics and Computing in Construction, Building Information Modeling, Semantic Modeling

## Research Experience

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<b>Graduate Research Assistant, Advisor: Nora El-Gohary</b> Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, Urbana, IL	Fall 2012 – present
<ul style="list-style-type: none"><li>Worked on an NSF project aimed at automating the compliance checking of construction projects with textual energy regulations and contract specifications.</li><li>Developed a domain-specific, machine learning-based hierarchical text classification algorithm for classifying clauses in energy regulatory documents and contract specifications.</li><li>Developed an ontology-based multi-label text classification algorithm for classifying text in energy regulatory documents and contract specifications.</li><li>Developed semantic, natural language processing, rule-based information extraction algorithms for automated extraction of energy requirements from energy codes and contract specifications.</li><li>Developed EXPRESS-based information extraction algorithms for automated extraction of relevant design information from BIM-represented building designs.</li><li>Developed semantic, information transformation algorithms for automated transformation of the extracted energy requirements and design information into logic rules and facts.</li><li>Developed a novel EnergyACC prototype system for energy compliance checking in construction.</li></ul>	
<b>Independent Study Research, Advisor: Nora El-Gohary</b> Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, Urbana, IL	Summer 2012
<ul style="list-style-type: none"><li>Reviewed literature in machine learning and text classification, produced an independency study report.</li></ul>	
<b>Independent Study Research, Advisor: Nora El-Gohary</b> Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, Urbana, IL	Spring 2012
<ul style="list-style-type: none"><li>Reviewed literature in social network analysis, produced an independency study report.</li></ul>	

## Publications

### Peer-Reviewed Journal Papers

- Zhou, P., and El-Gohary, N. (2015). "Automated extraction and transformation of energy requirements from contract specifications." *Autom. Constr.*, in preparation.
- Zhou, P., and El-Gohary, N. (2015). "Ontology-based information extraction from energy regulatory documents." *Autom. Constr.*, to be submitted.
- Zhou, P., and El-Gohary, N. (2015). "Ontology-based multi-label text classification for construction regulatory documents." *J. Comput. Civ. Eng.*, 10.1061/(ASCE)CP.1943-5487.0000530, 04015058.
- Zhou, P., and El-Gohary, N. (2015). "Domain-specific hierarchical text classification for supporting automated environmental compliance checking." *J. Comput. Civ. Eng.*, 10.1061/(ASCE)CP.1943-5487.0000513, 04015057.

### Peer-Reviewed Conference Papers

- Zhou, P., and El-Gohary, N. (2016). "Automated extraction of environmental requirements from contract specifications." *Proc., 2016 ASCE Construction Research Congress Congress (CRC)*, ASCE, Reston, VA, in preparation.
- Zhou, P., and El-Gohary, N. (2015). "Ontology-based information extraction from environmental regulations for supporting environmental compliance checking." *Proc., 2015 ASCE Int. Workshop Comput. Civ. Eng.*, ASCE, Reston, VA, 190-198.
- Zhou, P., and El-Gohary, N. (2014). "Ontology-based multi-label text classification for enhanced information retrieval for supporting automated environmental compliance checking." *Proc., Comput. in Civ. and Build. Eng. (2014)*, ASCE, Reston, VA, 2238-2245.
- Zhou, P., and El-Gohary, N. (2014). "Semantic-based text classification of environmental regulatory documents for supporting automated environmental compliance checking in construction." *Proc., 2014 ASCE Construction Research Congress Congress (CRC)*, ASCE, Reston, VA, 897-906.

## Conference Presentations

- Zhou, P., and El-Gohary, N. (2015). "Ontology-based information extraction from environmental regulations for supporting environmental compliance checking." 2015 ASCE International Workshop on Computing in Civil Engineering, June 21st-23rd, Austin, TX.
- Zhou, P., and El-Gohary, N. (2014). "Ontology-based multi-label text classification for enhanced information retrieval for supporting automated environmental compliance checking." 2014 ICCBE and the 2014 CIB W078 conferences, June 23rd-25th, Orlando, FL.
- Zhou, P., and El-Gohary, N. (2014). "Semantic-based text classification of environmental regulatory documents for supporting automated environmental compliance checking in construction." 2014 Construction Research Congress (CRC) Conference, May 19th-21st, Atlanta, GA.

## Teaching Experience

- TA of UIUC CEE 422 - Construction Cost Analysis

Spring 2015

- TA of UIUC CEE 422 - Construction Cost Analysis
- Grader of UIUC CEE 422 - Construction Cost Analysis

Fall 2013  
Fall 2012

## Professional Service

Student member of Data Sensing and Analysis (DSA) committee, Visualization, Information Modeling and Simulation (VIMS) committee, American Society of Civil Engineers (ASCE).

## Internship Experience

### Internship in CBMI Construction Co., Ltd, Beijing

January 2011-June 2011

- Internship at the department of Technical Center and Engineering Management of CBMI, assisted managers with following tasks:
  - **Contract Management:** Compiled civil work subcontract for Xinjiang Hetian 4500t/d Cement Production Line Project, communicated with subcontractors for finalization and submission of financial documents, recorded and summarized bidding information in bid opening meeting.
  - **Labor Management:** Drafted labor management work flow chart based on the outline provided by labor manager, and published it on company website.
  - **Equipment Management:** Helped equipment director organize equipment reports from 14 oversea construction sites, recorded and oversaw equipment status, drafted equipment disposal reports to senior manager, coordinated with procurement department for equipment procurement.
  - **Information Management:** Designed a basic database management system to record contract and drawing changes, in order to track responsibilities and monitor project progress.

### Curriculum Internship at Construction Sites

September 2009-October 2009

- Assisted project manager with safety and quality supervision at the construction sites of Jinan Lushang Changqingting residential project, Jinan West Railway Station of Beijing-Shanghai High Speed Railway, and Jinan Jianbang Yellow River Bridge.

### Internship at SINOMA, China National Material Group Corporation Ltd., Tangshan

August 2009-September 2009

- Participated in production management under instruction of production manager, drafted a JIT report regarding deployment and procurement of raw materials for productivity maximization.

## Volunteer, Leadership Experience and Activities

### Member of IT Department of Chinese Students and Scholars Association (CSSA) in UIUC

April 2012-August 2013

- Charged daily maintenance of CSSA website, participated in video recording and editing for major activities like Moon Festival Gala.

### Volunteer of SCORE

November 2011-May 2012

- Helped small business clients with "Leaf Bag" project marketing, drafted parts of business referral guide in SCORE Champaign branch, which is a nonprofit association dedicated to educating entrepreneurs and helping small businesses start, grow, and succeed nationwide.

### Student Assistant of Department

November 2009-December 2009

- Assisted department staffs with printing and organizing documents, dealing with communication with students, composing and publishing announcements in website.

### Volunteer of Chongqing University

September 2008-January 2009

- Volunteered to teach dropout children English and math at each weekend.

### Leader of a Computer Student Association

November 2007-December 2007

- Organized the Second E-sport Game of Shandong University as vice president of CHAOYUE computer committee in sponsors seeking, game planning, controlling and coordination.

### Student Assistant of Department

September 2007-June 2008

- Maintained and troubleshoot computer softwares for department. Assisted faculties and staffs with printing and copying business.

## Skills

- **Languages:** Mandarin (Fluent), English (Fluent)
- **Softwares:** Bentley Microstation (Basic), AutoCAD (Basic), Revit Architecture (Basic), Autodesk Quantity Take-off (Basic), Microsoft Office (Proficient), Primavera P6 (Basic), Microsoft Project (Intermediate), Microsoft Access (Basic), C (Basic), PHP (Basic), HTML (Basic), MySQL (Basic), Java (Intermediate), Python (Intermediate)
- **Tools:** Basic tools of surveyor like Level, Theodolite and Total Station
- **Others:** Mac OS, Window OS, Linux (Ubuntu)

## Awards & Honors

- Excellent Bachelor Degree Thesis of Department (top 5%) July 2011
- Scholarship for Academic Achievement as Excellent Exchange Student July 2009
- Graduate Certificate for Excellent Exchange Student July 2009
- Excellent Volunteer of Chongqing University January 2009
- Excellent Team Award in the Second Marketing Innovation Competition of Department of Management at Shandong University December 2007

## Certificates

- C Language Certificate in the NCRE-3 (China) March 2009
- C Language Certificate in the NCRE-2 (China) September 2008

## References

### Nora El-Gohary, Assistant Professor

Department of Civil and Environmental Engineering  
University of Illinois at Urbana-Champaign  
(217) 333-6610, [gohary@illinois.edu](mailto:gohary@illinois.edu)

### Khaled El-Rayes, Professor

Department of Civil and Environmental Engineering  
University of Illinois at Urbana-Champaign

(217) 265-0557, [elrayes@illinois.edu](mailto:elrayes@illinois.edu)

**Liang Y. Liu, Associate Professor**

Department of Civil and Environmental Engineering  
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**Mani Golparvar-Fard, Assistant Professor**

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University of Illinois at Urbana-Champaign  
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