PERSONAL INFORMATION

Caterina Guiot

Enterprise	University	EPR
☐ Management Level	☒ Full professor	☐ Research Director and 1st level Technologist / First Researcher and 2nd level Technologist
☐ Mid-Management Level	☐ Associate Professor	☐ Level III Researcher and Technologist
☐ Employee / worker level	☐ Researcher and Technologist of IV, V, VI and VII level / Technical collaborator	☐ Researcher and Technologist of IV, V, VI and VII level / Technical collaborator

WORK EXPERIENCE

Prof of Applied Physics (FIS07) , Neuroscience 'R. Levi Montalcini' Dept, University of Torino from 2016

EDUCATION AND TRAINING

Replace with EQF (or other) level if relevant

- Ph. D in Physiology (1990)
- Post-degree training at: Technical University, Bielefeld, BRD; Free University,Amsterdam, NL ;DAMPT, University of Cambridge, UK.
- Specializzazione in Nuclear Physics (1984)
- Laurea in Physics (1981)

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s) English (C1), Russian (A1)

Job-related skills

-Faculty member of the PhD Program in Complex Systems for Quantitative Biomedicine, University of Torino.

−Expertize in fluid dynamics in biology, medical applications of ultrasound and non-ionizing radiation; modeling of tumor growth, in particular universal laws, scale phenomena and study of the fractal dimensions of the microcirculation, modeling in neuroscience (sleep, neurodegeneration) and nanomedicine.

-Author of four patents (3 national and one with PCT extension), of which 3 pertaining to the use of micro and nanobubbles in the clinical field and one relating to the improvement of the use of ultrasonic vascular doppleflow techniques.

Other skills

AI applications to biology and medicine

ADDITIONAL INFORMATION

Most significant publications

Machine Learning Profiling of Alzheimer's Disease Patients Based on Current Cerebrospinal Fluid Markers and Iron Content in Biofluids
Ficiara, E; Boschi, S; (...); Guiot, C
Feb 22 2021 | FRONTIERS IN AGING NEUROSCIENCE 13

A mathematical model for the evaluation of iron transport across the blood-cerebrospinal fluid barrier in neurodegenerative diseases
Ficiara, E; D'Agata, F; (...); Guiot, C
42nd Annual International Conference of the IEEE-Engineering-in-Medicine-and-Biology-Society (EMBC)
2020 | 42ND ANNUAL INTERNATIONAL CONFERENCES OF THE IEEE ENGINEERING IN MEDICINE AND BIOLOGY SOCIETY: ENABLING INNOVATIVE TECHNOLOGIES FOR GLOBAL HEALTHCARE EMBC'20 , pp.2270-2273

An external validation of the Candiolo nomogram in a cohort of prostate cancer patients treated by external-beam radiotherapy
Gabriele, D; Guarneri, A; (...); Ricardi, U
May 5 2021 | RADIATION ONCOLOGY 16 (1)

A Multiscale Hypermodel to Predict the Nephroblastoma Response to Preoperative Chemotherapy
Graf, N; de Bono, B; (...); Stamatakos, G
Nov 2016 | PEDIATRIC BLOOD & CANCER 63 , pp.S245-S245

A Simple PSA-Based Computational Approach Predicts the Timing of Cancer Relapse in Prostatectomized Patients
Stura, I; Gabriele, D and Guiot, C
Sep 1 2016 | CANCER RESEARCH 76 (17) , pp.4941-4947

Is there still a role for computed tomography and bone scintigraphy in prostate cancer staging? An analysis from the EUREKA-1 database
Gabriele, D; Collura, D; (...); Gabriele, P
Apr 2016 | WORLD JOURNAL OF UROLOGY 34 (4) , pp.517-523

A two-clones tumor model: Spontaneous growth and response to treatment
Stura, I; Venturino, E and Guiot, C
Jan 2016 | MATHEMATICAL BIOSCIENCES 271 , pp.19-28

Growth impairment after TBI of leukemia survivors children: a model- based investigation
Galletto, C; Gliozzi, A; (...); Guiot, C
Oct 13 2014 | THEORETICAL BIOLOGY AND MEDICAL MODELLING 11

Computational Horizons In Cancer (CHIC): Developing Meta- and Hyper-Multiscale Models and Repositories for In Silico Oncology - a Brief Technical Outline of the Project
Stamatakos, G; Dionysiou, D; (...); Tsiknakis, M
2014 6th International Advanced Research Workshop on In Silico Oncology and Cancer Investigation (IARWISOCI)
2014 | 2014 6TH INTERNATIONAL ADVANCED RESEARCH WORKSHOP ON IN SILICO ONCOLOGY AND CANCER INVESTIGATION (IARWISOCI)

DOUBLE-LAYERED MODELS CAN EXPLAIN MACRO AND MICRO STRUCTURE OF HUMAN SLEEP
Stura, I; Priano, L; (...); Venturino, E
Apr 2013 | INTERNATIONAL JOURNAL OF NEURAL SYSTEMS 23 (2)

A novel approach to the analysis of human growth
Gliozzi, AS; Guiot, C; (...); Iordache, DA
May 17 2012 | THEORETICAL BIOLOGY AND MEDICAL MODELLING 9

Caterina G**uiot**

20/02/2023