

## PERSONAL INFORMATION

Name **BORAZJANI, Arman**

Address

Telephone

E-mail **BORAZJANI.1916173@STUDENTI.UNIROMA1.IT**

Nationality IRANIAN

Date of birth 1992

Research Interests  
Modeling of Graphene Nanocomposites  
Modeling of Dynamics and Vibrations numerical  
Nonlinear modeling and Analysis of Structures  
Finite Elements Method Modeling  
SPM, AFM  
Nonlocal, Two-phase Elasticity numerical modeling  
NEMS, MEMS

## ACADEMIC EXPERIENCE

[Sapienza University of Rome](#), Rome, Italy, September 2019 – present

**M.Sc.** in Nanotechnology engineering, **GPA: 3.67/4 (27/30)**

*Relevant Courses:* Surface Engineering, Chemistry for Nanotechnology, Modern Physics for Nanotechnology, Electron Microscopies and Related Techniques, Optics, Macromolecular Structures, Micro-Nano Fluidics, Dynamics of Micro-Mechatronic systems, Nonlinear analysis of structures, Sensors Laboratory, Micro-Nano devices and Materials for Electrical Electromagnetic Applications and Fundamentals, Nanoelectronic and MEMS Integrated Devices.

[Islamic Azad University North Tehran Branch](#), Tehran, Iran. September 2011 – August 2016

**B.Sc.** in Mechanical engineering, **GPA: 3.1/4 (15.06/20)**

*Thesis:* Design and Construction of Vibration and Critical Speed meter flexible Rotor (19/20)

### Research Assistant

At the CNIS - Centro di ricerca interdipartimentale sulle nanotecnologie applicate all'ingegneria di Sapienza, under the supervision of prof. Alessandro Giuseppe D'Aloia, Sapienza University of Rome, Rome, Italy. July 2022 – present

### Research Assistant

In Impact Mechanics Laboratory, **Analyzing vibration, buckling, and energy harvesting of local/nonlocal piezoelectric nanobeams** (under the supervision of prof. Shahrokh Hosseini Hashemi), [Iran University of Science and Technology](#), Tehran, Iran. September 2017 – September 2019

*Relevant Courses:* Advanced Vibration, Continuum Mechanics, Impact Mechanics, Finite Element, Advanced Mathematics, Robotics, Advanced Dynamics.

### Teaching Assistant

Mechanical Vibrations; Instructor: Prof. Shahrokh Hosseini Hashemi; [Iran University of Science and Technology](#), Fall 2018, Spring 2019.

Impact Mechanics; Instructor: Prof. Shahrokh Hosseini Hashemi; [Iran University of Science and Technology](#), Fall 2018, Spring 2019

**Elected Member and Head of Students Scientific Chapter (SSC)**, Department of Mechanical Engineering, Iran University of Science and Technology, Tehran, Iran, September 2017 – July 2019.

**Revit (Mechanical) designer** in Emarat\_e\_khorshid office, designing mechanical facilities of buildings, Tehran, Iran, April 2018-July 2019

**Internship Trainee** at Pars Tethys-Trench Dredging Industries Co (TDIC), Tehran, Iran, May 2014-August 2016

**Buckling of a stiffened/unstiffened panel simulation in MSC Nastran and Abaqus softwares, determining the buckling loads and mode shapes**, [Sapienza university of Rome](#), under the supervision of prof. Walter Lacarbonara

**Cell Mechanical behavior considering Bottom Effect with AFM, numerical modeling, and experimental in SNN Lab**, [Sapienza University of Rome](#), under the supervision of prof. Daniele Passeri

**Normal mode analysis of a Turbine blade, determining the linear vibration modes of a blade subject to the stiffening centrifugal forces**, [Sapienza University of Rome](#), under the supervision of prof. Walter Lacarbonara

**Flap analysis project in MSC Adams, Evaluating outputs (disp, vel, acc, and force) both with and without Failure consisting rigid and flex flap also considering Friction on joints, Compliances and Motion/Force modification**, [Sapienza University of Rome](#), under the supervision of prof. Walter Lacarbonara

**Modeling gas detection sensors in Matlab, determining the electrical conductivity diagram and other factors**, [Sapienza University of Rome](#), Under the supervision of prof. Alessio Tamburrano

**Arduino modeling projects by Thinkercad and Fritzing**. [Sapienza University of Rome](#), Under the supervision of prof. Alessio Tamburrano

**Modelling and solving the thermal vibration of a two-phase nanobeam embedded in an elastic medium**, [IRAN UNIVERSITY OF SCIENCE AND TECHNOLOGY](#), Under the supervision of Prof. Shahrokh Hosseini Hashemi and Dr. Fakher

## PUBLICATIONS

**Fluid-Conveying FGNT surrounded with the size-dependent Elastic Medium considering nonlocal stress/strain theory, and higher order beam theory**  
Ali Naderi, Shahin Behdad, [Arman Borazjani](#)  
to be submitted soon

**Vibration Analysis of a Thick Nonlinear Plate considering Moving load FG Nanocomposites with GDQM**  
[Arman Borazjani](#), Walter Lacarbonara, Giovanni Formica  
to be submitted in 2022.

## PERSONAL SKILLS

Certificate of "NanoInnovation 2020", September 2020, Sapienza University of Rome, Rome, Italy

Certificate of "The 8th International Conference on Acoustics and Vibration", December 2018, Shahid Beheshti University, Tehran, Iran

Certificate of "Abaqus" from "Tehran Institute of Technology"

Scored in the top 1 percent among all students in the cross-country university entrance exam

Volunteer Aid Worker, "Khane\_ye\_Abi" (Blue Home) Drug addiction and HIV treatment Center, 2014-2019

## MOTHER TONGUE

Persian

## OTHER LANGUAGES

**English:** Fluent (IELTS 7)

**Italian:** Beginner

## SOCIAL SKILLS

### Private Institutes

Instructor, Engineering Mathematics (for master's entrance exam)

Instructor, Differential Equation (for master's entrance exam)

### Other Activities

Teaching English and GMAT/GRE courses as a private teacher in Rome, Italy

Private Fitness and functional trainer

Football Podcaster

Playing a musical instrument (Setar)

Video clips and Audio Editing

## OTHER PROJECTS

**Construction of a 3R Robot as a testing device for leap motion**, Iran University of Science and Technology, Robotics (extra courses), Under the supervision of Prof. Moharram Habib Nejad Korayem.

**Modeling the Vibration of a turbine blade considering gap effect and friction in MATLAB**, Iran University of Science and Technology, Advanced Vibrations course, Under the supervision of Prof. Hamid Ahmadian.

**Modeling A dynamic model for a rotating beam with bearings**, Iran University of Science and Technology, Advanced Vibrations course, Under the supervision of Prof. Hamid Ahmadian.

**Calculation and Analysis of a Deep drawing process**, Islamic Azad University North Tehran Branch, Theory of Plasticity, Dr. Nabi Mehri Khansari

**Design and Analysis of a Bodybuilding Device**, Islamic Azad University North Tehran Branch, Mechanical Engineering Design II, Dr. Ehsan Kowsari nia

**Design and Analysis of an Elevator**, Islamic Azad University North Tehran Branch, Mechanical Engineering Design I, Dr. Ehsan Kowsari nia

**Modeling a stepped beam by Finite Element Method**, Islamic Azad University North Tehran Branch, Introduction to Finite Element Method, Dr. Kamran Asemi Ahangar

## TECHNICAL SKILLS

**Programming:** Mathematica (Professional), MATLAB (Finite elements), Arduino

**Design software skills:** Catia, SolidWorks, Rhino and Revit (professional in both Mechanics and Architecture), AutoCAD

**Analysis software skills:** Abaqus (Professional and Certified), Ansys, MSC Nastran (Mr. Mauro Linari from MSC Software), MSC Adams (by Mr. Daniele Catelani from MSC Software), MSC Marc (by Mr. Daniele Catelani from MSC Software)

**Typesetting:** Microsoft word, Latex

## REFERENCES

[Walter LaCarbonara](#), Professor, Sapienza University of Rome, Rome, Italy  
Email: [walter.lacarbonara@uniroma1.it](mailto:walter.lacarbonara@uniroma1.it)

[Shahrokh Hosseini Hashemi](#), Professor, Iran University of Science and Technology, Tehran, Iran.  
Email: [shh@iust.ac.ir](mailto:shh@iust.ac.ir)

[Kamran Asemi Ahangar](#), Assistant Professor, Islamic Azad University North Tehran Branch, Tehran, Iran.  
Email: [k.Asemi@iau-tnb.ac.ir](mailto:k.Asemi@iau-tnb.ac.ir)

[Ehsan Shakouri](#), Assistant Professor, Islamic Azad University North Tehran Branch, Tehran, Iran.  
Email: [e\\_shakouri@iau-tnb.ac.ir](mailto:e_shakouri@iau-tnb.ac.ir)

F.to Arman Borazjani