

# CURRICULUM VITAE

## PERSONAL INFORMATION



**Pasquale Vena**



 (+39) 0223994236  (+39) 3389478226

 [pasquale.vena@polimi.it](mailto:pasquale.vena@polimi.it)

 [www.cmic.polimi.it](http://www.cmic.polimi.it)

EC Expert ID: EX2023D733896

Sex Male | Date of birth 29/11/1968 | Nationality Italian

## WORK EXPERIENCE

November 2024 – present	<p><b>Position: Professor in Industrial Bioengineering</b> (IBIO-01/A – Bioingegneria) Department of Chemistry, Materials and Chemical Engineering, Giulio Natta</p>
January 2007 – October 2024	<p><b>Position: Associate professor in Industrial Bioengineering</b> Politecnico di Milano, Dept. of Structural Engineering (Jan 2007- Dec 2012), Department of Chemistry, Materials and Chemical Engineering, Giulio Natta (DCMC) (Jan 2013 – present)</p> <ul style="list-style-type: none"> <li>(2020-2022) Member of the scientific board of the DCMC Department</li> <li>(2023-present) Member of the DCMC Department council</li> <li>(2020-2024) Member of the committee for international mobility program for Biomedical Engineering School.</li> <li>(2019-present) Member of the admission board of Double Degree program in “Materials Engineering and Nanotechnology” and “Biomedical Engineering”.</li> <li>(2014-present) Responsible for Training and Research Activity in the Tissue and Material Mechanics sector of the Laboratory of Biological Structures at Politecnico di Milano;</li> <li>(2013-present) Responsible for the Inter-departmental Laboratory “In-situ micromechanics labs”</li> <li>(2011-present) Member of the teaching board of the PhD program in Materials Engineering, Politecnico di Milano.</li> <li>(2011-2012) Member of the teaching board of the PhD program in Structural Engineering (Dept. of Structural Engineering, Politecnico di Milano)</li> <li>(2009-2012) Member of the Department of Structural Engineering council.</li> </ul>
April 2001-December 2006	<p><b>Position: Assistant professor in Industrial Bioengineering</b> Politecnico di Milano, Dept. of Structural Engineering</p>
Dec 1998-April 2001	<p><b>Post-doc Fellow and Research Assistant</b> Politecnico di Milano, Dept. of Structural Engineering</p>
Oct 1997- Nov 1998	<p><b>Research Assistant</b> Politecnico di Milano, Dept. of Structural Engineering</p>

Sept 1993-Dec 1994	<p><b>Military Service as Second Lieutenant of the Navy General Staff (Stato Maggiore della Marina Militare Italiana)</b></p> <p>Service at the Navy Arsenal – Naval Base LaSpezia, Service in the Engineers Corps.</p>
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**EDUCATION AND TRAINING**

Jan /1995-Oct/1997	<p><b>PhD student in Structural Engineering</b></p> <p>Politecnico di Milano, Dept. of Structural Engineering;</p> <ul style="list-style-type: none"> <li>▪ Main covered topics: Computational biomechanics, Shape optimization methods, Non-linear computational mechanics</li> <li>▪ Final dissertation: "Shape Optimization of a Femoral Head Endoprosthesis Allowing for Interface Behaviour"</li> <li>▪ Final title achieved on May 1998</li> </ul>
09/1987-07/1993	<p><b>MSc student in Civil Engineering (track: Structural Engineering)</b></p> <p>Politecnico di Milano</p> <ul style="list-style-type: none"> <li>▪ Five years Engineering school</li> <li>▪ Final dissertation: "Optimization of Fiber-Reinforced Composites"</li> <li>▪ Final mark 100/100 cum Laude</li> </ul>

**ADDITIONAL INFORMATION**

<b>Teaching activity</b>	<p><i>In the Bachelor program Biomedical Engineering, Politecnico di Milano</i></p> <ul style="list-style-type: none"> <li>- since Academic year 2003/2004 "Mechanics of Continua and Structures for biomedical engineering" (8 ECTS)</li> </ul> <p><i>In Master program Biomedical Engineering, Politecnico di Milano</i></p> <ul style="list-style-type: none"> <li>- Academic years from 2003/2004 to 2012/2013 "Laboratory of Computational Biomechanics" (2.5 ECTS);</li> <li>- since Academic year 2009/2010 "Mechanics of Biological Structures" (5 ECTS);</li> </ul> <p><i>In Master program Materials Engineering and Nanotechnology, Politecnico di Milano</i></p> <ul style="list-style-type: none"> <li>- since Academic year 2013/2014 "Micromechanics" (5 ECTS). From AY 2020/2021 this course is also delivered to students enrolled in the Double Degree program "Biomedical Engineering and Material Engineering and Nanotechnology".</li> </ul> <p><i>Lectures in Master programs at foreign universities:</i></p> <ul style="list-style-type: none"> <li>- (2015, 2016, 2017) Lectures on "Mechanics of biological tissues" at the University of Cardiff, UK (4 hours lectures each year within the course on Biomaterials by Prof. Samuel Evans).</li> <li>- (2021) Lecture on "Mechanics of soft and hard tissues" within the course on Orthopaedic Biomaterials at the Technical University of Delft, NL (on-line).</li> <li>- (2022) Lecture on "Mechanics of ceramic materials for biomedical applications" at the Institute for Materials Testing, Materials science and Strength of Materials (IMWF), University of Stuttgart, Germany (on line).</li> </ul> <p><i>In PhD programs:</i></p> <ul style="list-style-type: none"> <li>- (2011, 2012) "Numerical methods for Materials Engineering", PhD program in Materials Engineering, Politecnico di Milano</li> <li>- (2015, 2017) "Computational models for micromechanics of materials", PhD program in Materials Engineering, Politecnico di Milano</li> <li>- (2013) "Cross-sectoral course: non linear computational mechanics for tissues and biomaterials" with invited foreign lecturers: Prof. Christian Hellmich (TU Wien) and Samuel Evans (Univ. of Cardiff), PhD program in Biomedical Engineering, Politecnico di Milano</li> <li>- (2019, 2021) "Advanced models in Biomechanics", PhD program in Biomedical Engineering, Politecnico di Milano</li> </ul> <p><i>Lectures in summer schools and workshops:</i></p>
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- (2022) Lectures on “Tissue Mechanics and Relevant Numerical Methods” at the Summer School "Advances in Multiscale Modelling for Cardiovascular Use" within the MSCA-ITN DECODE, Politecnico di Milano
- (2022) Lectures on “Mechanics of arteries: computational modeling” at the Summer School "Advances in Multiscale Modelling for Cardiovascular Use" within the MSCA-ITN DECODE, Politecnico di Milano
- (2022) Lecture on “Micro/nano Characterization of Balloon/coating System for DCBs and its Small Scale Interaction with Vascular Tissues: In Silico Modelling” in the workshop “Multi-scale modelling of DCBs: approaches and challenges”) within the MSCA-ITN DECODE, Politecnico di Milano
- (2023) Lecture on “Simulation of Bone and its Fracture” in the Summer School “Computational Tissue Biomechanics from in-vitro Experiment to Damage and Failure Analysis”, KTH Royal Institute of Technology, Stockholm, Sweden.

Milano  
November, 6 2024

*Pasquale Vena*