Curriculum Vitae of Marco Catillo

Name:	Marco Catillo
Date of birth:	July 9th, 1992
Place of birth:	Rome, Italy
Nationality:	Italian
Address:	Via Ilario Corte 17/B, Rome, Italy
Temporary address:	Limmattalstrasse 65, 8049, Zurich, Switzerland
Working address:	Wolfgang-Pauli-Str. 27 HIT G 33.2, 8093, Zurich, Switzerland
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Phone number:	+39 3385824294

CURRENT POSITION

▷ **Postdoctoral position in Theoretical Physics**
Institution: Department of Physics, ETH, Zurich, Switzerland — Jan 2021 - present
Description: I am currently working on Lattice QCD and numerical simulations together with Prof. Marina K. Marinković

PREVIOUS JOBS

▷ **Postdoctoral position in Theoretical Physics**
Institution: Ludwig Maximilian University of Munich, Munich, Germany — Jan 2020 - Dec 2021

EDUCATION

▷ **Doctor of Philosophy (Ph.D.) in Theoretical Physics**
Institution: Karl-Franzens University of Graz, Graz, Austria
Thesis Title: "Dirac eigenmodes and symmetries in QCD"
Supervisor: Prof. Leonid Glozman
Description: My Ph.D. activity in Graz has been focused on the study of the symmetry properties in confinement and deconfinement regime of QCD and the connection with the eigenmodes of the Dirac operator. For this purpose I have studied also the role played by the Random Matrix Theory in QCD as a good tool to analyse the lattice calculations and extrapolate informations about the breaking of some symmetries groups in QCD. — Mar 2016 - June 2019
Grade: Sehr gut (1), *Age at graduation*: 26, *Official duration*: 3 years

▷ **Master's degree in Theoretical Physics** *(Laurea Magistrale in Fisica)*
Institution: University of Rome "La Sapienza", Rome, Italy
Thesis Title: "Study of tetraquark states on the lattice in Yang-Mills theory"
Supervisors: Prof. Massimo Testa and Prof. Silvano Petrarca — Oct 2013 - Dec 2015
Grade: 110/110, *Age at graduation*: 23, *Official duration*: 2 years

▷ **Bachelor's degree in Physics** *(Laurea Triennale in Fisica)*
Institution: University of Rome "La Sapienza", Rome, Italy
Thesis Title: "Onde gravitazionali da stelle rotanti",
(english translation: "Gravitational waves from rotating stars")
Supervisor: Prof. Leonardo Gualtieri — Oct 2010 - Sep 2013
Grade: 109/110, *Age at graduation*: 21, *Official duration*: 3 years

▷ **Scientific high school diploma** *(Diploma di Maturità Scientifica)*
Kind of secondary school diploma: Italian secondary school diploma
Institution: Liceo Scientifico Statale "Louis Pasteur", Rome, Italy — Sep 2006 - Jul 2010
Grade: 84/100

STUDIES AND EXPERIENCES ABROAD

▶ **Visitor at Stony Brook University**
Institution: Stony Brook University, New York, USA
Supervisor: Prof. Jacobus Verbaarschot — Jan 2018 - May 2018
Description: During my abroad period I focused on the possibility to have larger symmetries in QCD and their description in terms of Random Matrix Theory models. Moreover I had also the possibility to enlarge my knowledge studying the SYK model, which has important applications in the physics of black holes. In particular I was interested in the study of different physical regimes of this theory.
Duration: 5 (months)

▶ **55th International University week for theoretical physics**
Place: Winter School, Admont, Austria — Feb 2017

▶ **International Summer School: Symmetries and Phase Transitions – from Crystals and Superconductors to the Higgs particle and the Cosmos**
Place: Technische Universität Dresden , Dresden, Germany — Aug 2016

TALKS AND POSTERS

▶ **Talk** at APLAT 2020, "Asia-Pacific Symposium for Lattice Field Theory"
Place: Asia/Tokyo, web conference via zoom, *title*: "From QCD string breaking to quarkonium spectrum" — Aug 2020

▶ **Talk** at Excited QCD 2020
Place: Krynica Zdrój, Poland, *title*: "From string breaking to quarkonium spectrum" — Feb 2020

▶ **Talk** at ACHT 2018, "Non-Perturbative Methods in Quantum Field Theory"
Place: Leibnitz, Austria, *title*: "Chiralspin symmetry and baryons" — Sept 2018

▶ **Talk** at "Quantum Chromodynamics and Its Symmetries"
Place: Oberwölz, Austria, *title*:"Baryon parity doublets and chiralspin symmetry" — Sept 2018

▶ **Talk** at Stony Brook University, New York, USA
Place: Stony Brook University , Stony Brook, NY 11790, USA, *title*: "On the emergence of particular symmetries in QCD" — May 2018

▶ **Talk** at "Technical Advances in Lattice Field Theory"
Place: University of Southern Denmark , CP -Origins, Odense, Denmark, *Title*: "Distribution of the Dirac eigenmodes in QCD and random matrix theory" — Dec 2017

▶ **Talk** at *35th International Symposium on Lattice Field Theory*, Lattice 2017
Place: Granada, Spain, *title*: "Distribution of the Dirac modes in QCD" — Jun 2017

▶ **Poster** at *55th International University week for theoretical physics*, Winter School
Place: Admont, Austria, *title*: "Distribution of the Dirac modes in QCD" — Feb 2017

▶ **Talk** at "Monitoring Workshop Graz – Jena – Wien"
Place: Erwin Schrödinger International Institute for Mathematics and Physics, Vienna, Austria, *title*: "Distribution of the Dirac modes in QCD" — Dec 2016

▶ **Talk** at *Gauge topology: from lattice to colliders*, Workshop in ECT*
Place: ECT*, European Center for Theoretical Studies in Nuclear Physics and Related Areas, Trento, Italy, *title*: "Distribution of the Dirac modes in QCD" — Nov 2016

PUBLICATIONS AND PAPERS

A full publication list is given on this link: http://inspirehep.net/search?ln=en&p=catillo&of=hb&action_search=Search&sf=earliestdate&so=d

1. M. Catillo, M. K. Marinković, P. Bicudo and N. Cardoso, "From string breaking to quarkonium spectrum", [arXiv:2005.05723 [hep-lat]].
2. M. Catillo, L. Y. Glozman and C. B. Lang, "Chiral-spin symmetry emergence in baryons and eigenmodes of the Dirac operator", Phys. Rev. D **99**, no. 9, 094040 (2019) doi:10.1103/PhysRevD.99.094040 [arXiv:1904.01969 [hep-ph]].
3. M. Catillo and L. Y. Glozman, "Baryon parity doublets and chiral spin symmetry", Phys. Rev. D **98**, no. 1, 014030 (2018) doi:10.1103/PhysRevD.98.014030 [arXiv:1804.07171 [hep-ph]].

4. M. Catillo and L. Y. Glozman, "Distribution law of the Dirac eigenmodes in QCD", Int. J. Mod. Phys. A **33**, no. 10, 1850054 (2018) doi:10.1142/S0217751X18500549 [arXiv:1709.01886 [hep-lat]].
5. M. Catillo and L. Y. Glozman, "Distribution of the Dirac modes in QCD", EPJ Web Conf. **175**, 04005 (2018) doi:10.1051/epjconf/201817504005 [arXiv:1707.07055 [hep-lat]].

SKILLS

Programming skills: C, C++, Perl, Python, PHP, LaTeX, HTML, CSS, Javascript
Software skills: Matlab, Mathematica (9, 10, 11), Origin (data analysis and graphing software), ROOT (CERN), LAPACK, ARPACK, Xcode, Emacs, Nano, Vim, Atom
Operative systems: Windows, Linux, Mac OS X
Foreign language skills:
- Italian (Mother tongue)
- English (Professional knowledge)
- German (Basic knowledge)

Note:
English: TOEFL certification, score: 91/120.
German: ÖSD certification, level B1.

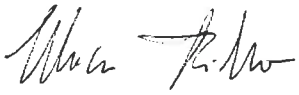
OTHER

Italian Physical Society - Invited Member	from July 2014
Private teacher of mathematics and physics to high school students	Oct 2012 - Oct 2014
Test on skills "TECO" at University of Rome "La Sapienza"	2013

AWARDS AND GRANTS

I have finished the high school one year before the scheduled date for the regular course of study, by virtue of academic merits, according to the Italian law "DPR n.122 / 2009, Article 6, paragraph 2".

I hereby give my consensus that my personal data provided with this application are used for all the procedures involved and required by this selection.

Signature: 

(Dated: January 26, 2021)