

## PERSONAL INFORMATION

Raihan Rahmat Rabi



## WORK EXPERIENCE

(01 March 2021 – 28 Feb 2022)

## Post-Doctorate researcher

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>

## 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

**Prof. Giorgio Monti**

- Full professor at Sapienza University of Rome, Italy.
- Email:

**Dr. Vincenzo Bianco**

- Assistant Professor, Sapienza University of Rome
- Email:

Data e luogo: Roma, 18/01/2022

Firma: