



(FORMATO EUROPEO)

INFORMAZIONI PERSONALI

Name **MARENGO MARCO**
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Age 57



ESPERIENZE LAVORATIVE

POSIZIONE ATTUALE

RESPONSABILITÀ ISTITUZIONALI

INCARICHI EDITORIALI

PRINCIPALI SETTORI DI RICERCA E COMPETENZA

*Gli argomenti principali di ricerca sono i tubi di calore, la fisica delle goccioline e degli spray, la microfluidica, i sistemi di ebollizione e bifase, la bagnabilità superficiale. La ricerca è di carattere sperimentale, numerico e modellistico/matematico. **Track record:** 350 articoli, più di 160 lavori in riviste specializzate internazionali, 6 capitoli in libri, un libro (Springer) e 5 brevetti internazionali (**h-index: 42** in SCOPUS). La ricerca è stata riconosciuta con copertine su riviste, come *Physics of Fluids* e *Langmuir*, e con oltre 30 seminari su invito, tra cui 6 come plenarie in conferenze internazionali.*

1.1.2023 – presente PROFESSORE ORDINARIO DI FISICA TECNICA, DIPARTIMENTO DI INGEGNERIA CIVILE E ARCHITETTURA, UNIVERSITÀ DI PAVIA, ITALIA

SETTEMBRE 2016 – DICEMBRE 2022

1.1.2019 – 31.12.2022 Direttore dell'Advanced Engineering Centre, Università di Brighton, Brighton, Regno Unito
1.1.2014 – 32.12.2022 Professore Ordinario di Termofluidica e Controllo Termico – Scuola di Informatica, Ingegneria e Matematica – Università di Brighton, Brighton, Regno Unito
24.04.2019 – presente Fondatore della società spin-off FREDSS4BUILDINGS, specializzata in simulazioni energetiche di edifici. L'azienda è supportata dall'Università di Brighton.
17.06.2017 – 12.08.2017 Visiting Professor presso il Dipartimento di Ingegneria Meccanica, Università di Toronto, Toronto, Canada
17.06.2017 – 10.08.2017 Visiting Professor presso la Lassonde School of Engineering, York University, Toronto, Canada

2019 – 2022 Chair of the Engineering Division Industrial Board, University of Brighton, Brighton
2017 – 2019 Chair of the Professoriate Advisory Group, University of Brighton
2003 – 2006 Delegato del Rettore dell'Università di Bergamo per i Progetti Europei, Bruxelles, Belgium
2002 – 2005 Co-direttore del Laboratorio Sperimentale di Microsistemi e Robotica (LSRM) presso il Centro di Ricerca per l'Innovazione e la Tecnologia, Dalmine, Italia

2021 – presente Associate Editor of MDPI Energies Journal
2019 – presente Associate Editor of the Int. Journal Multiphase Flows, Elsevier
2019 – presente Editorial Board of Int. Journal of Experimental Thermal and Fluid Science, Elsevier
2009 – 2018 Editor-in-Chief of Atomization and Sprays Int. Journal, Begell House
Membro di altri 4 Comitati Editoriali di Riviste Internazionali.

ASSOCIAZIONI SCIENTIFICHE

2022 - presente	Vice-President del European Institute of Liquid Atomization and Sprays
2022 - presente	Membro del comitato direttivo della UK Heat Transfer Association
2021 – presente	ESA Space Science Strategist
2016 – presente	Membro scientifico presso International Heat Pipe Conference Committee
2006 – presente	Membro scientifico presso ICLASS and ILASS International Conferences
2005 – presente	Membro del Consiglio dell'European Institute of Liquid Atomization and Spray Systems
2005 – presente	Membro del Comitato Scientifico delle Conferenze ILASS Europe

ORGANIZZAZIONE DI INCONTRI SCIENTIFICI INTERNAZIONALI

2022 – 2023	Presidente del Comitato Scientifico – 31 st European Conference On Liquid Atomization & Spray Systems
2020 – 2021	Presidente del Comitato Scientifico – 15 th International Conference On Liquid Atomization & Spray Systems
2018 – 2022	Co-Chair di International Workshop on Surface Wettability Effects on Phase Changes, Brighton, UK and Mons, Belgium
2015 – 2021	Co-director of the International Advanced Courses on the Interface, Drops and Liquid Sprays Physics

Membro del Comitato Scientifico di una decina di Conferenze Internazionali, tra cui: International Conference On Boiling & Condensation Heat Transfer, International Conference on Heat Transfer and Fluid Flow, WSEAS Int. Conf. on Heat Transfer, Thermal Engineering and Environment, European Microfluidics Conference. Reviewer for more than 15 International Research peer-reviewed Journals, such as "Physics of Fluids", "Nature Communication", "Experiment in Fluids", "Atomization and Sprays", "International Journal of Heat and Mass Transfer".

PROGETTI DI RICERCA (SELEZIONE)

Role	Funder	Scheme	Year	Title	Duration (yr)	Total budget	UoB Budget
Co-PI	European Space Agency	MAP	2015	Innovative Wickless Heat Pipe Systems for Ground and Space Applications	3	973,832	889,680
Co-PI	KTP	KTP	2015	The CHP Bureau	2	136,793	136,793
PI	University of Brighton	Scheme A	2015	The physics of droplet impact on complex surfaces	3	66,000	66,000
Co-PI	European Space Agency	MAP	2016	Enhanced Condensers in Microgravity	3	1,706,722	38,549
Co-PI	INNOVATE UK	INNOVATE UK	2016	LOOP Heat Pump Circuit (LOOPER)	2	121,760	103,203
PI	EPSRC	Open Grant	2017	Novel Hybrid Heat Pipes For Space And Ground Applications (HyHP)	3	892,749	722,000
PI	University of Brighton	Concept fund	2018	Fast early-stage simulator of energy consumption and comfort in buildings	<1		21,000
PI	University of Brighton	Accelerator fund	2019	Fast early-stage simulator of energy consumption and comfort in buildings	<1		20,000
PI	University of Brighton	CMRD	2018	A new bio-microfluidic organoid culture device for biomedical applications	<1		10,000
PI	KTP	KTP	2019	Fabrication of a LHP for intermediate temperature range, European Thermodynamics Ltd	2	186,189	186,189
Supervisor	European Community	Marie Curie IF grant	2019	BOIL-MODE-ON	2	164,500	164,500
Supervisor	UKRI	World Class Laboratory	2020	Climatic Environmental Chamber	<1	215,000	215,000
PI	RICARDO Ltd	PhD scholarship	2022	Thermal Control of EV Battery Pack	3	66,000	66,000

RUNNING GRANTS

1. ESA ISS Pulsating Heat Pipes experiment – Phase C/D for the Heat Transfer Host 1, 01.10.2014 – 31.12.2027, PI, £0k

**ATTIVITA' DI SPIN-OFF
UNIVERSITARIE**

2. *LEVERHULME, AMUsE on Diffuse Interface Simulations of Nucleation, 01.01.2022 – 30.06.2025, £409k*
3. *i3MED project, PI, 01.04.2020 – 31.10.2023, £455k*
4. *ESA MAP TOPDESS, PI, 01.10.2019-30.09.2023, £65k*
5. *ESA MAP ENCOM4, Co-I, 01.09.2020 – 31.08.2023, £34k*
6. *ESA MAP WHISKIES, PI, 01.08.2020 – 31.07.2023, £15k*

APRIL 2019 – PRESENTE FOUNDER AND BOARD MEMBER OF FREDSD4BUILDINGS LTD
 FREDSD4BUILDINGS Ltd, Engineering Company Services for dynamics energy simulation of buildings. Spin-off dell'Università di Brighton.

FEBRUARY 2010 – JUL 2012 FOUNDER AND BOARD MEMBER OF ICENOVA SRL
 ICENOVA srl, Bergamo board of Trade incubator, Brembate di Sopra, Italy, www.icenova.eu
 Engineering Company Services in recovery heat sector and authorized distributor of ENEFTECH Brand in Italy. Turnover 2010: 17,000€, EBT 734 €, Turnover 2011: 340,000 €, EBT 21,500 €

NOVEMBER 2007 – DEC 2011 FOUNDER AND PRESIDENT OF UNIHEAT SRL
 UNIHEAT srl, viale Kennedy 28, 24060 Bagnatica, Italy, www.uniheat.it
 Engineering consultant company in thermal and energy sector.
 Turnover 2010: 261,700 €, EBT 700€, Turnover 2011: 348,867 €, EBT 7000€

**PROIZIONI
PRECEDENTI AL 2014**

2005 – 2016 ASSOCIATE PROFESSOR OF THERMAL PHYSICS
 University of Bergamo, via Salvecchio 19, 24100 Bergamo
 PERMANENT POSITION/TENURE OF THERMAL PHYSICS

2002 – 2004 Associate Professor of industrial Thermal Physics (Temporary tenure track)
 University of Bergamo, via Salvecchio 19, 24100 Bergamo

1999 – 2002 Assistant Professor of Thermal Physics
 University of Bergamo, via Salvecchio 19, 24100 Bergamo
 PERMANENT POSITION/TENURE OF THERMAL PHYSICS

1998 – 1999 University researcher of Thermal Physics
 University of Bergamo, via Salvecchio 19, 24100 Bergamo
 NON-PERMANENT POSITION AS RESEARCHER AT THE ENGINEERING FACULTY

1998 Wissenschaftliche Mitarbeiter / University Researcher

EDUCAZIONE

- 1993 – 1996 Ph.D. in Energetics, Polytechnic of Milan, Italy**
1984 – 1988; 1990-1991 Master Degree in Physics cum laude, Università di Torino, Italy with a Thesis on Applications of Nonlinear Dynamical Systems for the analysis of the Large Scale Structure of the universe. Total effective duration: 6 years
1979 – 1984 Scientific High School Degree (58/60), Liceo Scientifico "F. Vercelli", Asti, Italy

LINGUE

ITALIAN (MOTHERLANGUAGE),
 ENGLISH (PROFICIENCY LEVEL),
 GERMAN (GOOD LEVEL)

BREVETTI

1. EUROPEAN PATENT: METODO E APPARATO PER LO STAMPAGGIO A CALDO DI PRODOTTI IN MATERIALE TERMOPLASTICO, APPLICANT: B.M. MOBILI IN PLASTICA, INVENTORS: MARCO MARENGO, ANDREA BARCELLA, FILING: EP 06425432.9, DATE: 17.07.2006
2. EUROPEAN PATENT: VALVE MECHANISM FOR A THERMO HYDRAULIC SYSTEM,

PARTICULARLY FOR HIGH PRESSURE, APPLICANT: RECORDS SPA, INVENTORS: MARCO MARENGO, GIANPIETRO COSSALI, EGIDIO GOTTI, FILING: EP 07112325.1-1252, DATE: 12.07.2007

3. EUROPEAN PATENT: DEVICES AND METHOD FOR ENHANCED HEAT TRANSFER, APPLICANT: UNIVERSITÉ DE MONS-HAINAUT, INVENTORS: R. RIOBOO, M. MARENGO, S. DALL'OLIO, M. VOUE, J. DE CONINCK, FILING: EP 07113887.9-1266, DATE: 06.08.2007

4. EUROPEAN PATENT: MICRODISSIPATORE POLIMERICO, IN PARTICOLARE PER IL CONDIZIONAMENTO TERMICO DI DISPOSITIVI MECCANICI ED ELETTRONICI, APPLICANT: NANTO S.R.L., INVENTOR: MARCO MARENGO, FILING: RM2007A000593, DATE: 15.11.2007

5. ITALIAN PATENT: DEVICE AND METHODS FOR DROP GENERATION, APPLICANT: UNIVERSITÀ DI BERGAMO, INVENTORS: MAURIZIO SANTINI, MARCO MARENGO, GIANPIETRO COSSALI, FILING: PCT IT2008/000554, DATE: 22.08.2008

6. ITALIAN PATENT: MICRO-COGENERATOR SUPPLIED BY WOOD BIOMASS, APPLICANT: ICENOVA SRL, INVENTORS: MARCO MARENGO, GIORDANO SUARDI, DANIELE ROSSETTI, FILING: GE2011U000029, DATE: 15.11.2011

7. EUROPEAN PATENT: WICK STRUCTURE FOR TWO-PHASE HEAT TRANSFER APPARATUS, APPLICANT: UNIVERSITY OF BERGAMO, UNIVERSITÉ LIBRE DE BRUSSEL, INVENTORS: COSIMO BUFFONE, MARCO MARENGO, FILING: EP14157863.3, DATE: 05.03.2014

SELEZIONE DI 10 PUBBLICAZIONI RECENTI

1. Mameli M., Mangini, D., Vanoli, G.T., Araneo, L., Filippeschi, S., Marengo, M., Advanced multi- evaporator loop thermosiphon, ENERGY, 112, 562-573, 2016
2. Mangini D., Mameli M., Fioriti D., Araneo L., Filippeschi S., Marengo M., Hybrid Pulsating Heat Pipe for Space Applications with Non-Uniform Heating Patterns: Ground and Microgravity Experiments, APPLIED THERMAL ENGINEERING, 2017
3. Pagliarini, L., Cattani L., Bozzoli F., Mameli M., Filippeschi S., Rainieri S., Marengo M., Thermal characterization of a multi-turn pulsating heat pipe in microgravity conditions: Statistical approach to the local wall-to-fluid heat flux, INT. J. HEAT AND MASS TRANSFER, 169, 120930, 2021
4. Qian N., Fu, Y.; Chen, J.; Marengo, M.; Zhang, J.; Xu, J., Thermal performance analysis of axial-rotating oscillating heat pipe and its prediction model based on grey system theory, THERMAL SCIENCE AND ENG. PROGRESS, 29, 101210, 2022
5. Andredaki, Manolia; Vontas, Konstantinos; Georgoulas, Anastasios; Miché, Nicolas; Marengo, Marco; The effect of channel aspect ratio on flow boiling characteristics within rectangular micro-passages, INT. J. HEAT AND MASS TRANSFER, 183, 122201, 2022
6. Loyola-Fuentes, J.; Pietrasanta, L.; Marengo, M.; Coletti, F., Machine Learning Algorithms for Flow Pattern Classification in Pulsating Heat Pipes, MDPI Energies, 15, 6, 1970, 2022
7. Bouchard, DJ; Andredaki, M; Georgoulas, A; Marengo, M; Chandra, S; , Penetration characteristics of a liquid droplet impacting on a narrow gap: Experimental and numerical analysis, PHYSICS OF FLUIDS, 34, 5, 57111, 2022