PERSONAL INFORMATION

Raihan Rahmat Rabi

(01 April 2022 – Present)

Post-Doctorate researcher (Assegnista di ricerca)

La Sapienza Universita di Roma

- Review of the state-of-art of methodology concerning the bridge health monitoring
- Review of the state of the art regarding the damage detection through neural networks
- Development of a damage detection procedure based on the data acquired from the numerical bridge models
- Application of the developed damage detection procedure on a real bridge

(01 March 2021 – 28 Feb 2022)

Post-Doctorate researcher (Assegnista di ricerca)

Universita degli studi dell'Aquila

- Review of the state-of-art of methodology for the seismic assessment of bridges;
- Review of the state-of-art of applications of UAV for bridges;
- Development of a platform for the 3D reconstruction of the bridge geometry based on UAV photogrammetry and computer vision.
- Development of a system for the automatic extraction of the geometric information of the bridge starting from the point cloud.
- Development of a simplified framework for the nonlinear seismic analysis of bridges.

(01 Sep 2020 – 31 Dec 2020)

Research collaboration (Short term)

Sapienza University of Rome

- Literature review of vulnerability assessment of RC buildings
- Development of a simplified analytical method for the seismic assessment of shear-type buildings
- Development of fragility curves using the simplified analytical assessment method for RC frames
- Territorial risk assessment

(Jun 2013 – Feb 2014)

Bridge Design Engineer

Ministry of Rural Rehabilitation and Development, Kabul,

- Design solutions, execution details, analysis and design of the structures;Prepare repair / rehabilitation of existing structures
- Check and provide guidance to Auto CAD Draftsman
- Coordination with Road Engineers and relevant personnel from other fields
- Development of a detailed project plan to monitor and track progress
- Preparation of monthly reports on the status of the activity performed
- Supervise Bridge / Culvert Inventory / Condition Survey
- Report and escalate to General Project Manager as needed

EDUCATION AND TRAINING

(Nov 2016 – Feb 2020) **PhD in Structural Engineering**

Sapienza University of Rome, Italy

▪ Assessment and retrofitting of R/C structures using energy dissipative braces
▪ Comparison of the efficiency of design methods for dissipative bracing systems
▪ Proposal of an innovative energy-based approach for the design of bracing systems

(Jan 2015 – April 2016) **Master of Science (MSc) in Structural Engineering (Master Europroject)**

Sapienza University of Rome, Italy

▪ Modelling and Analysis of Structures
▪ Reinforced Concrete Design to Eurocode 2
▪ Steel Design to Eurocode 3
▪ Anti-Seismic Reinforced Concrete Design
▪ Masonry Construction
 Timber Structures Design

(June 2009 – June 2013) **Bachelor of Science (BSc) Degree in Civil Engineering**

Nangarhar University, Jalalabad, Afghanistan

▪ Mechanics of soil (Geotechnical Engineering)
▪ Reinforced Concrete Design to ACI Code
▪ Steel Structures Design
▪ Environmental Engineering
▪ Analysis and Design of Bridges

(Jan 2011 – Feb 2012) **Attended Master in Evaluation Control and Reduction of Environmental Seismic Risk (MECRES) as an Exchange Undergraduate Student**

Sapienza University of Rome, Italy

▪ Anti-Seismic Reinforced Concrete Design
▪ Masonry Constructions to Eurocode 6
▪ Bridge Design
▪ Steel Constructions
▪ Finite elements method
▪ Strengthening with Advanced Composite materials

(Feb 2006 – Mar 2007) **Diploma in Business Administration (DBA)**

Capital College of Information Technology, Peshawar, Pakistan

▪ Financial Accounting
▪ Principles of Business
▪ Business communication
▪ Management
▪ Money, Banking and Finance

PERSONAL SKILLS

Mother tongue(s)	Pashto

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
	Certificate of Proficiency In English				
Italian	B2	B2	B2	B2	B2
	Certificate In Italian Language				

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Computer skills
- Professional ability of programming and data analysis in MATLAB
- Professional ability of programming and data analysis in Python
- Professional ability in using OPENSEES
- Professional ability to use commercial FEM softwares such as SAP2000, ETABS, CDS

ADDITIONAL INFORMATION

Publications
- Mechanical-Analytical Soil-Dependent Fragility Curves of Existing RC Frames with Column-Driven Failures
  Published in *Buildings* 11, no. 7: 278. https://doi.org/10.3390/buildings11070278

- Energy-based method to design hysteretic bracings for the seismic rehabilitation of low-to-medium rise RC frames
  Published in *Bulletin of earthquake engineering* https://doi.org/10.1007/s10518-021-01249-z

- Simplified pushover analysis for the assessment of shear-type RC frames
  Published in *Appl. Sci.* **2021**, *11*(24), 11711; https://doi.org/10.3390/app112411711

- Direct displacement-based design of hysteretic bracings for retrofitting of reinforced concrete buildings http://10.21203/rs.3.rs-2125238/v1

Presentations
- Presentation on the assessment of reinforced concrete structures and the solutions of retrofitting and strengthening, at Sapienza University, Rome, Italy.
- Presentation on construction of confined masonry techniques and the effects of infill walls on the design parameters, at the university of Nangarhar University, Afghanistan.

Conferences
- CICE international conference on Fiber Reinforcing Polymers (FRP)

- OPENSEES DAYS international Conference on modelling and analysis of masonry bridges

References