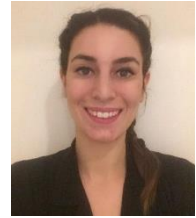


Chiara Scognamiglio
-Post Doc Researcher-

Via Carlo Denina 81
+39 3337999633
Date of birth: 11/10/1989, Rome

scognamiglio.chiara1@gmail.com
www.linkedin.com/in/c-scognamiglio



Professional experience

Apr 2019-current

Istituto Italiano di Tecnologia, Center for Life and Nanoscience Rome, Italy
Post Doc Researcher- Responsible for 3D Bioprinting Laboratory

- Research project responsibilities
- PhD students supervision
- Technology transfer on tissue engineering applications
- Scientific divulgation
- 3D bioprinting of living tissues (muscle, bone, central nervous system)
- Development of 3D disease models (lungs cancer, lymphoma)
- Integration of microfluidic tools in the 3D bioprinter
- Fabrication of microfluidic chips
- Hydrogel/biomaterials preparation
- Design of the 3D constructs
- Fluorescence and confocal microscopy
- Cells culture and seeding

Jan 2021-May 2021

Temple University Rome, Italy
Teaching assistant of Dynamics

- Assisting design the course, construct tests, prepare materials
- Working with students
- Learning about student problems with the course material
- Leading discussion
- Clarifying materials and answering questions
- Creating homework and exams

Mar 2018-Mar 2019

Istituto Italiano di Tecnologia, Center for Life and Nanoscience Rome, Italy
Post Doc Researcher

- Research project responsibilities
- PhD student supervision
- Realization of 3D *in vitro* models (vessels-on-a-chip)
- Microfluidic chip design and fabrication
- Channels functionalization for cells adhesion
- Cells seeding within the chambers
- Cells culture
- Endothelial permeability measurements in presence of microbubbles
- Investigation of ultrasounds and microbubbles interaction
- Fluorescence and confocal microscopy
- Algorithm to detect and characterize inter-endothelial gaps

Jan 20219-May 2019

Temple University Rome, Italy
Lecturer of Thermodynamics

- Design the course
- Construct tests
- Prepare materials

- Lead discussion
- Create homework and exams

Jan 2018-May 2018

Temple University Rome, Italy
Teaching Assistant of Thermodynamics

- Assisting design the course, construct tests, prepare materials
- Working with students
- Learning about student problems with the course material
- Leading discussion
- Clarifying materials and answering questions
- Creating homework and exams

Nov 2014- Dec 2017

DIMA, La Sapienza University Rome, Italy
Joint PhD in Physics and Mechanical Engineering

Thesis: Cavitation bubbles dynamics confined in microsystems

Grade: summa cum laude

- Ultrasounds acoustic detection for biological applications
- Fabrication of a blood vessel-on-a-chip
- Cells seeding within the chambers
- Fabrication of biomimetic hydrogel-based devices
- Study of water at negative pressure
- Development of optical techniques to measure water negative pressure
- Study of the bioeffects induced by cavitation on *in vitro* blood vessels
- Numerical study on confined cavitation

Mar 2015- Jul 2015
 and
 Apr 2016- Jul 2017

Institut de Physique de Nice, University Cote d'Azur Nice, France
Joint PhD in Physics and Mechanical Engineering

Collaboration with La Sapienza

- Microfabrication of microfluidic chips
- Fast imaging of microbubbles in microfluidic chips
- Optical techniques for investigation of water properties under extreme conditions
- Data and image post-processing

Apr 2015 – Jul 2015

LPMC, Nice France

Research Intern

- Micro-patterned hydrogel devices fabrication in Clean Room
- Biomimetic-humidity hydrogel sensors design and fabrication
- Fabrication of hydrogel-on-glass devices

Education

Nov 2012- Oct 2014

La Sapienza University Rome, Italy
Master of Science in Nanotechnologies Engineering

Thesis: Acoustic cavitation in hydrogels

Grade: 110/100 cum laude

- Hydrogel scaffolds for cavitation studies
- Fast imaging

Data and Image Analysis

Nov 2008-Dec 2012

La Sapienza University Rome, Italy
Mechanical Engineering

Thesis: Heat transfer in nano-confined fluids

Grade: 105/110

- Molecular Dynamics simulations on temperature profile across a liquid in a nanochannel
- Data analysis

Professional experience

Jul 2016	Acoustofluidics (Porquerroles, France)
Oct 2015	Liquids at Interfaces (Ecole de physique, Les Houches, France)
Apr 2015-Jun 2015	Cardiovascular Hemodynamics (Rome, Italy)
Jul-2015	Dynamics of individual and collective elements (Peyresq, France)

Skills

Linguistic:	Italian (Native) – English (C2) – French (C1) – Greek (A2)
IT:	Matlab – Origin – ImageJ – Latex – Inkscape – Sketchup – Solidworks – Fortran – C++ – OpenFOAM – NAMD – Ansys – Comsol
Management:	Project planning and organization – Implementing and organizing experimental methods (equipment, orders) – Tracking scientific and technological advances – Technical reports – Weekly shift plans – Handling and editing classified documents – Oral presentations – Customer's service
Technical:	Microfluidic chips (hydrogels and PDMS) – Bioprinting – Clean room – Microfabrication (lithography and soft-lithography, hydrogel patterning) – Cells Culture (thawing, freezing, passaging and seeding) – Microscopy (optical, confocal, fluorescent) – Silicon chips microfabrication – Ultrasounds for drug delivery – Fast Imaging – Acoustics (ultrasounds generation, amplification and detection) – Transducers – Hydrophone – Biomaterials – 3D <i>in vitro</i> modeling
Others:	Driving license: A, B, B1

Publications and Conferences

- **C. Scognamiglio**, Francesco Magaletti, Yaroslava Izmaylov, Mirko Gallo, Carlo Massimo Casciola and Xavier Noblin, *The detailed acoustic signature of a micro-confined cavitation bubble*, Soft Matter, 2018
- G. Silvani, **C. Scognamiglio**, D. Caprini, L. Marino, M. Chinappi, M. F. Kiani, G. Sinibaldi, G. Peruzzi, C. M. Casciola *Reversible USMB-induced junctional opening in an artificial endothelial layer*, Small, 2019
- R. De Luca, G. Silvani, **C. Scognamiglio**, G. Sinibaldi, G. Peruzzi, M. Chinappi, M. F. Kiani, C. M. Casciola, *Towards cavitation-enhanced permeability in blood vessel on a chip*, AIP Conference Proceedings, vol. 1873(1), p 020010, 2017
- **C. Scognamiglio**, A. Soloperto, G. Ruocco, G. Cidonio, *Bioprinting cells: building physiological tissues one cell at a time*, American Journal of Physiology Cell physiology, 2020
- Gianluca Cidonio, Filippo Perinib, **Chiara Scognamiglio**, Marco Costantini, Andrea Barbetta, *3D Printing of Biphasic Inks: Beyond Single-Scale Architectural Control* (to be submitted)
- X. Noblin, **C. Scognamiglio**, Y. Y. C. Sang, M. Pellegrin, M. T. P. Zaballos, C. Llorens, M. Argentina, *Fast propagation of cavitation nucleation in natural and artificial systems* (to be submitted)
- **C. Scognamiglio**, Y. Yzamylov, X. Noblin, F. Magaletti, C.M. Casciola, *Cavitation within a liquid micro-confined by a porous hydrogel*, Liquids at interfaces Conference, Ljubljana, Slovenia, July 17-21, 2017
- **C. Scognamiglio**, F. Magaletti, M. Gallo, C. M. Casciola, X. Noblin, *Bubble cavitation dynamics in micro-confined porous systems*, Flow 17 Conference, Paris, France, July 3-5, 2017
- G. Silvani, R. De Luca, **C. Scognamiglio**, G. Sinibaldi, D. Caprini, G. Peruzzi, M. Chinappi, L. Marino, G. Durando, M. F. Kiani, C. M. Casciola, *Cavitation-enhanced permeability on blood vessel on a chip*, Flow 17 Conference, Paris, France, July 3-5, 2017

- **C. Scognamiglio**, X. Noblin, C.M. Casciola, *Cavitation bubble dynamics confined in micro-systems*, Bubbles & Drops Conference, Lyon, France, June 26-30, 2017
- **C. Scognamiglio**, C. M. Casciola, X. Noblin, *Stretched water and cavitation in a bioinspired microdevice*, Water X, Exotic Properties of Water in Extreme Conditions, Nice, France, July 13-16, 2016