Enrico Rinaldi, PhD

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Internationally recognized researcher in computational theoretical high energy and nuclear physics, with 10 years of experience in programming, data analysis and Monte Carlo methods using Top500 high performance computing resources. Outstanding publication record and presentation skills in an international community. Strong curiosity towards new challenges and ability to deliver results on time, even when tackling previously unknown subjects. Hands-on experience with ML research in physics and business. Able to take the lead and perform well as part of a team. Avid learner with strong analytical, modeling and data oriented backgrounds. Interested in advancing artificial intelligence applications to benefit society.

Skills

- Daily experience with data manipulation, statistical analysis, Monte Carlo methods
- Programming experience in Python and C/C++
- Experience with ML tools
- Excellent presentation skills (oral and written)
- Excellent ability to actively lead a collaborative effort and communicate in a team
- Italian (native) English (fluent) Japanese (basic)

Experience

AI RESEARCHER, ARITHMER INC. – 2019-PRESENT

- R&D for 3D deep learning strategies to enable fast and accurate scene segmentation for robotic systems
- R&D for Quantum Annealing solutions to business optimization problems

SPECIAL POSTDOCTORAL RESEARCHER, RIKEN (JP) /BNL (US) – 2016-2019

- Successfully secured a highly competitive Japanese fellowship with personal research grant for 3 years to perform research on Monte Carlo calculations of strongly-coupled quantum gauge theories for describing dark matter and aid experimental searches that are undergoing in the US using multi-million $ experiments
- Designed numerical simulations using massively parallel supercomputers (NVidia GPUs) leading to a published research article on the journal Nature and ACM Gordon Bell prize finalist for scientific HPC.
- Performing cutting-edge research in machine learning for physics using generative models and normalizing flows

POSTDOCTORAL RESEARCHER, LAWRENCE LIVERMORE NATIONAL LABORATORY (US) – 2013-2016

- Leading projects culminating in scientific publications with hundreds of citations as a member of 4 international collaborations (LatKMI, LatticeStrongDynamics, CalLat and MCSMC)
- Developed open source code for Monte Carlo simulations and time series analysis
- Physics and Life Sciences Outstanding Postdoctoral Fellow award at LLNL in 2016

Education

- University of Edinburgh, Edinburgh, UK – **PhD in Theoretical Particle Physics**, 2013
  supported by prestigious SUPA (Scottish Universities Physics Alliance) scholarship for 3.5 years (and JSPS fellowship for 0.5y)
  awarded Diploma Prize at International School of Subnuclear Physics, Erice, Italy (2011) for work on Extra Dimensions
- University of Milan, Milan, Italy – **Master of Science in Theoretical Physics**, 2009
  supported by scholarship "Homo Sapiens Sapiens"
- University of Milan, Milan, Italy – **Bachelor of Science in Physics**, 2007