

FABIO CIULLA

EDUCATION

Northeastern University
Boston, MA
2011 – 2014

Doctor of Philosophy in Physics

Thesis: Diffusion processes in geographical networks
Focus: Complex Systems, Network Science

Università La Sapienza
Rome, Italy
2006 – 2010

Master of Science in Physics, 110/110 cum laude

Thesis: Gelation of particles with short-term attraction
Focus: Physics of Liquids, Condensed Matter

Università La Sapienza
Rome, Italy
2001 - 2006

Bachelor of Science in Physics, 110/110

Focus: Statistical Mechanics, Computational Physics

PROFESSIONAL EXPERIENCE

Lawrence Berkeley National Laboratory
Berkeley, CA
2022 - present

Postdoctoral Research Fellow

Predictions of water quality impacts from environmental disturbances

Netbase Quid
Santa Clara, CA
2020 - 2021

Head of Data Science

Detection of statistical anomalies in semantic graphs.
Contribution to the company roadmap. Mentoring junior data scientists

Quid Inc.
San Francisco, CA
2017 - 2020

Senior Data Scientist

Implementation of word embedding models for graphs generation. Study of the interplay of information diffusion between news outlets and social media networks

Quid Inc.
San Francisco, CA
2014 - 2017

Data Scientist

Analysis of semantic graph topology. Investigation of dimensionality reduction techniques for latent topics extraction

TEACHING EXPERIENCE

Northeastern University
Boston, MA

Teaching Assistant

Spring 2012

Laboratory of Physics 2 for Engineering

Fall 2011, Spring 2012

Physics 2 for Engineering

Fall 2011

Laboratory of Physics 1 for Life Science

PUBLICATIONS

Gozzi N, Tizzani M, Starnini M, Ciulla F, Paolotti D, Panisson A, Perra N.

Collective response to media coverage of the COVID-19 pandemic on Reddit and Wikipedia: mixed-methods analysis

Journal of medical Internet research 2020; 22(10):e21597 <https://doi.org/10.2196/21597>

Ciulla F, Mantegna RN.

Dynamics of fintech terms in news and blogs and specialization of companies of the fintech industry

Chaos: An Interdisciplinary Journal of Nonlinear Science. 2019; 30(8):083112 <https://doi.org/10.1063/5.0004487>

Ciulla F, Perra N, Baronchelli A, Vespignani A.

Damage detection via shortest-path network sampling

Physical review E. 2014; 89(5):052816 <https://doi.org/10.1103/PhysRevE.89.052816>

Zhang Q, Perra N, Gonçalves B, Ciulla F, Vespignani A.

Characterizing scientific production and consumption in physics

Scientific reports. 2013; 3(1):1-9 <https://doi.org/10.1038/srep01640>

Ciulla F, Mocanu D, Baronchelli A, Gonçalves B, Perra N, Vespignani A.

Beating the news using social media: the case study of American Idol

EPJ Data Science. 2012; 1(1):1-11 <https://doi.org/10.1140/epjds8>

Zaccaria A, Cristelli M, Alfi V, Ciulla F, Pietronero L.

Asymmetric statistics of order books: The role of discreteness and evidence for strategic order placement

Physical Review E. 2010; 81(6):066101 <https://doi.org/10.1103/PhysRevE.81.066101>

Lu PJ, Zaccarelli E, Ciulla F, Schofield AB, Sciortino F, Weitz DA.

Gelation of particles with short-range attraction

Nature. 2008; 453(7194):499-503 <https://doi.org/10.1038/nature06931>

PATENTS

Topic-influenced document relationship graphs

Tacchi RA, Ciulla F, Musial W, Goodson R - US Patent 10,769,381, 2020

Topic predictions based on natural language processing of large corpora

Ciulla F, Tacchi RA, Goodson R - US Patent 10,552,468, 2020

Adjustment of document relationship graphs

Ciulla F, Musial W, Tacchi RA - US Patent 10,255,272, 2019

Facilitating targeted analysis via graph generation based on an influencing parameter

Tacchi RA, Ciulla F - US Patent 9,558,265, 2017

Measuring accuracy of semantic graphs with exogenous datasets

Tacchi RA, Ciulla F - US Patent 9,436,760, 2016

PROGRAMMING LANGUAGES

Python, R

Scientific and ML libraries: Numpy, Scikit-learn, Scipy, Pandas, Tensorflow, Keras