

Mirosław J. Skibniewski

Professional Biography

- Date & Place of Birth: September 14, 1957; Warsaw, Poland
- Degrees: M.Eng. Warsaw University of Technology (1981)
M.S. Carnegie-Mellon University (1983)
Ph.D. Carnegie-Mellon University (1986)
- Certificate: Harvard University Graduate School of Education
Management Development Program (2001)
- Citizenships: European Union (Poland) & USA
- Office Address: Center of Excellence in Project Management, Dept. of Civil & Environmental Engineering, University of Maryland, College Park, MD 20742-3021, USA,
Phone: +1-301-405-9364, E-mail: mirek@umd.edu

Summary

Dr. Mirosław J. Skibniewski is a Professor of Construction Engineering and Project Management in the Department of Civil and Environmental Engineering in the A. James Clark School of Engineering at the University of Maryland, College Park. Prior to his current appointment he served for 20 years as a faculty member and administrator at *Purdue University* in West Lafayette, Indiana. He received his M.Eng. degree from *Warsaw University of Technology*, and M.S. and Ph.D. degrees from *Carnegie-Mellon University*. Prof. Skibniewski is also an alum of the *Harvard University* Graduate School of Education Management Development Program. Prior to his academic career he worked as an engineering professional with the 135 years-old *Pittsburgh Testing Laboratory*, a nationwide construction engineering consulting firm in Pennsylvania (later renamed to *Intertek Professional Service Industries, Inc.* www.psiusa.com) where he led structural and construction safety investigations, design quality reviews, structural testing, construction claims reviews, value engineering, and forensic engineering projects.

As a researcher and educator, Professor Skibniewski focuses on planning, design, construction, operations and management aspects of sustainable and resilient infrastructure through the use of advanced technologies such as modern IT-based solutions, sensor-based systems, 3-D printing, smart materials, automation and robotics. Initially, while at Purdue University, he developed one of the first construction automation programs in the United States and collaborated with major industrial and government organizations, both nationally and worldwide. His past short-term appointments include service as Visiting Eminent Scholar in the Del E. Webb School of Construction at *Arizona State University*, Distinguished Visiting Professor at the *University of Technology Sydney* (Australia), Visiting Senior Research Scientist with the *Commonwealth Scientific and Industrial Research Organization (CSIRO)* Division of Building, Construction and Engineering in Melbourne, Australia, as Research Professor at the *Institute for Mechanized Construction and Rock Mining* in Warsaw, Poland, as Visiting Professor at the *University of Hong Kong, Hong Kong Polytechnic University, Hong Kong University of Science and Technology, Loughborough University, Cardiff University, Slovak Technical University, Nanyang Technological University* (Singapore), *National University of Singapore, National Taiwan University of Science & Technology - Taiwan Tech, National Taiwan University, Technical University of Munich, IAE* (Argentina), *Pontifical Catholic University* (Santiago, Chile), and others. He has also served as a grantee of *Alexander von Humboldt Foundation*, and *Fulbright Foundation*.

Dr. Skibniewski served on the *National Academy of Engineering USA-Germany* and *USA-Japan Frontiers in Engineering* committees, *American Society of Civil Engineers'* Robotics and Field Sensing Committee,

Information Technology Committee, Intelligent Computing Committee, Modularization Committee of the *Construction Industry Institute* at the University of Texas at Austin, and on the *National Academy of Sciences* Assessment Panel for construction automation and computer integrated construction programs at the *National Institute of Standards and Technology*. He was a founding member of the Board of Directors and President of the *International Association for Automation and Robotics in Construction*. Since 1994 Dr. Skibniewski has been continuously serving as Editor-in-Chief of *Automation in Construction*, an international research journal (Elsevier) with the highest *Impact Factor* value among all Civil Engineering scholarly periodicals listed in the *ISI Web of Science*, North American Editor of the *Journal of Civil Engineering and Management* (Taylor & Francis), Co-Editor-in-Chief of *Frontier of Engineering Management* (Springer Nature), as well as a member of editorial boards of over twenty peer-reviewed scholarly journals.

Among Prof. Skibniewski's past honors are the National Science Foundation *Presidential Young Investigator Award* (1986), American Society of Civil Engineers' *Walter L. Huber Research Prize* (1998), Civil Engineering Faculty Medal from Slovak University of Technology (2004), International Association for Automation and Robotics in Construction *Tucker-Hasegawa Research Award* (2007), honorary/distinguished professorships from *Warsaw University of Technology* (2004), *Taiwan Tech - National Taiwan University of Science and Technology* (2005), and *Moscow State Industrial University* (2007), *University of Technology Sydney* (2013), the *Titular Professor* designation from the President of Poland (2006), the inaugural *Tan Swan Beng Visiting Endowed Chair Professorship* from *Nanyang Technological University*, Singapore (2007-2008), *Honorary Professor* of *Tsinghua University*, Beijing, China, *Visiting Distinguished Specialist* at the *Huazhong University of Science and Technology*, Wuhan, China (since 2014), *Distinguished Visiting Fellow* by the *UK Royal Academy of Engineering* (2016), and the *A. James Clark Endowed Chair Professorship* at the University of Maryland (2006-2010). An elected Member of the U.S. National Academy of Construction, Foreign Member of the *Russian Academy of Engineering* (2006) and of the *Academy of Engineering in Poland* (2013), Prof. Skibniewski is a recipient of an honorary doctorate from *Vilnius Gediminas Technical University*, Lithuania (2009). Dr. Skibniewski is listed in *Who's Who in Science and Engineering*, *Who's Who: American Men and Women in Science*, *Who's Who in Engineering*, *Who's Who in America*, *Who's Who Online*, and in other national and international biographical references. He is an author or co-author of over 400 technical publications and has made more than 150 invited research and conference keynote presentations worldwide.

As the Founding Dean of the College of Engineering at Khalifa University with campuses in Abu Dhabi and Sharjah, UAE, from 2010 to 2011, Dr. Skibniewski oversaw the creation of a government-endowed research-intensive academic institution consisting of eight engineering departments, as well as the recruitment of engineering department heads and faculty members. As Assistant Executive Vice President for Academic Affairs and Associate Provost of Purdue University from 1997 to 2004, he served as a member of the group of the University's senior academic officers. His work in this capacity included chairing and coordination of the University's *Academic Reinvestment Program* and the *Faculty Program of Study in a Second Discipline*. As *Interim Dean of International Programs* and *Director of International Research* between 2002 and 2004, he served as Purdue University's chief international officer responsible for foreign relations, global cooperation in research and external engagement, study abroad programs, and international students and scholars. In this capacity he represented the University on the Board of Directors of the *Midwest Universities Consortium for International Activities* (MUCIA) and served as the institutional representative to the association of senior international officers of the *Committee for Institutional Cooperation* (CIC) - an administrative and academic organization of the senior officers of the 'Big Ten +' universities in the United States.

University Appointments

Academic

2005-present, **Professor** of Civil Engineering and Project Management, Department of Civil and Environmental Engineering, University of Maryland, College Park. Teaching and research in project management systems, legal aspects of engineering, selection and management of construction equipment, information technologies for construction project management. A. James Clark Endowed Chair (2005-2010). Faculty Affiliate, Maryland Robotics Center (A. James Clark School of Engineering)

1995-2005, **Professor**, Division of Construction Engineering and Management, School of Civil Engineering, Purdue University, West Lafayette, Indiana. Teaching and research in project engineering and management, construction equipment and management systems automation, computer-aided design-construction integration, administrative and legal aspects of engineering practice, enterprise resource planning applications in construction, and management of information technology.

1990-95 **Associate Professor**, School of Civil Engineering, Purdue University. Teaching and research as above.

1986-90 **Assistant Professor**, School of Civil Engineering, Purdue University. Teaching and research as above.

1982-86 **Research and Teaching Assistant**, Engineering Planning & Management Program, Department of Civil Engineering, Carnegie Mellon University. Teaching Assistant in engineering planning and management, and traffic analysis and management. Research related to project management, industrial safety, technology transfer and management, production automation, engineering economics, and construction robotics.

Administrative

- 2010-2011, **Founding Dean** (on leave from University of Maryland), College of Engineering, Khalifa University of Science, Technology and Research, Abu Dhabi, UAE. Academic leadership and oversight of a national elite, research-intense academic institution consisting of undergraduate and graduate programs in Aerospace-, Biomedical-, Civil Infrastructure & Environmental-, Electrical and Computer-, Industrial & Systems-, Information Security-, Mechanical-, and Nuclear Engineering.
- 2004, **Director of International Research**, Purdue University. Coordinated planning and implementation of international research and professional training initiatives for the University. Led training program proposal preparation efforts for the acquisition of resources from the U.S. Dept. of State and from private corporate and individual donors nationally and worldwide.
- 2002-2004, Interim **Dean of International Programs**, Purdue University. Led formulation of the strategic plan in the area of Purdue's international relations, as well as planning and implementation of all institutional activities related to international education, research, and service. Responsible for planning, implementation and management of approx. \$4 million annual budget and for the supervision of the Associate Dean, Director of the Office of Study Abroad Programs, Director of the Office of International Students and Scholars, and approx. 40 professional staff in three offices under the responsibility of the Dean. As senior international officer of the University, represented Purdue on the Board of Directors of Midwest Universities Consortium for International Activities (MUCIA), on the Committee for Inter-institutional Cooperation (CIC), and in other multi-lateral organizations. Executed planning effort leading to the hiring of a development officer for the Office of International Programs. Designed and oversaw institutional effort to increase study abroad participation by Purdue students by over 70% in two years.
- 2001-2004, **Associate Provost**, Purdue University. Member of the group of senior academic officers responsible for all aspects of academic planning and management of the University.
- 1997-2001, **Asst. Executive Vice President** for Academic Affairs, Purdue University. Co-responsible for matters of University resource policy, university-wide research initiatives, program development, evaluation and administration, and academic budget and planning. Provided academic oversight for campus-wide computer resource acquisition programs, including a \$6 million equipment grant from Intel Corporation. Coordinated university-wide Academic Reinvestment Program and Faculty Program of Study in a Second Discipline with annual budgets in the range of \$2 million.

Other Professional Positions

- 2012, **Visiting Professor** (full time, on leave from University of Maryland), Department of Building, National University of Singapore
- 1993, **Research Engineer** (25% IPA), U.S. Army Corps of Engineers Construction Engineering Research Laboratory (CERL) Robotics Center, Champaign, IL. Long-term strategic planning of Army construction robotics development program.
- 1993-2004, **Visiting Research Professor**, Institute for Mechanized Construction and Rock Mining, Warsaw, Poland. Strategic planning and research initiatives in automated construction equipment.
- 1992, **Visiting Senior Research Scientist** (on sabbatical from Purdue University), Division of Building, Construction and Engineering, Commonwealth Scientific and Industrial Research Organization (CSIRO), Melbourne, Victoria, Australia. Research in decision support systems for construction process automation and robotics, automated construction process modeling, advanced construction simulation and optimization.
- 1981-82, **Staff Engineer**, Engineering Dept., Pittsburgh Testing Laboratory (a nationwide construction engineering consulting firm, later renamed to *Professional Services Industries, Inc.*), Pittsburgh, PA. In charge of a nationwide engineering testing program for the U.S. Department of Transportation; conducted structural engineering investigations, failure analyses, design evaluations, value engineering studies, construction claims analyses, structural and construction safety assessments, and forensic engineering projects for various corporate clients.

Licenses

EIT (Pennsylvania; March 1983)

Citations (selected)

- Who's Who in America, since 2006
- Who's Who in Engineering, since 2003
- Who's Who: American Men and Women of Science, since 1992
- Who's Who in Science and Engineering, since 1999
- Who's Who in the Midwest, Millennium Edition 2000-2001
- International Who's Who of Professionals, since 2000
- Who's Who Online, since 1998
- Strathmore's Who's Who, 2000-2001 Millennium Edition

Awards, Recognitions and Honors (selected)

- 2021: Elected Member, National Academy of Construction (USA)
- 2020: Woh Hup Visiting Endowed Chair Professor of Civil Engineering, National University of Singapore
- 2018-present, Honorary Professor, Tianjin University, China
- 2018: Visiting Fellow, Jockey Club Institute for Advanced Study, Hong Kong University of Science and Technology
- 2016-present: T.-S. Yang Distinguished Honorary Professor, Chaoyang University of Technology, Taichung, Taiwan
- 2016-2019: Distinguished Chair Professor, Hong Kong Polytechnic University
- 2016: Distinguished Visiting Fellow, Royal Academy of Engineering (UK); Cardiff University, Wales, UK
- 2015-present: Honorary Professor of Civil Engineering, Tsinghua University, Beijing, China
- 2014-2019: Visiting Distinguished Specialist/ 'World's Top 500 Faculty,' Program Awardee, Huazhong University of Science and Technology, Wuhan, China
- 2014: Distinguished Visiting Professor, University of Central Lancashire, UK
- 2013: Visiting Eminent Scholar, Arizona State University, Tempe, AZ
- 2013: Dean's Podium Invited Speaker, College of Engineering Sciences, Ben-Gurion University, Israel
- 2013: Elected Member, The Academy of Engineering in Poland
- 2013: Distinguished Visiting Professor, University of Technology Sydney, Australia

- 2009: Honorary doctorate (*Doctor Honoris Causa*), Vilnius Gediminas Technical University, Lithuania
- 2008: Honorary Fellow, Institution of Facilities Management, Singapore
- 2007-2008: *Tan Swan Beng* Endowed Chair (Visiting) Professorship in Construction Industry, Nanyang Technological University, Singapore
- 2007: *Richard L. Tucker – Yukio Hasegawa Research Award* from International Association for Automation and Robotics in Construction
- 2007: Fulbright Commission *Senior Specialist* Award, Pontifical Catholic University, Santiago de Chile
- 2006: *Technical Sciences Professor* title granted by the President of the Republic of Poland
- 2006: Elected Foreign Member, Russian Academy of Engineering
- 2006: Honorary Professorship, Moscow State Industrial University, Russia
- 2006-2010: *A. James Clark* Endowed Chair Professorship, Department of Civil & Environmental Engineering, University of Maryland, College Park
- 2005: Honorary Professorship in Civil Engineering, Warsaw University of Technology, Poland
- 2005: Honorary Visiting Chair Professorship, National Building Research Center, National Taiwan University of Science and Technology (Taiwan Tech), Taipei, Taiwan
- 2004: Civil Engineering Faculty Medal, Slovak University of Technology, Bratislava, Slovakia
- 2004: Alexander von Humboldt Foundation *Connect* Award (Germany)
- 2004: Taiwan Science and Technology Foundation Award (Visiting Professorship at National Taiwan University)
- 2004: Fulbright Commission Senior Specialist Award, IAE –*Universidad Austral*, Pilar, Buenos Aires, Argentina
- 2003: Dedicated and Outstanding Service Award, International Programs, Purdue University
- 2001 & 2002: U.S. National Academy of Engineering/ Alexander von Humboldt Foundation, USA-Germany *Frontiers of Engineering*
- 2000: U.S. National Academy of Engineering/ Japan Academy of Engineering, USA-Japan *Frontiers of Engineering*.
- 1998: American Society of Civil Engineers' Walter L. Huber Research Prize
- 1995-1996: Academic Leadership Fellow, Committee on Institutional Cooperation (CIC) – a consortium of 'Big Ten' U.S. universities
- 1987-1992: Presidential Young Investigator, U.S. National Science Foundation

Membership in Professional and Scholarly Societies

American Society of Civil Engineers (ASCE) (since 1982)

- Indiana Delegate, District 9 Council (1986-91)
- Member of the Control Group, Aerospace Division Task Force on Construction Robotics (1987-89)
- Member, Committee on Field Sensing and Robotics in Civil Engineering (since 1990)
- Member, Intelligent Computing Committee; formerly Expert Systems Committee (since 1987)
- Member, Information Technology Committee; formerly Database Committee (since 1988)
- Member, Construction Research Council, Construction Institute (1987-present)

International Association for Automation and Robotics in Construction (IAARC)

- Founding Member and Co-Director (since 1991)
- Chairman, Newsletter Committee, (1993-95)
- Chairman, Publication Committee (1995-98)
- Chairman, External Relations Committee (1998-present)
- Vice-President and President-Elect (1999-2000)
- President (2000-01)

International Council for Building Research Studies and Documentation (CIB)

- W-75 Working Commission on Construction Equipment and Mechanization (1989-1996)
- Task Group 27, Human-Machine Technologies for Construction Site (1997-2002)
- W-78, Working Commission on Information Technology for Construction (since 1996)
- Task Group 29, Construction in Developing Countries (1999-2005)

International Council on Tall Buildings and Urban Habitat (ICTBUH)

- Co-Chairman, Committee 65, Robots and Tall Buildings (1991-2004)

American Society for Engineering Education (ASEE), since 2000

U.S. National Research Council, Transportation Research Board (NRC-TRB)

- Member, Committee on Applications of Emerging Technologies (1994-95)

Sigma Xi: The Scientific Research Honorary, since 1986

International Standards Organization (ISO) and American National Standards Institute (ANSI)

- U.S. Representative to ISO Technical Committee 195 (Construction Machinery and Equipment), 1994

International Association of Foundation Drilling (Technical Affiliate; 1998-2005)

FIATECH – Fully Integrated and Automated Technologies for Capital Project Industries (USA)

Research Advisory Panel on Automated Construction Project Sites (Affiliate; since 2003)

Engineering, Project and Production Management Association (Founding Member, Board of Directors; 2012-present)

Teaching

Regular Semester-Long Courses Taught at Purdue University (multiple academic years)

Course No.	Title
CE 221	Construction Plans and Estimates
CE 324	Labor Relations in Construction
CE 498	Civil Engineering Design Project
CE 520	Construction Project Control Systems
CE 521	Analysis of Construction Management Systems
CE 522	Computer Applications in Construction Engineering
CE 523	Utilization of Construction Equipment
CE 524	Legal Aspects in Engineering Practice
CE 526	Construction of Temporary Facilities
CE 597C	Expert Systems in Construction Engineering
CE 597I	International Construction
CE 5970	Computer Applications in Construction Project Management
CE 621	Construction Company Management
CE 697M	Construction Robotics and Automation

Regular Semester-Long Courses Taught at the University of Maryland (multiple times/ multiple academic years)

ENCE 320	Introduction to Engineering Project Management
ENCE 325	Introduction to Construction Project Management
ENCE 420	Selection and Utilization of Construction Equipment
ENCE 421	Legal Aspects of Architecture, Engineering Design and Construction
ENCE 622	Construction Automation and Robotics
ENCE 626	Web-Based Project Management

In addition to pre-structured, traditional classroom-taught courses, Prof. Skibniewski conducts individually tailored, directed study coursework (with variable course names) for individual students. Topics addressed in this fashion focused on highly specialized current research areas such as automated construction systems design and analysis, expert systems prototype development, reliability and risk analysis in construction, advanced technology transfer, neural networks and machine learning applications to construction engineering, sensor-based systems, construction labor economics, and international construction.

In addition to working with graduate students at the M.S. and Ph.D. level, from time to time Prof. Skibniewski engages in his research undergraduate students as well, particularly within the framework of the Summer Undergraduate Research Fellowship (SURF) program supported by the National Science Foundation.

Contributions in Course and Curriculum Development

at Purdue University

CE 697M Construction Automation and Robotics.
CE 521 Analysis of Construction Management Systems.
CE 221 Construction Plans and Estimates.
CE 498 Civil Engineering Senior Design Project.
CE 520 Construction Project Control Systems.
CE 523 Selection and Management of Construction Equipment.
CE 597C Expert Systems in Construction Engineering.
CE 597I International Construction Management.
CE 621 Construction Company Management.

at the University of Maryland

ENCE 622 Construction Automation and Robotics
ENCE 325 Introduction to Construction Management
ENCE 420 Selection and Utilization of Construction Equipment
ENCE 421 Legal Aspects of Engineering
ENCE 626 Web-Based Project Management Systems
ENCE 688E e-Construction Research Seminar

Research and Scholarship

Published Works (needs to be updated, over 400 items)

a. Books (selected)

1. Skibniewski, M. (1988): “*Robotics in Civil Engineering*,” Computational Mechanics Publications/ Van Nostrand Reinhold, Southampton, Boston, New York, ISBN 0-442-31925-8, 233 pp.

2. Zhang, L., Pan, Y., Wu, X., Skibniewski, M. (2021): „Artificial Intelligence in Construction Engineering and Management,” Lecture Notes in Civil Engineering, Springer, Singapore, ISBN 978-9811628412

b. Book Chapters and Invited Contributions to Books (selected)

1. Oppenheim, I., Skibniewski, M. (1988): “Robots in Construction,” in “International Encyclopedia of Robotics,” John Wiley & Sons, A Wiley-Interscience Publication, Vol. 1, New York, ISBN 0-471-63512-4, pp. 240-249 (ed. S. Nof, 1988 Technical Book of the Year Award)
2. Skibniewski, M. (1992): “Robot Implementation Issues for the Construction Industry,” in “Human-Robot Interaction,” Rahimi, M. and Karwowski, W., eds., Taylor & Francis Publishers, London, U.K., Washington, D.C., ISBN 0-85066-809-3, pp. 347-366
3. Skibniewski, M., Kunigahalli, R. (1997): “Automation in Concrete Construction,” Chapter 17, Concrete Construction Engineering Handbook, CRC Press, Boca Raton, FL, ISBN 0-8493-2666-4
4. Chao, L-C., Skibniewski, M. (1998): “Neural Networks for Evaluating Construction Technology,” Ch. 1 in “*Artificial Neural Networks for Civil Engineers: Advanced Features and Applications*,” American Society of Civil Engineers, Reston, VA, ISBN # 0-7844-0344-9, pp. 1-34
5. Budny, E., Chłosta, M., Meyer, H-J., Skibniewski, M. (2009): “Construction Automation and Robotics,” Chapter 14 in Springer *Handbook of Mechanical Engineering*, K.-H. Grote and E. Antonsson, eds., XXVIII, pp. 1149–1266, Part B, ISBN 978-3-540-49131-6, Berlin-Heidelberg - New York–Tokyo
6. Skibniewski, M. (2016): “Achieving Excellence in Project and Program Management in Poland through Creation of a Dedicated Center for Project and Program Management,” *Social Responsibility and Science in Innovation Economy*, P. Kawalec, R.P. Wierchosławski, eds., KUL Learned Society and John Paul II Catholic University of Lublin, ISBN 978-83-7306-710-3; ISBN 978-83-8061-147-4, 2015, pp. 19-30
7. deSoto B.G., Skibniewski, M. Future of Robotics and Automation in Construction, Chapter 15 in “Construction 4.0,” Routledge (Taylor & Francis) 2020, ISBN 978-0-367-02730-8, Sawhney, A., Riley, M., Irizarry, J., eds.

c. Articles in Refereed Archival Journals (since 2020 to date only)

Wu, X., Feng, Z., Chen, H., Qin, Y., Zheng, S., Wang, L., Liu, Y., Skibniewski, M.J.
Intelligent optimization framework of near zero energy consumption building performance based on a hybrid machine learning algorithm
(2022) Renewable and Sustainable Energy Reviews, 167, art. no. 112703, .
DOI: 10.1016/j.rser.2022.112703

Xiong, S.-H., Chen, Z.-S., Chiclana, F., Chin, K.-S., Skibniewski, M.J.
Proportional hesitant 2-tuple linguistic distance measurements and extended VIKOR method: Case study of evaluation and selection of green airport plans
(2022) International Journal of Intelligent Systems, 37 (7), pp. 4113-4162.
DOI: 10.1002/int.22714

Feng, Z., Wu, X., Chen, H., Qin, Y., Zhang, L., Skibniewski, M.J.
An energy performance contracting parameter optimization method based on the response surface method: A case study of a metro in China
(2022) Energy, 248, art. no. 123612, .
DOI: 10.1016/j.energy.2022.123612

Chen, H., Deng, T., Du, T., Chen, B., Skibniewski, M.J., Zhang, L.
An RF and LSSVM–NSGA-II method for the multi-objective optimization of high-performance concrete durability
(2022) Cement and Concrete Composites, 129, art. no. 104446, .
DOI: 10.1016/j.cemconcomp.2022.104446

Jethva, S.S., Skibniewski, M.J.

Agile project management for design-build construction projects: a case study

(2022) International Journal of Applied Science and Engineering, 19 (1), art. no. 2020216, .

DOI: 10.6703/IJASE.202203_19(1).001

Pan, Y., Zhang, L., Unwin, J., Skibniewski, M.J.

Discovering spatial-temporal patterns via complex networks in investigating COVID-19 pandemic in the United States

(2022) Sustainable Cities and Society, 77, art. no. 103508, .

DOI: 10.1016/j.scs.2021.103508

Khoso, A.R., Yusof, A.M., Chen, Z.-S., Skibniewski, M.J., Chin, K.-S., Khahro, S.H., Sohu, S.

Comprehensive analysis of state-of-the-art contractor selection models in construction environment-A critical review and future call

(2022) Socio-Economic Planning Sciences, 79, art. no. 101137, .

DOI: 10.1016/j.seps.2021.101137

Chang, J., Chen, Z., Wang, Z., Jin, L., Pedrycz, W., Martinez, L., Skibniewski, M.J.

Assessing the Spatial Synergy Between Integrated Urban Rail Transit System and Urban Form: A BULI-Based MCLSGA Model With Wisdom of Crowds

(2022) IEEE Transactions on Fuzzy Systems, pp. 1-15.

DOI: 10.1109/TFUZZ.2022.3185680

Hu, M., Skibniewski, M.

The impact of the design team characteristics on the sustainable building construction cost: structural equation model analysis

(2022) Architectural Engineering and Design Management, .

DOI: 10.1080/17452007.2022.2068497

Xiao, L., Chen, Z., Govindan, K., Skibniewski, M.J.

Effects of Online Consumer Reviews on a Dual-Channel Closed-Loop Supply Chain With Trade-In

(2022) IEEE Transactions on Engineering Management, pp. 1-16.

DOI: 10.1109/TEM.2022.3167160

Chen, Z., Zhang, X., Rodriguez, R.M., Pedrycz, W., Martinez, L., Skibniewski, M.J.

Expertise-structure and risk-appetite-integrated two-tiered collective opinion generation framework for large scale group decision making

(2022) IEEE Transactions on Fuzzy Systems, pp. 1-1.

DOI: 10.1109/TFUZZ.2022.3179594

Liu, H., Ju, Q., Zhao, N., Li, H., Skibniewski, M.J.

Value Proposition for Enabling Construction Project Innovation by Applying Building Information Modeling

(2022) Computational Intelligence and Neuroscience, 2022, art. no. 2586307, .

DOI: 10.1155/2022/2586307

Chen, Z.-S., Yang, L.-L., Chin, K.-S., Yang, Y., Pedrycz, W., Chang, J.-P., Martínez, L., Skibniewski, M.J.

Sustainable building material selection: An integrated multi-criteria large group decision making framework

(2021) Applied Soft Computing, 113, art. no. 107903, .

DOI: 10.1016/j.asoc.2021.107903

Hu, M., Skibniewski, M.

Green Building Construction Cost Surcharge: An Overview

(2021) Journal of Architectural Engineering, 27 (4), art. no. 04021034, .
DOI: 10.1061/(ASCE)AE.1943-5568.0000506

Pan, Y., Zhang, L., Yan, Z., Lwin, M.O., Skibniewski, M.J.
Discovering optimal strategies for mitigating COVID-19 spread using machine learning: Experience from Asia
(2021) Sustainable Cities and Society, 75, art. no. 103254, .
DOI: 10.1016/j.scs.2021.103254

Khoso, A.R., Yusof, A.M., Chen, Z.-S., Wang, X.-J., Skibniewski, M.J., Memon, N.A.
Embedded remote group environment through modification in macbeth – an application of contractor's selection in construction
(2021) Journal of Civil Engineering and Management, 27 (8), pp. 595-616.
DOI: 10.3846/jcem.2021.15763

Ma, T., Wang, Z., Skibniewski, M.J., Ding, J., Wang, G., He, Q.
Investigating stewardship behavior in megaprojects: An exploratory analysis
(2021) Engineering, Construction and Architectural Management, 28 (9), pp. 2570-2591.
DOI: 10.1108/ECAM-07-2020-0479

Khan, M., Khan, N., Skibniewski, M.J., Park, C.
Environmental particulate matter (Pm) exposure assessment of construction activities using low-cost pm sensor and latin hypercubic technique
(2021) Sustainability (Switzerland), 13 (14), art. no. 7797, .
DOI: 10.3390/su13147797

Besklubova, S., Skibniewski, M.J., Zhang, X.
Factors Affecting 3D Printing Technology Adaptation in Construction
(2021) Journal of Construction Engineering and Management, 147 (5), art. no. 2034, .
DOI: 10.1061/(ASCE)CO.1943-7862.0002034

Chen, Z.-S., Liu, X.-L., Chin, K.-S., Pedrycz, W., Tsui, K.-L., Skibniewski, M.J.
Online-review analysis based large-scale group decision-making for determining passenger demands and evaluating passenger satisfaction: Case study of high-speed rail system in China
(2021) Information Fusion, 69, pp. 22-39.
DOI: 10.1016/j.inffus.2020.11.010

Cong, X., Ma, L., Wang, L., Šaparauskas, J., Górecki, J., Skibniewski, M.J.
The early warning system for determining the “not in My Back Yard” of heavy pollution projects based on public perception
(2021) Journal of Cleaner Production, 282, art. no. 125398, .
DOI: 10.1016/j.jclepro.2020.125398

Huang, H.-T., Ping Tserng, H., Hou, R.-Y., Skibniewski, M.
Wireless sensor network-based monitoring of bridge pile foundations for detecting scouring depth
(2021) Journal of Marine Science and Technology (Taiwan), 29 (1), pp. 73-88.
DOI: 10.51400/2709-6998.1005

Zhang, L., Yuan, J., Xia, N., Ning, Y., Ma, J., Skibniewski, M.J.
Measuring value-added-oriented bim climate in construction projects: Dimensions and indicators
(2020) Journal of Civil Engineering and Management, 26 (8), pp. 800-818.
DOI: 10.3846/jcem.2020.13893

Yuan, J., Xie, H., Yang, D., Xiahou, X., Skibniewski, M.J., Huang, W.
Strategy formulation for the sustainable development of smart cities: A case study of Nanjing, China
(2020) International Journal of Strategic Property Management, 26 (4), pp. 379-399.

DOI: 10.3846/ijspm.2020.13345

Yao, X., Wei, H.-H., Shohet, I.M., Skibniewski, M.J.
Assessment of terrorism risk to critical infrastructures: The case of a power-supply substation
(2020) Applied Sciences (Switzerland), 10 (20), art. no. 7162, pp. 1-17.
DOI: 10.3390/app10207162

Cai, S., Ma, Z., Skibniewski, M.J., Guo, J.
Construction Automation and Robotics: From One-Offs to Follow-Ups Based on Practices of Chinese Construction Companies
(2020) Journal of Construction Engineering and Management, 146 (10), art. no. 05020013, .
DOI: 10.1061/(ASCE)CO.1943-7862.0001910

Ma, T., Ding, J., Wang, Z., Skibniewski, M.J.
Governing Government-Project Owner Relationships in Water Megaprojects: a Concession Game Analysis on Allocation of Control Rights
(2020) Water Resources Management, 34 (13), pp. 4003-4018.
DOI: 10.1007/s11269-020-02627-z

Yuan, J., Li, X., Ke, Y., Xu, W., Xu, Z., Skibniewski, M.
Developing a building information modeling-based performance management system for public-private partnerships
(2020) Engineering, Construction and Architectural Management, 27 (8), pp. 1727-1762.
DOI: 10.1108/ECAM-06-2019-0328

Chen, Z.-S., Zhang, X., Pedrycz, W., Wang, X.-J., Skibniewski, M.J.
Bid evaluation in civil construction under uncertainty: A two-stage LSP-ELECTRE III-based approach
(2020) Engineering Applications of Artificial Intelligence, 94, art. no. 103835, .
DOI: 10.1016/j.engappai.2020.103835

Cai, S., Ma, Z., Skibniewski, M.J., Bao, S., Wang, H.
Construction Automation and Robotics for High-Rise Buildings: Development Priorities and Key Challenges
(2020) Journal of Construction Engineering and Management, 146 (8), art. no. 04020096, .
DOI: 10.1061/(ASCE)CO.1943-7862.0001891

Kim, Y.J., Skibniewski, M.J.
Cash and Claim: Data-Based Inverse Relationships between Liquidity and Claims in the Construction Industry
(2020) Journal of Legal Affairs and Dispute Resolution in Engineering and Construction, 12 (3), art. no. 04520021, .
DOI: 10.1061/(ASCE)LA.1943-4170.0000402

Pan, Y., Zhang, L., Wu, X., Skibniewski, M.J.
Multi-classifier information fusion in risk analysis
(2020) Information Fusion, 60, pp. 121-136.
DOI: 10.1016/j.inffus.2020.02.003

Pan, Y., Zhang, L., Skibniewski, M.J.
Clustering of designers based on building information modeling event logs
(2020) Computer-Aided Civil and Infrastructure Engineering, 35 (7), pp. 701-718.
DOI: 10.1111/mice.12551

Wang, L., Zhang, P., Ma, L., Cong, X., Skibniewski, M.J.
Developing a corporate social responsibility framework for sustainable construction using partial least squares structural equation modeling

(2020) Technological and Economic Development of Economy, 26 (1), pp. 186-212.
DOI: 10.3846/tede.2020.11263

Kim, Y.J., Skibniewski, M.J.
Unsuccessful bids: Coefficient of variation of bids as indicator of project risk
(2020) Organization, Technology and Management in Construction, 12 (1), pp. 2193-2199.
DOI: 10.2478/otmcj-2020-0015

Xiahou, X., Yuan, J., Xie, H., Skibniewski, M.J., Li, Q.
Exploring driving factors of smart city development under the physical-human society-cyber (P-H-C) space model
(2020) International Journal of Construction Management, .
DOI: 10.1080/15623599.2020.1824601

Liu, H., Skibniewski, M.J., Ju, Q., Li, J., Jiang, H.
BIM-enabled construction innovation through collaboration: a mixed-methods systematic review
(2020) Engineering, Construction and Architectural Management, 28 (6), pp. 1541-1560.
DOI: 10.1108/ECAM-03-2020-0181

Yuan, J., Zhang, L., Tan, Y., Skibniewski, M.J.
Evaluating the regional social sustainability contribution of public-private partnerships in China: The development of an indicator system
(2020) Sustainable Development, 28 (1), pp. 259-278.
DOI: 10.1002/sd.2001

Keynote presentations at international conferences (2022 only)

https://e-2022.creative-construction-conference.com/international_committees.php?mirosław-skibniewski

https://www.youtube.com/watch?v=9ZcB8CtNKYo&ab_channel=RI-IWEARChannel

<https://ipcmc2022.yildiz.edu.tr/keynote-speakers-2/>

<https://www.ecppm2022.org/>

<http://convr2022.com/keynote-speakers-2>

<https://icisic2022.com/>

<http://www.icaceh.asia/node/7>

d. Technical Society, Funding Agency and Examination Panels (selected)

1. Proposal Reviewer and Panelist, U.S. National Science Foundation, Structures and Building Systems; Infrastructure Systems and related programs, since 1987- present
2. Invited Member, Construction and Engineering Industries Task Force on Strategic Management Information Needs, The World Electronic Community (WELCOM) Network, World Economic Forum, Geneva, Switzerland, 1987

3. Invited Member, Construction Industry Institute, Austin, Texas; Advanced Technological Systems Task Force, Automation Research Advisory Team, 1988-90
4. Invited Member, Construction Industry Institute, Austin, Texas, Task Force on Modularization, 1989-93
5. Proposal Reviewer, U.S. Environmental Protection Agency, Office of Research and Development (Risk Reduction Engineering), 1991
6. External Assessor, Research Grants Council, Hong Kong, annually since 1995
7. Invited Member, Panel for Building and Fire Research - National Institute of Standards and Technology. Appointed by the National Research Council, Washington, D.C., January 1996 - December 1998; re-appointed January 1999 - December 2002
8. External Assessor, Research Grants Committee, Australian Research Council, Canberra, Australia, 1996
9. Program Proposal Reviewer, The Croucher Foundation, Hong Kong, 2000
10. Funding Proposal Reviewer, Advanced Automation Technologies in Remediation of Nuclear Waste Contamination, U.S. Department of Energy, 2001
11. Panel Review Member, *Ramon y Cajal* Program, Spanish Foundation for Science and Technology (FECYT), Madrid, Spain; 2002, 2003
12. Accreditation Committee Member, M.S. Degree Program in Engineering Management, American University of Sharjah, Ministry of Higher Education and Scientific Research Academic Accreditation Commission, United Arab Emirates, June 2003
13. Research Consultant, Construction Knowledge Management, RoC-Taiwan Ministry of Higher Education and Scientific Research, Taipei, 2004
14. Accreditation Committee Member, M.S. Degree Program in Project Management, British University in Dubai, Ministry of Higher Education and Scientific Research Academic Accreditation Commission, United Arab Emirates, June 2004
15. Accreditation Committee Member, B.S. Degree Program in Civil Engineering, American University in Dubai, Ministry of Higher Education and Scientific Research Academic Accreditation Commission, United Arab Emirates, November 2004
16. Accreditation Committee Member, M.S. Degree Program in Information Technology Management, British University in Dubai, Ministry of Education Academic Accreditation Commission, United Arab Emirates, November 2005
17. Accreditation Committee Member, M.S. Degree Programs in Information Technology Management and Engineering Management, University of Wollongong in Dubai, Ministry of Education Academic Accreditation Commission, United Arab Emirates, April 2006
18. Accreditation Committee Chairman, B.S. Degree Program in Civil Engineering, Al-Hosn University, Ministry of Higher Education and Scientific Research Academic Accreditation Commission, United Arab Emirates, June 2006
19. Proposal Reviewer, Qatar National Research Fund, 2008-present
20. Invited Member, Panel on Advancing the Productivity and Competitiveness of the U.S. Construction Industry, The National Academies Board on Infrastructure and the Constructed Environment, Washington, D.C., November 2008
21. Chairman (appointed), State of Israel's Council on Higher Education International Committee on the Evaluation of Civil Engineering Academic Programs in Israeli Colleges and Universities, Jerusalem, October 2010 – February 2012
22. Invited Evaluator (appointed, Peer Review College, U.K. Engineering and Physical Sciences Research Council, since September 2012

e. Editorial Positions (selected)

1. Editor-in-Chief, *Automation in Construction*, Elsevier, ISSN 0926-5805, 1994-2024; IF=11.5
2. Co-Editor-in-Chief, *Frontiers of Engineering Management*, Higher Education Press (China) & Springer, Electronic ISSN 2096-0255, Print ISSN 2095-7513
3. North American Editor, *Journal of Civil Engineering and Management* (Taylor & Francis), Print ISSN: 1392-3730 Online ISSN: 1822-3605, 2001-2015; IF=3.714

f. Leadership in Conference Panels (selected)

f. Short Term International Visiting Appointments

- Distinguished Visiting Professor, Dept. of Civil & Environmental Engineering, Hong Kong University of Science and Technology, February-April 2017
- Adjunct Research Professor, School of Engineering, Aarhus University, Denmark, January 2017
- Distinguished Visiting Professor, Dept. of Building and Real Estate, School of Construction and Environment, Hong Kong Polytechnic University, September 2016
- Distinguished Visiting Professor, Dept. of Civil Engineering, Tsinghua University, Beijing, China, 2016-2017
- World Class Department Visiting Professor, Dept. of Civil Engineering, Hanyang University, Seoul, Korea, January 2016
- Visiting Professor, Dept. of Building, School of Design and Environment, National University of Singapore, April-August 2012
- Visiting Professor, Dept. of Construction Engineering and Management, Nile University, 6th October City/ Cairo, Egypt, March 2010
- Senior Specialist (supported by the Fulbright Commission), Department of Construction Engineering and Management, *Universidad Catolica*, Santiago, Chile, July 2007
- *Tan Swan Beng* Visiting Chair Professor, School of Civil and Environmental Engineering, Nanyang Technological University, Singapore, 2007-2008
- Visiting Professor, Białystok Technical University, Poland, periodically between 2007-2013
- Visiting Professor, Taiwan Tech - National Taiwan University of Science and Technology, Taipei, July-August 2006 and 2008
- Senior Specialist (sabbatical supported by the Fulbright Commission), IAE - *Instituto de Altos Estudios Empresariales (Universidad Austral)*, Buenos Aires, Argentina, November-December 2004
- Visiting Professor (supported by Taiwan Science & Engineering Foundation), Chung Hua University and National Taiwan University, September-October 2004
- Visiting Research Professor (supported by the “Connect” Award from the Alexander von Humboldt Foundation), Technical University of Munich, Germany, July-August 2004
- Honorary Visiting Professor, Loughborough University, England, 2001-2003
- Visiting Professor, Hong Kong Polytechnic University, July 1999
- Visiting Professor, Hong Kong University, Hong Kong, CPD short courses for civil engineers in professional practice, 1994-2001
- Visiting Professor, Asian Institute of Technology, Bangkok, Thailand, November 1992
- Visiting Professor, Slovak Technical University, Bratislava, Slovakia, June-July 1990 and March 1993
- Visiting Scholar, Fraunhofer Institute of Production Automation (IPA), Stuttgart, Germany, November 1985
- Visiting Scholar, Nuclear Research Center, Karlsruhe, Germany, November 1985

Involvement in Graduate Research

a. Major Professor for Completed Doctoral Theses and Dissertations (Purdue and UMD)

Completion Date	Name	Degree	Title
F 88	Jeffrey S. Russell (currently Prof. and Vice-Provost at Univ. of Wisconsin-Madison)	Ph.D.	A Knowledge-Based System Approach to Contractor Prequalification Process
S 90	Amarjit Singh (currently Prof. at Univ. of Hawaii-Manoa)	Ph.D.	Systems Analysis Tools for Flexible Production Systems in Earthmoving
F 93	Li-Chung Chao (currently Prof. Em. at National Kaohsiung First Univ. of Science and Tech., Taiwan)	Ph.D.	Adaptive Neural Network Approach to Estimating User Acceptability of New Construction Equipment
S 96	Wen-der Yu (currently Dist. Prof. and former V.P. for Int'l Programs, Chaoyang Univ. of Tech., Taiwan)	Ph.D.	Construction Technology Capability Evaluation with AI-Based Methods
S 96	Kamolwan Lueprasert (currently Prof. and Assoc. Dean of Engr., King Mongkut Institute of Technology, Thailand)	Ph.D.	Constructability Analysis - Machine Learning Approach
S 97	Jaeho Son (currently Prof. at Hongkik Univ., Korea)	Ph.D.	Genetic Algorithms for Construction Task Resource Leveling
S 00	Muhamad Abduh (currently Prof. at Institute of Technology Bandung, Indonesia)	Ph.D.	Utility Assessment of Internet Based Technologies for Design-Built Projects
S 03	Ahmed F.M. Salman (currently Assoc. Prof. at King Faisal Univ., Saudi Arabia)	Ph.D. ^[2]	Feasibility of Build-Operate-Transfer Infrastructure Projects in Egypt
S 03	Daniel Castro-Lacouture (former Prof. and Dept. Head at Georgia Tech., Atlanta. Currently Dean of Purdue Polytechnic Institute, W. Lafayette, Indiana)	Ph.D.	E-Commerce Applications for Acquisition of Construction Reinforcement Steel
F 04	Pollapat Nitithamyong (former Lecturer at Glasgow Caledonian University, Scotland, UK)	Ph.D.	Critical Success/Failure Factors in Application of Web-Based Project Management Systems in Construction
F 04	Seungki Park (currently Dir., Ministry of Construction and Transport, Korea)	Ph.D.	Impact of Information Technology Investment on Productivity in Korean Construction Firms
F 07	Boo-Young Chung (currently Pres., Samsung SDS, Brazil)	Ph.D.	Success and Failure Factors in Implementing Enterprise Resource Planning Systems in Engineering Construction Firms
F 07	Won-Suk. Jang (formerly Asst. Prof. at Yeungnam Univ., Korea, deceased)	Ph.D.	Wireless Sensor Networks Applications for Asset Tracking in Built Environment
S 08	Sabrina Golden (formerly U.S. Marine Corps Headquarters, Washington, D.C.)	Ph.D.	Impact of Immigration Reform on Construction Labor and Project Costs
S 08	Sam Negahban (currently Partner and VP. at Brawner Builders, Inc.)	Ph.D. ^[3]	Decision Support for ERP System Selection for Small and Medium – Sized Construction Firms

F 08	Omer Tatari (currently Assoc. Prof. at U. of Central Florida, Orlando)	Ph.D.	ERP Systems Application Strategy for the Construction Industry
F 10	Yajun-Alex Zeng (currently Sr. Quantitative Analyst at Turner Investment Partners, Philadelphia, PA)	Ph.D.	ERP Systems Application Risk Management Strategy for the Construction Industry
F 10	Jingfeng Yuan (currently Prof. at Southeast Univ., Nanjing, China)	Ph.D. ^[4]	Project Management Performance Issues in Public-Private Partnerships For Large Scale Infrastructure Projects in China
F 10	Momodu Fofana (currently Lecturer at Bowie State U., Bowie, MD and CEO, MitGuru LLC, Germantown, MD)	Ph.D.	Design and Specification for Information Security Standards for Project Management
F 10	Douglas Chelson (currently Asst. Prof., Western Kentucky U.)	Ph.D.	Measuring the Impact of BIM System Implementations on Construction Project Productivity
F 12	Andrew McCarty (currently Sr. Mgr. Systems Engr., School of Public Health, UMD)	Ph.D.	Measuring the Value of Training in Enterprise Management Software Systems
S 13	Saamyendu Ghosh (currently IT Dev. Dir., Amazon., Arlington, VA; Adj. Lecturer, Penn State Univ., George Washington Univ.)	Ph.D.	Project Governance in Enterprise Resource Planning Systems Implementations
S 13	Su-Chien Hsu (currently Assoc. Prof., Hong Kong Polytechnic Univ.)	Ph.D. ⁵	Complexity Theory Applications in Optimal Personnel Resource Assignments for Project Performance
2014	Ryciuk, Urszula (currently Asst. Prof. at Białystok Univ. of Tech.)	Ph.D. ¹	Measuring Impact of Trust in Construction Supply Chains
2014	Zhang, Limao (currently Prof., Huazhong Univ. of Science & Tech., Wuhan, China)	Ph.D. ⁴	Safety Systems Modeling and Optimization in Tunneling Construction
2015	Lijuan Chen (currently Asst. Prof. at Fudan Univ., Shanghai, China)	Ph.D. ⁴	Construction Quality Management with n-D Building Information Models
2015	Sterling Rooke (currently CEO, X8 Group, Inc.)	Ph.D.	Sensor-Based Safety Systems Evaluation for Hydraulic Fracturing-Based Natural Gas Extraction Project Management
2015	Hsi-Hsien Wei (currently Assoc. Prof., Hong Kong Polytechnic Univ.)	Ph.D. ⁶	Quantification Methods for Infrastructure Resilience Evaluations
F 2015	Liu Hui (currently post-doc fellow at China Central Univ., Changsha, China)	Ph.D. ⁴	System Reliability Issues and Success Measurements in Construction Technology Transfer Projects
May 2016	Gustavo Vecino (currently Chief Engr. Maritime Adm., U.S. Dept. of Transportation, Washington, D.C.)	Ph.D.	Web-Based Project Management Systems Solutions for Dredging Works
May 2022	Ming Hu (currently Assoc. Prof. School of Architecture, UMD)	Ph.D.	Predicting Cost Variances of Sustainable Building Design and Construction

^[1] External Advisor in collaboration with Białystok Univ. of Tech. and Gdańsk Univ. of Tech.

^[2] Co-major Professor, in collaboration with Zagazig Univ., Egypt

^[3] Co-major Professor/ Co-Advisor with Prof. G. Baecher

^[4] Co-major Professor, in collaboration with Southeast University, Nanjing, China, Huazhong Univ. of Science and Technology, Wuhan, China and China Central University, Changsha, China

^[5] Co-Major Professor/ Co-Advisor with Assoc. Prof. Q. Cui

^[6] Co-Major Professor with Prof. Igal Shohet from Ben Gurion University, Israel

b. Major Advisor for Completed Post-Doctoral Fellows and Visiting Faculty (selected)

Dates	Name	Research Topic
1989	Dr. J. S. Russell (currently Professor and Vice-Provost, Univ. of Wisconsin-Madison)	Quantification of Risks by Surety Companies Underwriting Surface Mining Reclamation Bonds
1990-91	Dr. P. Vähä (on leave from VTT-Technical Research Center of Finland)	Control Systems for Robotic Excavation
1990-92	Dr. Kinya Tamaki (on leave from Waseda University, Tokyo, Japan)	Construction Robotics Application Logistics
1996	Dr. Krishan Mathur (Assoc. Prof. on leave from National University of Singapore, currently Sr. Associate with Resource Management Corp., Washington, D.C.)	Computer Aided Constructability Analysis
2001	Dr. J. Wrona ^[1] (on leave as NATO Advance Science Fellow from Military University of Technology, Warsaw, Poland)	Innovative Control Technologies for Heavy Construction Equipment
2002-2004	Dr. Boong-yeol Ryoo (on leave from Intellix Corp., Seoul, Korea; currently Assoc. Prof. at Texas A&M Univ.)	E-Commerce Technology Applications in Construction Project Management
2007-2008	Prof. In-Joon Kang (on leave from Pusan National University, Korea)	GIS Technology Solutions for Construction Project Management
2008	Dr. Kamolwan Lueprasert (on leave as Assoc. Prof. and Fulbright Fellow from King Mongkut Institute of Technology, Bangkok, Thailand)	Legal Aspects of International Technology Transfer in Construction
2008-2009	Dr. Lei Zheng (on leave from Southeast University, Nanjing, China)	Trust Networks and their Implementation in Construction Management
2008-2009	Dr. Chengshuan Sun (on leave from Harbin Institute of Technology, China)	Sensor-Based Systems for Construction Project Management
2008-2010	Dr. Shaohua Jiang (on leave from Dalian University of Technology, China)	IT and Automation Technology Tools for Construction Project Planning and Execution
2009-2010	Dr. Hermanto Perelli (on leave from State University of Pernambuco, Brazil)	Classification and Standardization of Project Management Process Modeling Tools
2013-2014	Dr. Malin Zhang (Assoc. Prof. on leave from Southeast Univ. Nanjing, China)	Modeling of Construction Project Contract Disputes and Resolution Procedures
2015-2017	Dr. Jaeho Choi (Assoc. Prof. on leave from Dong-A Univ., Pusan, Korea)	1. Cost Optimization of Potable Water Delivery Construction Projects. 2. Innovative Strategies for Dredged Material Disposal
2016	Dr. Przemysław Sekuła (on leave from Univ. of Economics, Katowice, Poland)	Big Data Analysis Strategies for Infrastructure Project Construction, Operation and Maintenance

^[1] Joint advisee

In addition to his involvement with research advisory roles for the above students and scholars, Professor Skibniewski has served, and is currently serving, on additional Ph.D. and M.S. thesis committees in Civil and Environmental Engineering. He has also previously served on doctoral thesis committees in Electrical and Computer Engineering, Industrial Engineering, and Forestry and Natural Resources.

Research Grants and Awards Received (selected)

Start Date	End Date	Sponsor	Topic	Approx. Total Amount (US\$)	Proposal Involvement and Project Responsibility
1986	1987	CERL	Construction Industry Study of Emerging Building Technologies	35,000	Co-PI
1986	1988	Bechtel National, Inc.	Automation and Robotic Applications in Construction	15,000	PI
1987	1994	NSF	Presidential Young Investigator-Construction Automation	312,500	PI
1987	1988	PRF	Expert Systems for Functional Design and Evaluation of Construction Robotics	31,120	PI
1988	until expended	Charles Pankow Constructors, M.W. Kellogg	PYI Matching Funds	11,000	PI
1988	1989	NSF	Construction Robotics Systems Laboratory	40,500	PI
1988	1992	Obayashi Co.	Design and Development of Construction Robotics Fleet Management Systems	160,000	PI
1988	1992	IMMRRI	Automated Equipment Processes in Surface Mining	65,500	PI
1989	1989	CII	Construction Robotics Continuing Education Short Course Development	5,000	Co-PI
1989	1992	USBM	Evaluation and Quantification of Risks Confronted by Surety Companies Underwriting Reclamation Bonds	218,800	PI
1990	until expended	Waseda Univ.	Systems Science Institute Systems Engineering Research in Construction Automation	27,000	PI
1990	1992	CII	Expert Systems for Modular Construction	77,500	PI
1993	1993	CERL	Construction Robotics Center Long Range Research Plan	8,150	PI
1993	1996	Obayashi Co.	Automated Constructability Review Systems R&D	112,500	PI
1999	2001	PRF	Utility Assessment of Electronic Networking Technologies for Construction Project Management	28,000	PI

2000	2001	Yau Lee Holdings Ltd./VHSoft	Utility Assessment of Object Recognition Software for Project Quantity Take-offs	30,000	Co-PI
2003	2004	Purdue University Discovery Park/ e-Enterprise Center	<i>TeleTool</i> : Virtual Work Environment for Collaborative e-Work	50,000	PI
2003	2004	European Union <i>Leonardo da Vinci</i> Program	English-Medium Educational Materials for Construction Managers in EU Member Countries	200,000	Project Associate
2004	2004	Korea Water Corp.	Construction Management Training	9,000	PI
2004	2005	SAP Corp./ Vanguard	ERP Systems Implementation Strategies for Construction Firms	79,000	PI
2006	2006	Minta-Martin Foundation	Ubiquitous Computing Applications in Airport Infrastructure Condition Monitoring	34,500	PI
2006	until expended	Clark Construction Group LLC	Grant Support for Construction Project Management Research at UMD	50,000	PI
2007	2009	National Institute of Standards and Technology, U.S. Dept. of Commerce	Wireless Sensor Networks for Construction Asset Tracking Utilizing Ultrasound and RFID Technologies (Post-Doc. Support for Dr. W-S. Jang)	80,500	PI
2007	until expended	Faculty of Construction and Land Use, Hong Kong Polytechnic University	Joint Research in Construction Information Technologies	135,000	Research Partner and UMD Coordinator
2015	2016	Maryland Technology Transfer Center	Web-based Project Management System for Dredging Operations	25,000	Project Director
2016	2016	National Science Foundation	I-Corps Program (Dredging Project Innovation and Entrepreneurship)	50,000	PI

CERL = Construction Engineering Research Laboratory of the U.S. Army Corps of Engineers

CII = Construction Industry Institute, University of Texas-Austin

IMMRRI = Indiana Mining and Mineral Resources Research Institute

NSF = National Science Foundation

PRF = Purdue Research Foundation

USBM = U.S. Bureau of Mines, Office of Surface Mining and Reclamation

Professional Workshops and Short Courses (selected)

1. "Construction Automation Short Course for Practicing Engineers," Invited Short Course, Institution of Engineers of Hong Kong and University of Hong Kong, June 1994
2. "Robotics in Civil Engineering: State-of-the Art Review," Invited Short Course, Robotics Exhibition '94, Malaysian Industrial Development Authority, Johor Bahru, Malaysia, December 1994

3. "Advanced Computing Techniques in Construction," Invited Short Course for construction company executives, Yonsei University, Seoul, Korea, January-February 1996
4. "Cost Effective Construction Technology Innovations," Invited Short Course, Institution of Engineers of Hong Kong and University of Hong Kong, March 1996
5. "Legal Aspects of Construction Engineering Practice and Advanced Construction Technology Implementation," Invited Short Course, Institution of Civil Engineers of Hong Kong and University of Hong Kong, March 1997
6. "Sustainable Construction Engineering and Management," Invited Short Course, Institution of Engineers of Hong Kong and University of Hong Kong, March 1998
7. "Construction Project Administration," Invited Short Course, Institution of Engineers of Hong Kong and University of Hong Kong, June 1999
8. "Internet-Based Project Management Systems," Invited Short Course, Institution of Engineers of Hong Kong and University of Hong Kong, January 2000
9. "Construction Information Technology and Automation," Invited Short Course, Chung Hua University, Taiwan, October 2004
10. "Construction Management Graduate Education Programs," Invited Short Course, *Techint* Engineering and Construction Corp., Buenos Aires, Argentina, December 2004
11. "Construction Contracting Complexities and Innovative Solutions," Invited Short Course, Bechtel Power Corp., Frederick, Maryland, May 2007
12. "Critical Success Factors in ERP Systems Application in Construction," Invited Lectures for Engineering, Procurement and Construction Corporate Senior Executives, SAP A.G. World Headquarters, Walldorf - Heidelberg, Germany, September 2007
13. "International Contract Documents and Web-Based Project Management Systems," Invited Short Course, Bandung Institute of Technology and Indonesian Contractors Association, Jakarta, Indonesia, January 2008
14. "Construction Subcontracting – Legal Trends and Innovative Solutions," Invited Short Course, Bechtel Power Corp., Frederick, Maryland, November 2008
15. "Web-Based Project Management for Construction," Invited Short Course, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia, April 2009
16. "Mechanization, Automation and Robotics in Construction," Invited Seminar/ Short Course for Construction Engineers, Construction Research Institute of Malaysia and Construction Industry Development Board (Malaysia), Selangor, Malaysia, August 2012
17. "Crane Safety Standards – Current Research and Development," Invited Short Course for Practicing Engineers, Institute of Engineers Malaysia, Putra Jaya – Kuala Lumpur, August 2012
18. Various workshops and seminars on research proposal and peer-reviewed technical publications writing, multiple locations in Europe, North and South America and Asia, 2013-2019
19. "How to Become an Effective Writer of High Impact Scholarly Journal Paper Publications, Invited Workshop at Norwegian University of Science and Technology, Trondheim, Norway, September 2022

Student Counseling

As member of the Civil Engineering Graduate Admissions Committee representing the Construction Engineering and Management area, Professor Skibniewski served as the first faculty advisor to all incoming graduate students in construction engineering and management in the School of Civil Engineering at Purdue University. In addition to his work with graduate students, he was typically responsible each semester for approx. 15 undergraduate students in civil and construction engineering. Professor Skibniewski served as Faculty Advisor of *Beta Tau*, a Construction Engineering Honorary at Purdue University (1993-96), and of Purdue Students for Life (1998-2001). He served as Faculty Advisor to the Polish Students Association at Purdue (2002-2005), and was the founder of and faculty advisor to the Polish Students Association of Washington, D.C. (2005-2010). He also served as the founder and faculty advisor to the University of Maryland's student chapter of *Associated Builders and Contractors*, a national construction industry organization sponsored by the Washington, D.C. Metro Area chapter (2005-2010).

Upon his arrival at the University of Maryland, Prof. Skibniewski created the *e-Construction Group*, an academic research community based in the Department of Civil & Environmental Engineering for CEE and other Clark School graduate students, post-doctoral associates as well as outside individuals interested in state-of-the art Information Technology and automation tools and applications for decision support in construction project management. This group holds weekly meetings and research seminars conducted by Prof. Skibniewski, devoted to various research topics of interest to construction and engineering management researchers and practitioners.

University and Department Administrative Service

- **Civil and Environmental Engineering Committees (University of Maryland)**

2007-2010 Member, Executive Committee
2006-2010 Member, Graduate Program Committee
2006-07 Chairman, Faculty Search Committees for Structural Engineering and Project Management
2005-present Member, Faculty Promotion and Tenure Review Committee
2005-2009 Chairman, Graduate Studies Committee for the Project Management Program
2005-2010 Member, Graduate Admissions Committee for Project Management Program
2005-2009; 2015-2016, 2019-2021 Chairman, Project Management Ph.D. Preliminary Examination Committee
2012-present Member, Faculty Development Committee
2012-present Member, External Relations Committee
2016 Member, Faculty Merit Evaluation Committee

- **Civil Engineering Committees (Purdue University)**

1986-88 Member, Committee on Counseling and Guidance
1987-89 Member, Committee on Interactive Research
1987-99 Member, Committee on Civil Engineering Seminars
1988-89 Chairman, Committee on Counseling and Guidance
1989-90 Chairman, Committee on Interactive Research
1991-92 Member, Faculty Search Committee, Geotechnical Engineering Area
1993-94 Member, Faculty Search Committee, Transportation and Urban Engineering Area
1994 Member, Faculty Search Committee, Division of Construction Engineering and Management
1994-95 Elected Member, Area Heads Election Committee
1994-95 Elected Member, Committee on School Structure and Function
1995-96 Chairman, Committee on Civil Engineering Seminars
1995-2006 Member, Primary Committee (for Faculty Promotion and Tenure Decisions at Purdue University)
1996 Member, Faculty Retreat Planning Committee
1996-97 Chairman, Faculty Search Committee, Geotechnical, Structural, Transportation, Environmental and Hydraulics Areas
1996 Member, Area Heads Election Committee
2000 Member, Faculty Search Committee, Civil Engineering Materials Area
2000-01 Member, Civil Engineering Internal Awards Committee
2005 Member, CEM Division Head Search Committee

- **A.J. Clark School of Engineering Committees (University of Maryland)**

- 2007-2010, Alternate Member, A.J. Clark School of Engineering Faculty Promotion and Tenure Committee

- 2014-2015 Member, A.J. Clark School of Engineering Faculty Promotion and Tenure Committee
- **College of Engineering Committees (Purdue University)**
 - 1987 Member, *ad hoc* Committee on Undergraduate Student Distribution
 - 1991-93 Member, Academic Personnel Grievance Committee
 - 1990,1996 Member, Purdue Research Foundation Summer Faculty Grant Evaluation Committee
 - 2003-04, Coordinator, Purdue Recruitment Overseas (special initiative in diversity in Ph.D. student recruitment)
 - 2003-04, Member, Purdue University United Arab Emirates Special Academic Initiative
- **University Committees (Purdue University)**
 - 1996-1999 Invited Member, Editorial Board, Purdue University Press
 - 1996 Invited Member, Library Committee on Serials Acquisition
 - 1997-1999 Co-Chairman, Intel Corp. University Grant Executive Committee
 - 1997 Member, University Open Computing Facilities Committee
 - 1997-2004 Chairman, Academic Conflict of Interest University Committee
 - 1997-1998 Co-Chairman, Lecturer Employment Policy Committee
 - 1997-1998 Instructional Computing Facility Policy Committee
 - 1998 Co-Chairman, University Computational Center (PUCC) Performance Review Committee
 - 1999-2000 Member, Intellectual Property University Policy Committee
 - 1999-2002 Member, University Computing Resources Committee
 - 2001 Coordinator, University Facilities Planning Committee
 - 2002-03 Member, Afghanistan Higher Education University Assistance Committee
- **University Committees (University of Maryland)**
 - 2005-2008, 2019-2022 Member, University Senate

Community Service Activities (selected)

Judge, Lafayette-Indiana Regional Science and Technology Fair, 1987-88
Program Editor and Host, WBAA (Purdue University) radio program, 1988
Foreign Language Instructor, International Center, West Lafayette, IN, 1988-95
Lector, St. Thomas Aquinas Center, Purdue University, 1993-96
Member, Board of Directors, International Center of Greater Lafayette, 2000-02
Founder and Faculty Advisor, Polish Students Association of Washington, D.C. Metro Area, 2005-present
Member, Parents Committee, Polish School of Washington, D.C., 2007-2008
Lector, Our Lady of Częstochowa and St. Maximilian Kolbe Parish, Silver Spring, MD, 2006-present

Consulting, External Advisory and Related Activities (selected)

Consultant, construction robotics international survey, *Byggecentrum*, Copenhagen (Building Research Institute of Denmark), 1988
Consulting Research Professor, strategic planning of construction equipment research and development, Institute for Mechanized Construction and Rock Mining, Warsaw, Poland, 1993-2009

Consultant, academic central administration planning and management, *Ana Mendez University System*, Puerto Rico, 1999-2000

Consulting Professor, e-commerce and business decision support systems, University of Information Technology and Management, Rzeszów, Poland, 2000-2005

Advisor, international cooperation, College of Communication and Management, Poznań, Poland, 2000-2004

Consultant, proposal reviews for advanced automation technologies in remediation of nuclear waste contamination, U.S. Department of Energy, Washington, D.C., 2001

Consulting Member of the Senate, Skarbek College of Commerce and International Finance, Warsaw, Poland, 2001-2005

Consulting Member of Research Advisory Council, Institute for Theoretical and Applied Informatics, Polish Academy of Sciences, Gliwice, Poland, since 2007

Research Consultant, Ruentex Engineering and Construction Co., Taipei, Taiwan, 2007-2009

Consultant, Direct Sensing LLC, Oak Ridge, TN, 2014

Special Skills

Working knowledge of several foreign languages.