



Angelantonio Squicciarini

Date of birth: 04/11/1997

Nationality: Italian

CONTACT

Via Curzio Dei Mille 12
70123 BARI, Italy (**Home**)

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(+39) 3497356738

ABOUT ME

I have a great passion for engineering as well as physics, chemistry and mathematics. The firm dedication to theoretical subjects has led me to give private lessons in physics, analysis, geometry, electrical engineering, fluid dynamics and construction sciences to university students.

In addition to science, I have a strong involvement in fitness and wellness, where I train daily following scientific and nutritional training techniques. In the past, I practiced: karate, fishing, swimming, football and dance at a competitive level. I took a photography course, where I learned the functioning and use of the reflex, as I like being able to photograph people, objects and landscapes.

In recent years, I have developed a marked interest in pastry making, perfumes and wines.

English and French are two very important languages for me. In my free time, I like to read books written in these two languages to expand my vocabulary.

I can consider myself an ambitious guy and willing to work in a team.

WORK EXPERIENCE

10/01/2023 – 31/08/2023 Orléans, France

Ph.D. Student CNRS

Working on the ERC TRACE-it project: Control of particle flow driven by local concentration gradients in porous geological media.

I studied the phenomena of diffusiophoresis and electrophoresis for the transport of colloidal particles in porous media.

A CFD code was written using OpenFOAM software to resolve particle transport at the pore scale. The numerical results were validated with experimental data.

The theory of homogenization was studied to have a large-scale diffusion phoresis model.

I was followed in this training by Prof. Sophie Roman and Dr. Cyprien Soulaïne.

I resigned my PhD contract on 08/31/2023.

14/02/2022 – 31/07/2022 Lecce, Italy

Curricular Internship CNR-Nanotec & STMicroelectronics

I was part of the TITAN (Tumor Immunotherapy by Nanotechnology) project working on the research of microfluidic devices for engineered T cells for 6 months, where I formulated my master's thesis.

My task was focused on the study of new inertial microfluidic devices for tumor cell focusing, referring to scientific literature, design using CAD, fluid dynamics simulation using ANSYS FLUENT, optimization, construction using 3D printers (wire, dlp), micromilling, casting, quality control and viewing real results through a microscope.

I implemented a code written in C language within FLUENT, to be able to include the absent forces in the program.

I was followed in this training by Prof. Marco Donato De Tullio, by Dr. Dario De Marinis and by Dr. Francesco Ferrara.

01/04/2019 – 30/05/2019 Bari, Italy

Curricular Internship CNR STIIMA

Improve the accuracy in detecting defects on a glass fiber composite material by using deep learning through MATLAB software. The network instruction no longer occurred by localizing the defect with a single pixel (i.e. a channel) but rather 5 (a pixel plus the surrounding area made up of 4 pixels).

The learning was carried out through temperature data obtained from a pulsed thermographic inspection.

I was followed in this training by Dr. Roberto Marani.

EDUCATION AND TRAINING

15/02/2023 Bari, Italy

Industrial Engineer State Examination Section A Politecnico di Bari

04/11/2020 – 20/08/2022 Bari, Italy

Master's Degree in Mechanical Engineering Politecnico di Bari

Thesis Microfluidic devices for medical applications

16/09/2016 – 17/07/2020 Bari, Italy

Bachelor's Degree in Mechanical Engineering Politecnico di Bari

Thesis Analysis of thermal signals with deep neural networks for the non-destructive inspection of finished fiberglass components

2011 – 2016 Bari, Italy

Diploma Istituto Tecnico Tecnologico G.Marconi

LANGUAGE SKILLS

MOTHER TONGUE(S): Italian

Other language(s):

English

Listening C1

Reading C1

Writing C1

Spoken production C1

Spoken interaction C1

French

Listening B2

Reading B2

Writing B1

Spoken production B2

Spoken interaction B2

Spanish

Listening B1

Reading B1

Writing A2

Spoken production A2

Spoken interaction A2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

LINGUAGGI DI PROGRAMMAZIONE

PYTHON | MATLAB | CSS | HTML | C++ | C

CAD SOFTWARE

FUSION 360 | INVENTOR | AUTOCAD | SOLIDWORKS

CFD SOFTWARE

POINTWISE | PARAVIEW | OPENFOAM | COMSOL | SALOME | FLUENT

ALTRI SOFTWARE

ELVEFLOW | MICROSOFT OFFICE | LATEX

ADDITIONAL INFORMATION

Courses and Certificates

Computational Contact and Fracture Mechanics

I attended the "Computational Contact and Fracture Mechanics" course held by Prof. Marco Paggi for my PhD at IMT School for Advanced Studies. The course lasted 20 hours and the lessons were entirely delivered online due to COVID 19.

MECHANICAL SYSTEM DYNAMICS

Collaboration in the drafting of the document MECHANICAL SYSTEM DYNAMICS, Department of Mechanics, Mathematics and Management, Master's Degree Course: Mechanical Engineering Polytechnic of Bari, Author Prof. Giuseppe Carbone.

Basics of non-equilibrium statistical physics and molecular simulation techniques

I attended the course "Basics of non-equilibrium statistical physics and molecular simulation techniques" held by Prof. Gerald Kneller, at the bâtiment de Physique-Chimie, Université d'Orléans. The course lasted 20 hours.

Initiation aux methods numériques et statistiques

I attended the course "Initiation aux methods numériques et statistiques" held by Prof. Didier Chauveau and Dr. Carine Lucas, at the Laboratoire d'Informatique Fondamentale, Université d'Orléans. The course lasted 20 hours.

French course

I attended the French course at the Institut de Français de l'Université d'Orléans. The course lasted 20 hours.

I authorize the processing of my personal data pursuant to Legislative Decree 101/2018 and art. 13 GDPR (EU Regulation 2016/679) for the purposes of personnel research and selection.

Bari, 17/11/2023



Angelantonio
Squicciarini



Politecnico di Bari
Department of Mechanics, Mathematics and Management
via Re David 200 - 70125 Bari, Italy



June 29, 2023

To Whom It May Concern:

I met Angelantonio Squicciarini for the first time in 2021 at the Politecnico di Bari, where he was enrolled in the course of “Modeling of Complex Flow”, for the Master’s degree in Mechanical Engineering. He studied the subject with great motivation, showing a strong attitude for the discipline and a very good analytical capability. He obtained a final mark of 30/30. His strong interest in the discipline led him to continue studying fluid mechanics and related applications after the course. Under my supervision, he decided to work on his thesis focusing on microfluidic devices for medical applications, by means of numerical simulations and laboratory experiments. During his work he demonstrated a genuine interest for the research topic, showing good problem-solving skills, always carrying out independent work. He wrote a clear final thesis, with a very good overall quality.

Mr. Angelantonio Squicciarini completed the Master’s degree in Mechanical Engineering in October 2022.

Angelantonio has shown a good capacity of quickly adapting to different research subjects, and a very good ability in programming. He is a polite and kind person. He worked with creativity and autonomy and is very motivated to interact with colleagues in an international and challenging environment. This makes me certain that he will succeed in his doctoral studies and beyond that.

If any additional information is needed, please do not hesitate to contact me.

Sincerely,

Marco Donato de Tullio
Full Professor of Fluid Dynamics
Phone: +39 080 5963794
Fax: +39 080 596 3411
E-mail: marcodonato.detullio@poliba.it



Politecnico
di Bari

To Whom It May Concern

As a Professor in the teaching of “Principles of Electrical Engineering” for the Bachelor’s degree in Mechanical Engineering, delivered by the Department of Mechanics, Mathematics and Management of the Polytechnic of Bari, I had the opportunity to interact and meet the student Angelantonio Squicciarini, who showed particular interest in my subject.

Angelantonio is highly motivated and his interest in the topics covered, are supported by his diligent work. During his studies he repeatedly showed me how responsible and devoted he is to the subject. He is ambitious, determined, has a strong character and has optimal communication, participation and interaction skills.

For these reasons, I believe that Mr. Angelantonio Squicciarini is the ideal profile to continue doctoral studies.

Bari, 30/06/2023

Vito Puliafito

Vito Puliafito, Eng., Ph.D.

Associate Professor of Electrical Engineering - S.S.D. ING-

IND/31 Department of Electronic and Information

Engineering Polytechnic of Bari

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June 30, 2023

To Whom It May Concern:

I met Mr. Angelantonio Squicciarini at CNR Nanotec in Lecce in 2021 where I followed him in a 6-month internship.

In the first months of the internship, Angelantonio worked with FDM and DLP 3D printers and he was able to use equipment in perfect autonomy, fabricating device for cell analysis.

In this first part I was able to notice an excellent knowledge of CAD programs.

In the second part of the internship, he focused on the design, simulation and realization of inertial microfluidic devices for cell separation.

He studied the literature of microfluidic devices and he was able to use fluid dynamics simulation software, write codes in C language showing an excellent theoretical and practical knowledge of CFD and programming language.

He realized devices using a micro milling system in an independent way finding optimal solutions using CAM software.

I can confirm that Mr. Angelantonio Squicciarini adapts very well to any circumstance, bringing excellent results in a short time and he is the suitable candidate to continue his studies with a PhD.

For more information, do not hesitate to contact me.

Sincerely,

 Francesco Ferrara
Researcher
CNR Nanotec - Institute of Nanotechnology
francesco.ferrara@nanotec.cnr.it

Orléans (France)
June 20, 2023

To whom it may concern,

I am writing to certify that Angelantonio Squicciarini is a PhD student at the University of Orléans (France) working at the Institute of Earth Science of Orleans under the supervision of Dr. Cyprien Soulaïne and myself. M. Squicciarini started his PhD in January 2023, he is working on developing a numerical model for the transport of colloids by diffusiophoresis in porous media;

So far, M. Squicciarini showed great motivation, he is hardworking and has a strong background in mathematics and physics. We are very satisfied with the work he provides and are looking forward for the first outcomes of his research.

I will be happy to discuss with you by phone or email if needed.

Sincerely,

Sophie Roman

