

# Resume

## Bozidar Stojadinovic, Professor

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### Biographical Data

Born **06.10.1962**  
Nationality **USA**  
Residency **Switzerland**

### Education

May 1995 **Ph.D. Civil Engineering** **University of California, Berkeley**  
Major: Seismic design and analysis of concrete structures  
Minors: Theoretical mechanics, numerical mathematics  
Thesis Title: “Seismic Upgrading of Bridge Outrigger Knee Joint Systems”  
Thesis advisor: Professor C. R. Thewalt

May 1990 **M.S. Civil Engineering** **Carnegie-Mellon University**  
Major: Computer-aided engineering  
Thesis Title: “Neural Computing in Civil Engineering”  
Thesis advisor: Professor D. R. Rehak

March 1988 **Dipl.Ing. (B.S.) Civil Engineering** **University of Belgrade, Yugoslavia**  
Major: Design of concrete structures  
Thesis Title: “Cable-Stayed Bridge over River Sava in Belgrade”  
Thesis advisor: Professor S. Venecanin

### Employment History

2011 – today **Professor**, IBK, D-BAUG, Swiss Federal Institute of Technology (ETH) Zürich  
**Chair of Structural Dynamics and Earthquake Engineering**

2010 – 2010 **Kwang-Hua Visiting Professor**, Department of Civil Engineering, Tongji University, Shanghai, China

2009 – 2011 **Geological Faculty Scientist**, ESD, Lawrence Berkeley National Laboratory

2008 – 2011 **Professor**, CEE Department, University of California Berkeley  
Structural Engineering, Mechanics and Materials

2006 – 2009 **Director**, NEES Equipment Site laboratory, University of California Berkeley

2003 – 2008 **Associate Professor**, CEE Department, University of California Berkeley

2000 – 2003 **Assistant Professor**, CEE Department, University of California Berkeley

1995 – 1999 **Assistant Professor**, CEE Department, University of Michigan, Ann Arbor

1990 – 1995 **Graduate Research and Teaching Assistant**, CEE Department, University of California Berkeley

1988 – 1990 **Graduate Research Assistant**, CEE Department, Carnegie-Mellon University

1988 **Research Engineer**, Institute IMS, Belgrade, Yugoslavia

1987 **Graduate Teaching Assistant**, CEE Department, University of Belgrade

**Swiss Federal Institute of Technology Zürich**

July 2011-present

Professor, Chair of Structural Dynamics and Earthquake Engineering

Performing teaching, research and service duties at the Department of Civil, Environmental and Geomatic Engineering of the Swiss Federal Institute of Technology Zürich (ETHZ). Teaching duties are centered on the core Masters course in Structural Dynamics and two Masters courses in Seismic Design. Research is organized in four areas. The main research concentration is on probabilistic performance-based seismic design of civil structures, specializing in performance-based evaluation and design of highway bridge structures, industrial and nuclear facility structures, and communities using the methodology developed within the Pacific Earthquake Engineering Center at Berkeley. An ongoing research project in this area is the development of a risk-informed performance-based regulatory framework for nuclear facility structures. Second focus is on development of novel structural response modification devices, technologies and theoretical background aimed at improving seismic performance of sensitive infrastructure facilities. A recent research project in this area is on the application of seismic isolation technology to enhance the seismic performance of small modular nuclear power plants. Third concentration area is the behavior and design of steel-concrete composite structural element, structural connections, and structures under seismic, blast and fire loads. A recent project in this research area is on the development of steel-concrete sandwich structural walls for tall buildings and especially hardened facilities. The fourth research area is the application of modern information technologies and computer-controlled devices to improve the science and practice of structural engineering. Ongoing research in this area is on the development of new experimental methods, such as the hybrid simulation technology, to effectively demonstrate the performance of civil structures under earthquake excitation using hybrid models composed of physical and computer-instantiated components. Service duties include those associated with the financial and personnel aspects of the Chair, administrative tasks within the Institute for Structural Engineering (IBK) and the Department, and professional education and technology transfer services. Current service project is design and installation of the hybrid simulation capability at the IBK Structural Testing Laboratory at ETHZ.

**University of California Berkeley**

January 2000–June 2011

Professor of Civil Engineering

Performing teaching, research and service duties at the Department of Civil and Environmental Engineering of the University of California Berkeley and the Earth Science Division of the Lawrence Berkeley National Laboratory. Teaching assignments include two undergraduate (Structural Engineering and Design of Steel Structures) and three graduate courses (Design of Steel and Composite Structures, Behavior of Steel Structures, and Experimental Methods in Structural Engineering). Recent and ongoing funded research projects address: 1) development of probabilistic performance-based seismic design tools for bridge design and evaluation; 2) introduction of next-generation accelerated bridge construction into California bridge design practice; 3) development of probabilistic risk-reduction factor based evaluation procedures for nuclear facility structures; 4) development of a technical basis for US Nuclear Regulatory Commission review of base isolation technologies for nuclear power plant structures; 5) feasibility study of Generation IV nuclear power plant structural design; 6) development of hybrid simulation experimental methods for examination of seismic behavior of structures using NSF's George E. Brown Jr. Network for Earthquake Engineering Simulation (NEES); 7) design and development of the *nees@berkeley* Equipment Site; 8) experimental evaluation and development of fragility models for reinforced concrete bridge columns, reinforced concrete shear walls, and steel moment connections and steel column base connections; 9) simulation of earthquake motion and response of structures in an urban region; and 10) integration of acquired wireless sensor data into a framework for evaluation of the state of the structure after an extreme seismic or blast event. Department service duties are: Director (from 09/2006 until 10/2009) and Associate Director (09/2004 to 09/2006) of the UC Berkeley NEES Equipment Site, member of the UC Berkeley Seismic Review Committee, UC Berkeley representative of the board of CUREE,

Member of the UC Berkeley College of Engineering SUPERB committee, and EERI Student Chapter Faculty Advisor. Professional consulting services include: Consulting Member of the US Nuclear Regulatory Commission Advisory Committee on Regulatory Safeguards for issues related to structural integrity of nuclear power plant structures; external consultant for structural health monitoring systems for Kinometrics Inc.; peer reviewer for the San Francisco Department of Building Inspection.

**University of Michigan, Ann Arbor**

July 1995–December 1999

Professor of Civil Engineering

Performed teaching, research and service duties at the Department of Civil and Environmental Engineering. Teaching assignments include two undergraduate courses (Solid and Structural Mechanics, and Reinforced Concrete Design) and three graduate courses (Dynamics of Structures, Finite Element Methods in Solid and Structural Mechanics, and Earthquake Engineering). Completed research projects include: 1) development of Free Flange fully restrained steel beam-to-column connection (FEMA-350); 2) examination of reasons for failure of steel moment connections; 3) investigation of seismic behavior and design options for moment-resistant column bases; and 4) applications of augmented reality for detecting and managing hazard imperceptible by human senses. Developed and conducted a short course on Dynamics of Structures at the Black and Veatch Ann Arbor office. Department service duties were: Associate Director of the Structures Laboratory, ASCE Student Chapter Faculty Advisor and member of the departmental Research Committee.

**University of California Berkeley**

January 1990–June 1995

Graduate Student

Completed requirements for a Ph.D. degree in Civil Engineering. Worked as a project engineer on a SAC Joint Venture project to experimentally analyze the pre-Northridge style steel beam-to-column connections with Professor E. P. Popov. Performed experimental and theoretical analysis of the behavior of existing and upgraded bridge outriggers with Professor C. R. Thewalt. Wrote ArcS, a program for interactive nonlinear analysis of reinforced concrete cross sections. Worked as a Teaching Assistant for two graduate courses: Nonlinear Structural Analysis and Finite Element Methods.

**Carnegie-Mellon University**

August 1988–December 1989

Graduate Student

Completed requirements for an M.S. degree in Civil Engineering. Examined potential uses of the neural computing paradigm in engineering design and developed sample applications. Assisted in teaching of an undergraduate Structural Analysis course.

**Professional Memberships**

Earthquake Engineering Research Institute, Member, 1992

American Concrete Institute, Member, 1993

American Society of Civil Engineers, Associate Member, 1995

American Institute of Steel Construction, Member, 1996

Structural Stability Research Council, Member, 1999

Consortium of Universities for Research in Earthquake Engineering, Board Member, 2000

Network for Earthquake Engineering Simulation, Member, 2000

**Awards and Honors**

2006 ACI Fellow

2004 ASCE Walter L. Huber Civil Engineering Research Prize

2003 University of California Berkeley Presidential Chair Fellow Award

1999 NSF CAREER Award: Haptic Models of Large Structures

1999 ASCE/CERF CAREER Award

1997 University of Michigan Presidents Initiative Fund Award

1988 ‘‘B. Korolija’’ Prize for Outstanding Scholastic Achievement

1987 University of Belgrade Award for Outstanding Academic Achievement.