Stanford

Renate Fruchter

Director of PBL Lab

Civil and Environmental Engineering

Bio

BIO

Dr. Renate Fruchter is the founding director of the Project Based Learning Laboratory (PBL Lab), lecturer in the Department of Civil and Environmental Engineering, and Senior Research Engineer thrust leader of "Collaboration Technologies" at the Center for Integrated Facilities Engineering (CIFE), at Stanford. She received her Civil Engineering Diploma from the Institute for Civil Engineering, Bucharest, Romania. She received her M.Sc. and Ph.D. from the Technion – Israel Institute of Technology. Her R&D focuses on collaboration technologies in support of cross-disciplinary, geographically distributed teamwork in education and corporate settings. Over the years her research team developed and deployed innovative collaboration technologies for virtual team building, synchronous and asynchronous knowledge capture, sharing and re-use, project memory, corporate memory, and mobile solutions for global teamwork and e-Learning. She is a designer of physical and virtual interactive learning and workspaces. She studies the relation between technology-people-place-process. These studies focus on the impact of technology on learning, engagement, knowledge work productivity, emergent work practices and processes, team dynamics, and assessment. She is the developer of the innovative "Architecture, Engineering, Construction (AEC) Global Teamwork" course launched in 1993 engaging university and industry partners worldwide. Her latest projects focus on: (1) big data analytics and visualization towards harmonizing occupant well-being and building sustainable performance; and (2) accelerating creativity and engagement in global teamwork through VR, AI, and parametric modeling.

ACADEMIC APPOINTMENTS

- Sr Research Engineer, Civil and Environmental Engineering

ADMINISTRATIVE APPOINTMENTS

- Director, PBL Lab, (1996-2021)

HONORS AND AWARDS

- Award for Outstanding Contributions Computing in Civil and Building Engineering, ISCCBE (2016)
- Best Paper Award, ASCE (2016)
- Best Paper Award, ISCCBE (2016)
- Computing in Civil Engineering Award, ASCE (2013)
- Award for Innovation of PBL Lab and AEC Global Teamwork, Learning!100 (2011)
- Doctor Honoris Causa for ground-breaking work on PBL, Faculty of the Humanities, Aalborg University, Aalborg, Denmark (2011)
- Award for 21st Century Award for Best Practices in Distance Learning Distinction for PBL Lab, U.S. Distant Learning Association (USDLA) (2010)
- Appreciation for IT Innovation, Intel - Information Technology, IT People, Intellectual Capital and Solutions Group (2001)
- Best Journal Paper Award, CERA: Concurrent Engineering Research and Application International Journal (1998)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Scientific Board Member, AI & Society International Journal (2010 - present)

- TAC Member, ASCE (2007 - 2010)

- Board Member – ASCE USA liaison, ISCCBE (2006 - 2012)

- TCCIT EXCOM Member, ASCE (2003 - 2007)

- Scientific Board Member, ISCCBE (2002 - present)

- Associate Editor, ASCE Journal of Computing in Civil Engineering (1997 - 2000)

- TCCIT Education Committee - Chair, Vice-chair, Secretary, ASCE (1994 - present)

- TCCIT Intelligent Computing Committee Member, ASCE (1992 - present)

PROGRAM AFFILIATIONS

- Center for East Asian Studies

PROFESSIONAL EDUCATION

- Ph.D., Technion - Israel Institute of Technology, Haifa, Israel , Civil Engineering (1990)

- M.Sc., Technion - Israel Institute of Technology, Haifa, Israel , Civil Engineering (1986)

- Engineering Diploma, Civil Engineering Institute Bucharest, Bucharest, Romania , Civil Engineerin (1981)

PATENTS

- Fruchter Renate, Biswas Pratik. "United States Patent #7458013 Concurrent Voice to Text and Sketch Processing with Synchronized Replay", Leland Stanford Junior University, Nov 25, 2008

- Yen Samuel, Fruchter Renate, Leifer Larry. "United States Patent # 6724918 System and Method for Indexing, Accessing and Retrieving Audio/Video with Concurrent Sketch Activity", Leland Stanford Junior University, Apr 20, 2004

LINKS

- AEC Global Teamwork Project Gallery: http://pbl.stanford.edu/AEC%20projects/projpage.htm

- PBL Lab: http://pbl.stanford.edu

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Cognitive demands on global learners, VR in teamwork, Sustainability, Wellbeing

Teaching

COURSES

2023-24

- Computer Integrated A/E/C: CEE 122B (Spr)

- Computer Integrated Architecture/Engineering/Construction (A/E/C): CEE 122A (Win)

- Computer Integrated Architecture/Engineering/Construction (AEC) Global Teamwork: CEE 222A (Win)

- Computer Integrated Architecture/Engineering/Construction (AEC) Global Teamwork: CEE 222B (Spr)

2022-23

- Computer Integrated A/E/C: CEE 122B (Spr)

- Computer Integrated Architecture/Engineering/Construction (A/E/C): CEE 122A (Win)

- Computer Integrated Architecture/Engineering/Construction (AEC) Global Teamwork: CEE 222A (Win)

- Computer Integrated Architecture/Engineering/Construction (AEC) Global Teamwork: CEE 222B (Spr)

2021-22

- Computer Integrated A/E/C: CEE 122B (Spr)

- Computer Integrated Architecture/Engineering/Construction (A/E/C): CEE 122A (Win)

- Computer Integrated Architecture/Engineering/Construction (AEC) Global Teamwork: CEE 222A (Win)

- Computer Integrated Architecture/Engineering/Construction (AEC) Global Teamwork: CEE 222B (Spr)

2020-21

- Computer Integrated A/E/C: CEE 122B (Spr)

- Computer Integrated Architecture/Engineering/Construction (A/E/C): CEE 122A (Win)

- Computer Integrated Architecture/Engineering/Construction (AEC) Global Teamwork: CEE 222A (Win)

- Computer Integrated Architecture/Engineering/Construction (AEC) Global Teamwork: CEE 222B (Spr)