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**EDUCATION**

1996-2000: **Ph.D. in Civ. Eng.**, Swiss Federal Institute of Technology, Lausanne (EPFL)

1989-1996: **B.Sc. in Theoretical Mathematics**, University of Belgrade, Faculty of Mathematics

1989-1994: **B.C.E. in Civil Engineering**, University of Belgrade, Faculty of Civil Engineering

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**EMPLOYMENT HISTORY**

2022-present: **Professor**, Princeton University, Dept. of Civil and Environmental Eng.

2015-2022: **Associate Professor**, Princeton University, Dept. of Civil and Environmental Eng.

2009-2015: **Assistant Professor**, Princeton University, Dept. of Civil and Environmental Eng.

2000-2008: **Solutions & Services Manager / R&D Manager**, SMARTEC SA, Switzerland

1996-2000: **Ph.D. Student, Teaching Assistant, Project Manager**, EPFL, Switzerland

1994-1996: **Teaching Assistant**, University of Belgrade, Faculty of Civil Engineering

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**RESEARCH TOPICS**

- **Structural Health Monitoring (SHM)** for sustainable and resilient future cities based on advanced sensing, data analysis, and structural modeling, and emerging digital technologies
  - Advanced SHM technologies: fiber optic sensors (**FOS**), 2D sensing sheets based on large area electronics (**LAE**), 3D sensing using **GPR** and embedded **RF-sensors**, conductive polymers
  - Adv. SHM data analysis: **physics-** and **data-based** diagnostics and prognostic by combined **analytical and numerical modelling** (FEM, DEM) with **machine learning** (CNN, EMD, etc.)
  - Advanced data and metadata management: documentation, integration, and visualization using Photogrammetry, Virtual Tours, Information Modelling, and Augmented Reality (**VT/IM/AR**)
  - SHM decision-making: **Bayesian** inference, cognitive and organizational bias of **heuristics**, expected utility theory (**EUT**), prospect theory (**PT**), and value of information (**VOI**)
  - **Cyber-Physical Systems** based on true **Smart Structures** (kinetic, deployable, and adaptable)
  - **Heritage structures, structural art**: holistic analysis for sustainable preservation and reuse
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**TEACHING SUBJECTS**

CEE312 Statics of Structures

CEE415/HUM417/... Historic. Struct.:

Ancient Arc.'s: Materials, Constr. and Eng.

CEE463/263/GLS263 A Social and Multi-

Dimensional Exploration of Structures

CEE521 Continuum Mechanics

CEE537 Structural Health Monitoring

CEE538/ART538 Holistic Analysis of Heritage Str.

EGR156 Foundations of Eng.: Multivariable Calc.

EGR102 Engineering in the Modern World (precept)

Short Courses on SHM using Fiber Optic Sensors

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**TEACHING SKILLS**

Courses followed and completed in Pedagogy, Psychology, and Methods of Education

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**LANGUAGES**

Serbian (also Croatian, Bosnian, and Montenegrin) Mother tongue

English, French, Italian, Macedonian

Fluent

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## SELECTED AFFILIATIONS

<b>A&amp;A</b>	<b>Director, Program in Archeology</b> , Department of Art & Archeology, Princeton University, 2022-present
<b>PIIRS</b>	<b>Faculty Associate</b> , Princeton Institute for International and Regional Studies, Princeton University, 2019 – present
<b>DUT</b>	<b>Visiting Professor (3-year term)</b> , Dalian U. of Technology, China, 2018-2021
<b>CAIT</b>	<b>Affiliated Faculty</b> , Center for Advanced Infrastructure and Transportation, Rutgers University, 2009 – present

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## SELECTED PROFESSIONAL MEMBERSHIPS (LEADERSHIP ROLES)

<b>SPIE</b>	<b>Lifetime Member, Conference Co-Chair:</b> Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems, within SPIE Smart Struct. & Non-Destructive Eval., Int'l Soc. for Optics and Photonics
<b>ISHMII</b>	<b>Council Member, Vice-President for Education (2016-2022)</b> , International Society for Structural Health Monitoring of Intelligent Infrastructure
<b>ACI</b>	<b>Voting Member</b> , Committee 444: Structural Health Monitoring, American Concrete Institute
<b>TRB</b>	<b>Inaugural Committee Member</b> , Bridge Preservation Committee (AKT60), Transportation Research Board of the National Academies <b>Member</b> , Joint Subcommittee on Structural Health Monitoring (AHD30(3))
<b>IRD/ASCE</b>	<b>Member</b> , Emerging Technologies Committee, Infrastructure Resilience Division of American Society of Civil Engineers
<b>IEC</b>	<b>Member, Technical Advisory Group</b> for Int'l Standards Developments, IEC SC86C: <i>Fibre Optics Systems &amp; Active Devices</i> , Int'l Electrotech. Commission

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## SELECTED HONORS AND AWARDS

<b>2011&amp;22:</b>	<b>Two Excellence in Teaching Awards</b> , by Undergraduate and Graduate Engineering Council (E-Council) of Princeton University
<b>2021:</b>	<b>ASCE Moisseiff Award</b> , by Structural Engineering Institute of American Society of Civil Engineers
<b>2019:</b>	<b>ISHMII Fellow</b> , by International Society for Structural Health Monitoring of Intelligent Infrastructure
<b>2019:</b>	<b>SPIE Community Champion</b> , by International Society for Optics and Photonics.
<b>2014:</b>	<b>E. Lawrence Keyes, Jr. / Emerson Electric Co. Faculty Advancement Award</b> , by the School of Engineering and Applied Science, Princeton University
<b>2014:</b>	<b>Highly Commended Award</b> , by The Chartered Institute of Building (CIOB), UK
<b>2013:</b>	<b>The Structural Health Monitoring Person of the Year Award</b> , by the editorial board, associate editors, and editors of journal <i>Structural Health Monitoring</i>
<b>2017&amp;21:</b>	<b>Two Literary Achievement Awards</b> , by International Bank Note Society ( <i>hobby</i> )

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## HIGHLIGHT PROJECTS

Punggol EC26 (1<sup>st</sup> 20+year appl. of FOS in buildings)  
SMARTape/SMARTprofile (1<sup>st</sup> commercial DFOS\*)  
Gota Bridge (1<sup>st</sup> long-term large-scale appl. of DFOS)  
350+ SHM projects (bridges, buildings, pipelines...)  
Streicker Bridge (outdoors lab for SHM, 20+papers)

\*DFOS=Distributed Fiber Optic Sensor

## SUMMARY OF RESEARCH FUNDING

External grants (EU, CH): ~\$1,500,000  
External grants (USA): \$1,505,192  
Internal grants (Princeton): \$650,360  
In-kind (USA, EU, Asia): \$852,191  
**Total: ~\$4,500,000**

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## SELECTED COLLABORATIVE PROJECT AND INITIATIVES

### WHILE IN INDUSTRY

**EU-Funded Projects:** “POLYTECT” 2006-2010, “ZEM” 2001-2005, “PDT-COIL” 2000-2005, numerous int’l collaborators from industry and academia; **SMARTEC R&D Manager**

### OUTSIDE PRINCETON UNIVERSITY

**USDOT-UTC Program:** The United States Department of Transportation University Transportation Center (UTC), ‘Region 2’, consortium of ten US colleges and universities, 2018-2022; **Princeton Project Director**

**Future Cities Laboratory (Singapore – ETH Centre): *Responsive Cities***; numerous international collaborators, 2015-2019; **Cyber Civil Infrastruct. Advisory Committee**

**The Getty Foundation: *Keep it modern***; consort. of eight institutions aiming at restoring and preserving The Nat’l School of Arts, Havana, 2019-2020; **Princeton Coordinator**

### WITHIN PRINCETON UNIVERSITY

**Heritage Structures Program: *Holistic Analysis of Heritage Structures***: in development with Department of Art & Archaeology, 2015-present; **Co-Founder**

**Engineering and the Arts Initiative:** *university wide movement (informal mini-center) that focuses on research challenges at intersection of the two*, 2018-present; **Co-Founder**

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**INVITED, KEYNOTE, AND GUEST LECTURES:** 57 in total

**SPONSORED VISITS, WORKSHOPS, AND LECTURES:** 28 in total

**SPECIAL EVENTS, NEWS, AND OUTREACH:** 30+ in total

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### SELECTED SERVICES OUTSIDE PRINCETON UNIVERSITY

**Advisory Board Member:** **Federal Highway Administration** Exploratory Advanced Research Project “Virtual Nondestructive Evaluation (NDE) for Highway Structures”; **University of Perugia**, Italy, the International Faculty Board of the Doctoral Program in CEE

**Tenure / Promotion Referee** for two international and three national cases

**Editorial Board Member** of six journals (including ***Sensors***) and guest editor of five special issues; ***Executive Editorial Board Member***, Engineering Research Express

**Scientific Advisory or Program Committee Member** of numerous events, incl. **IWSHM**, **SPIE**, **SHMII**, **IABSE**, etc.; **Organized / Chaired** of 18 mini-symposia and spec. sessions

**Reviewer of research proposals** (incl. NSF, NSERC, SNF) and numerous **journal papers**

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### SELECTED SERVICES TO PRINCETON UNIVERSITY

**University Research Board** (2020-present), **Committee on Library and Computing** (2019-present), **Faculty Council on Teaching and Learning** (2017-2019), **Chair** (2018-2019)

**Executive Committee**, Programs in Archaeology (2018-2022) and Arc. and Eng. (2017-2020)

**Director of Undergraduate Studies**, Department of CEE (2015-present)

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### MENTORING

**UNDERGRADUATE: Summer:** 16 students; **Independent study:** 25 stud.; **Senior thesis:** 40 stud.  
Outcomes: 20+ *journal papers*, 22 *students awarded*; 2 *advisees work in academia*

**GRADUATE: M.S.E.:** 11 stud.; **Ph.D.:** 12 stud. (8 grad., 4 to grad. 2023-28); **VSRC:** 9 int’l stud.  
Outcome: 60+ *journal papers*, 1 *book chapter*, 9 *awards*; 3 *grad. Ph.D.-s work in academia*

**POSTDOCTORAL:** 2 postdocs; Outcome: 7 *journal papers*; 2 *postdoc work in academia*

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### PUBLICATIONS

**Books:** 1 + 1 (in 2023) + 1 hobby; **Book chapt.:** 6; **Papers:** 103; **Conference papers:** 200+.