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UNIVERSITÀ DEGLI STUDI DI MILANO

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[Nome e cognome] CURRICULUM VITAE

INFORMAZIONI PERSONALI (NON INSERIRE INDIRIZZO PRIVATO E TELEFONO FISSO O CELLULARE)

COGNOME	TOLDO
NOME	CHIARA
DATA DI NASCITA	19/04/1986

**INSERIRE IL PROPRIO CURRICULUM
(non eccedente le 30 pagine)**

Data

16 MARZO 2021

Luogo

AMSTERDAM

Chiara Toldo, PhD

GENERAL INFORMATION

Post-doctoral researcher
Amsterdam University,
The Netherlands

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Santa Barbara, CA 93101, US

EMPLOYMENT

- **Harvard U. and Milano U.**
from November 2021- November 2024
Marie Curie Global Fellow
- **Amsterdam University**
from March 2020- October 2021
Post-doctoral researcher (FOM Physics/f fellow)
- **CEA Saclay and Ecole Polytechnique, Paris, France**
from September 2018- March 2020
Post-doctoral researcher in the groups of G. Bossard (Ecole Polytechnique) and I. Bena (CEA Saclay)
- **Kavli Institute for Theoretical Physics, Santa Barbara, CA, USA**
from September 2017-August 2018
Post-doctoral researcher in the group of Prof G. Horowitz.
- **Columbia University in the City of New York, NY, USA**
from October 2014 to September 2017
Post-doctoral researcher in the group of Prof. F. Denef.
 - Rubicon NWO grant (Netherlands) funds the academic year 2015-2016 of research at Columbia
 - Visitor at Princeton University (April 2015-September 2015) in the group of Prof. S. Gubser.

EDUCATION

- Utrecht University (ITF), *PhD in Physics* (October 2010- September 2014)
Supervisor: Prof. S. Vandoren, PhD Thesis title: "Anti-de Sitter black holes in gauged supergravity", defended on 11 June 2014
- Padova University *MSc in Theoretical Physics* (2008-2010)
Supervisor: Dr. G. Dall'Agata, thesis title: "Black holes and duality", final grade: 110 cum laude/110
- Padova University, *BSc in Physics* (2005-2008)
Supervisor: Prof. F. Zwirner, thesis title: "Extra-dimensions and deviations from Newton's Law", final grade 110 cum laude /110
- Liceo Scientifico N. Tron, Schio, *Diploma*, grade 100/100 (2000-2005)

GRANTS AND AWARDS

- Marie Curie Global Fellowship (ERC, 2021, **251k euro**, assigned via competitive assessment). This grant funds a 3-year postdoctoral position at Harvard U. (2y) - Milano U. (1y)
- Marie Curie Standard Fellowship (ERC, 2020, **212k euro**, assigned via competitive assessment). This grant funds a 2-year postdoctoral position at King's College London (declined)
- Physics/f NWO grant (Netherlands, 2019, **240k euro**, assigned via competitive assessment open only to female applicants). This grant funds a 3-years postdoctoral position at UvA
https://www.nwo.nl/en/about-nwo/organisation/nwo-domains/enw/Disciplines/Phys/Research/NWO+Physics_x002f_f+grants
- Rubicon NWO grant (2014, **64k euro**, assigned via competitive assessment). This grant funds the academic year 2015-2016 of research at Columbia University, NYC
<http://www.nwo.nl/en/research-and-results/programmes/rubicon/Awarded+grants/Round+2013-3>
- "Laura Bassi" price of the Italian Physics Society (SIF) for scientific production, (September 2014, **2k euro**, assigned via competitive assessment)
<http://www.sif.it/attivita/congresso/100/premiati>
- Henri Poincare Institute for a Research In Paris Program: "Gauged supergravity black holes and their CFT duals" (December 2019, **1.2k euro**, assigned via competitive assessment) travel grant with Dr. P. Benetti Genolini
- wait-listed for the *Sofja Kovalevskaja Award*, 2019/2020 round (1.5m euro, Humboldt foundation, Germany)

PUBLICATIONS AND PREPRINTS Notice that in the field of Theoretical High Energy Physics the authors are listed in alphabetical order, in particular there is no concept of "first author".

- [1] R. Monten, C. Toldo, *Wrapped probe branes on AdS_4 black holes from Q^{111}* , in preparation
- [2] A. Castro, J. Pedraza, C. Toldo, E. Verhijden, *Near-extremal AdS_5 black holes and JT gravity*, in preparation
- [3] M. Hogervorst and C. Toldo, *Bounds on multiscalar CFTs in the ϵ -expansion*
<https://arxiv.org/abs/2010.16222>, accepted for publication in JHEP
- [4] C. Toldo, *Holographic duals of refined partition functions*, Proceedings of the Conference on Recent Developments in Strings and Gravity (2019), Corfu Greece, PoS(CORFU2019)130
<https://arxiv.org/abs/2003.14409>

- [5] S. M. Hosseini, C. Toldo, I. Yaakov, *Supersymmetric Rényi entropy and charged black holes*, JHEP07(2020)131
<https://arxiv.org/abs/1912.04868>
- [6] K. Hristov, S. Katmadas, C. Toldo *Matter coupled Kerr-Newman AdS_4 black holes*, Phys.Rev. D100 (2019) no.6, 066016
<https://arxiv.org/abs/1907.05192>
- [7] K. Hristov, S. Katmadas and C. Toldo, *Rotating attractors and BPS black holes in AdS_4* , JHEP01 (2019) 199
<http://arxiv.org/abs/1811.00292>
- [8] G. Horowitz, J. Santos and C. Toldo, *Deforming black holes in AdS* , JHEP 1811 (2018) 146
<http://arxiv.org/abs/1809.02399>
- [9] C. Toldo and B. Willett, *Partition functions on 3d circle bundles and their gravity duals*, JHEP 1805 (2018) 116
<http://arxiv.org/abs/1712.08861>
- [10] R. Monten and C. Toldo, *Black holes with halos*, Class.Quant.Grav. 35 (2018) no.3, 035001
<http://arxiv.org/abs/1612.02399>
- [11] A. Amariti and C. Toldo, *Betti multiplets, flows across dimensions and c-extremization*, JHEP 1707 (2017) 040
<http://arxiv.org/abs/1610.08858>
- [12] C. Toldo, *Thermodynamics of rotating black holes in gauged supergravity*, Phys. Rev. D 94, 066002
<http://arxiv.org/abs/1604.05705>
- [13] A. Gnechchi, U. Gursoy, O. Papadoulaki, C. Toldo, *A magnetically induced quantum phase transition in holography*, JHEP 1609 (2016) 090
<http://arxiv.org/abs/1604.04221>
- [14] N. Callebaut, S. Gubser, A. Samberg, C. Toldo, *Segmented strings in AdS_3* , JHEP 11 (2015) 110,
<http://arxiv.org/abs/1508.07311>
- [15] A. Gnechchi and C. Toldo, *First order flow for non-extremal AdS black holes and mass from holographic renormalization*, JHEP 1410 (2014) 075,
<http://arxiv.org/abs/1406.0666>
- [16] A. Gnechchi, K. Hristov, D. Klemm, C. Toldo, O. Vaughan, *Rotating black holes in 4d gauged supergravity*, JHEP1401 (2014) 127,
<http://arxiv.org/abs/1311.1795>
- [17] K. Hristov, C. Toldo and S. Vandoren, *Phase transitions of hairy AdS_4 magnetic black holes*, Phys. Rev. D 88 026019 (2013),
<http://arxiv.org/abs/1304.5187>

	<p>[18] A. Gnechchi and C. Toldo, <i>On the non-BPS first order flow in $N = 2$ $U(1)$ gauged supergravity</i>, JHEP03 (2013) 088, http://arxiv.org/abs/1211.1966</p> <p>[19] C. Toldo and S. Vandoren, <i>Static nonextremal AdS_4 black holes</i>, JHEP1209 (2012) 048, http://arxiv.org/abs/1207.3014</p> <p>[20] K. Hristov, C. Toldo, S. Vandoren, <i>AdS black branes: BPS bounds and asymptotic charges</i>, Contribution to the proceedings of the XVII European Workshop on String Theory 2011, Padova, http://arxiv.org/abs/1201.6592</p> <p>[21] K. Hristov, C. Toldo, S. Vandoren, <i>On BPS bounds in $D=4$ $N=2$ gauged supergravity</i>, JHEP12 (2011) 014, http://arxiv.org/abs/1110.2688</p>
WORK IN PROGRESS	<p>[22] P. Richmond, A. Passias, C. Toldo, <i>6D Taub-NUT and Taub-Bolts and partition functions of 5d SCFTs</i>, in progress</p> <p>[23] J. Armas, A. Gnechchi, C. Toldo, <i>Black saturns in AdS_5: a blackfold approach</i>, in progress</p> <p>[24] N. Bobev, A. Charles, P. Benetti Genolini, C. Toldo, <i>Supersymmetric NUTs and Bolts and their ABJM duals</i>, in progress</p>
THESES	<p>[25] PhD thesis "Anti-de Sitter black holes in gauged supergravity", June 2014, available at http://dspace.library.uu.nl/handle/1874/294324</p> <p>[26] MSc thesis (Padua U.): "Black holes and duality", September 2010</p> <p>[27] BSc thesis (Padua U.): "Extra dimensions and deviations from Newton's law", September 2008</p>
TEACHING EXPERIENCE	<p>Utrecht University (NL),</p> <p><i>Teaching assistant</i> February 2011 to June 2011</p> <ul style="list-style-type: none"> • Cosmology master course taught by Dr. Tomislav Prokopec (one semester, 7.5 ECTS). <p><i>Teaching Assistant</i> September 2011 to February 2012</p> <ul style="list-style-type: none"> • Advanced Quantum Mechanics bachelor course taught by Dr. Gleb Arutyunov (one semester, 10.25 ECTS). <p><i>Teaching Assistant</i> September 2012 to February 2013</p> <ul style="list-style-type: none"> • General Relativity master course taught by Prof. Gerard 't Hooft (one semester, 7.5 ECTS).

SUPERVISOR
ACTIVITIES

- Master thesis supervisor of Francis Headley (Part III Cambridge + one year master at UvA), academic year 2020/2021
- Supervised project with PhD student R. Monten (Columbia and Leuven), leading to the published paper <http://arxiv.org/abs/1612.02399>

REFeree
ACTIVITIES

- Referee for the journals Journal of High Energy Physics JHEP (2016-present), Classical and Quantum Gravity (2018-present), European Physics Journal A (2017-present), European Physics Journal C (2019-present).
- External referee for the doctoral thesis of M. Rabbiosi (Milano U., Dec. 2017), Supervisor S. Klemm.

ORGANIZATIONAL
DUTIES AND
OTHER
ACTIVITIES

- Co-organizer of the "Supersymmetric Black Holes, Holography and Microstate Counting" at Simons Center for Geometry and Physics, New York (October 2020) <http://scgp.stonybrook.edu/archives/31487>
- Member of the national panel of 6 organizers of the series of conferences "Avogadro meetings", editions 2018 (Rome), 2019 (Naples), 2020 (Florence) <https://sites.google.com/site/avogadromeetings/past-editions>
- Organizer of the PlaneT PhD lunch talks in ITF, Utrecht (2011- 2014), ISCAP seminars (2015-2016) at Columbia University, CPHT string seminars at Ecole Polytechnique (2018-2019)
- Personal website: <https://sites.google.com/view/chiaratoldo1/home>
- Co-founder of the Columbia Society for Women in Physics (2016) <http://physics.columbia.edu/columbia-society-women-physics>
- Co-organizer of the "Girls in science day" event at Columbia University, aimed at introducing middle-school girls to physics by means of simple experiments <https://womeninscienceatcolumbia.org/girls-science-day/>
- Part of the National phase for Physics Olympiad (Senigallia, Italy) in 2004 and 2005; Part of 2005 National phase of Chemistry Olympiad (Frascati)
- Fulfilled requirements for the ASN Italian Habilitation "Professore di Seconda Fascia". Applied during 6th term (November 2020)

INVITED
SPEAKER AT
CONFERENCES,
WORKSHOPS

Speaker in 15 international conferences/ workshops/ schools

- "Pre-Strings 2019" conference, Leuven, Belgium
- "Southampton workshop on black holes, holography and gauge theories" (2019)
- "Recent Developments in Strings and Gravity" conference, Corfu, Greece, September 2019
- "Supersymmetric Localization and Holography: Black Hole Entropy and Wilson Loops" workshop, ICTP Trieste, July 2018
- (Short talk) Pacific coast gravity meeting, Caltech, March 2018, "AdS black hole bound states"
- "Localization and holography" workshop, Ann Arbor, October 2017
- "Supergravity 2017" workshop, Padova, May 2017
- "Black holes and string theory" conference, Logan (Utah), May 2017
- "COST - The string theory Universe " conference, Milan, February 2017
- "Black holes and Emergent Spacetime" conference, Nordita (August 2016).
- "Theoretical frontiers in black holes and cosmology" school and conference, Natal, Brazil (June 2015)
- "Black hole and quantum information" workshop, Weizmann Institute, Israel, (January 2014)
- 2013 National PhD day, Utrecht (October 2013)
- String theory Universe conference, Bern (Sept 2013)
- Short talk, 2011 DRSTP school, Sao Paulo: "AdS black holes and the cosmic dyon"

INVITED
SEMINARS
AND JOURNAL
CLUB TALKS

Invited speaker to 36 departmental seminars and 7 journal clubs

2021:

- Zoom Seminar at CERN (March 2021)
- Zoom Seminar at Tor Vergata U. (April 2021)
- Zoom Seminar at Milano U. (April 2021)
- Joint Brussels-Leuven-Mons Seminar (May 2021)

2020:

- Zoom Seminar at University of Torino (Dec 2020)

- Journal Club seminar, (Sept 2020) and Mock Job Talk at UvA (March 2020), in preparation for interview for faculty W1 position in Cologne
- Zoom Seminar, Korea Institute for Advanced studies (June 2020)
- Zoom Seminar, Caltech, High Energy and String Theory seminars (May 2020)

2019:

- Journal club talk "AdS₅ black holes and microstates via localization" (E. Polytechnique, January 2019)
- Seminar at Utrecht University (March 2019)
- Public talk (W2 position job talk) at Humboldt University, 2019
- Public exam for INFN permanent positions (Italy, final selection)
- Seminar at Perimeter Institute (May 2019)
- Seminar at Ecole Normale Supérieure, Paris (September 2019)
- Seminar at Imperial College (October 2019)

2018:

- Journal club talk, "Partition functions on squashed spheres and holographic measures during eternal inflation", UCSB (April 2018)
- Talk CNRS concours chercheurs for permanent positions, 2018, Paris
- Mathematical Physics seminar, UCSB, June 2018
- Seminar at IPMU Tokyo, July 2018
- Seminar at Ecole Polytechnique (November 2018)
- Seminar in Parma University (November 2018)
- Seminar at Durham University (December 2018)

2017:

- Seminar at KITP Santa Barbara (Jan. 2017) "New goals for AdS black holes"
- Seminar at AEI Potsdam, February 2017
- Seminars in University of California Los Angeles (UCLA)
- Seminar at University of Southern California (USC), April 2017
- Journal club talk, "Universal RG flow and black hole microstates", UCSB (October 2017)
- String seminar at UCSB (December 2017), "Partition functions on circle bundles and their gravity duals"

2016:

- Journal club talk, "AdS Black hole microstates from supersymmetric localization", Columbia University (January 2016)

- Seminar at City College of New York, "AdS₄ black hole from M-theory and holographic vitrification" (November 2016)
- Seminar at C.N. Yang Institute, Stony Brook, "AdS₄ black hole from M-theory and holographic vitrification" (November 2016)

2015:

- String seminar, Ann Arbor, University of Michigan, "New goals for AdS black holes" (April 2015)
- ISCAP journal club, Columbia university, "Rotating black holes and the Kerr/CFT correspondence" (April 2015)

2014:

- High Energy Physics Seminar, Columbia University, (November 2014)
- Thesis defense talk (Utrecht U.) June 2014

2013:

- String seminar, Milano Bicocca: "Phase transitions of AdS₄ black holes" (May 2013)
- String seminar in ITF Leuven (November 2013)
- String seminar at Paris Jussieu (November 2013)
- String seminar at CEA Saclay (November 2013)

2012:

- String Seminar (ITF Utrecht), "BPS bounds in N=2 gauged supergravity"
- Theory Student Seminar NIKHEF (April 2012)

2011:

- PlaneT talk (Utrecht University): "Black holes in supergravity"

INTERNATIONAL COLLABORATIONS

Prof. A. Castro (Amsterdam U.), Prof S. S. Gubser (Princeton University), Prof. G. Horowitz (University of California Santa Barbara), Prof. D. Klemm (Milano University), Prof. S. Vandoren (Utrecht University), Dr. U. Gursoy (Utrecht University), Dr. A. Amariti (Milano U.), Dr J. Armas (Amsterdam U.), Dr. N. Callebaut (Columbia University and Leuven University), Dr. A. Gnechchi (CERN), Dr S. M. Hosseini (Kavli IPMU), Dr. K. Hristov (Bulgarian Academy of Science, Sofia), Dr S. Katmadas (Leuven U.), Dr. M. Hogervorst (Perimeter Institute), Dr. A. Passias (Uppsala U.), Dr R. Monten (CEA Saclay), Dr. Olga Papadoulaki (ICTP), Dr J. Pedraza (City College London), Dr. P. Richmond (King's College London), Dr. A. Samberg (Heidelberg U. and Princeton U.), Dr. J. E. Santos (Cambridge U.), Dr. O. Vaughan (Hamburg U.), E. Verheijden (Amsterdam U.), Dr. B. Willett (KITP Santa Barbara), Dr I. Yaakov (Milano Bicocca U.).

COMPUTER
SKILLS

- LateX, C and $C++$ programming, Mathematica and Maple

LANGUAGES

- Mother language: Italian
- English: fluent speaking, reading and writing
- French: basic knowledge

REFEREES

- Prof. F. Denef: fmd7@columbia.edu
- Prof. S. Vandoren: S.J.G.Vandoren@uu.nl
- Prof. A. Castro: A.Castro@uva.nl
- Prof. G. Horowitz: gary@physics.ucsb.edu