



Jacopo Ghiglieri

Curriculum Vitae

Last updated on April 25, 2024

Personal details

Born December 17th 1983 in Milan. Italian nationality

Current position

Oct 2019 to present **CNRS chargé de recherche** (tenured staff scientist) at SUBATECH (IN2P3/CNRS, IMT-Atlantique, Nantes Université), Nantes, France

Awards

March 2013 **Ph.D. dissertation award** of the German Physical Society (DPG) for 2011 and 2012 in particle, nuclear and hadronic physics and gravity and relativity.

Oct 2012-Sep 2014 **Theory Postdoctoral Fellowship** from the Institute of Particle Physics (Canada). 2-year fellowship awarded each year to the two top postdocs in Particle Theory in Canada, 20k CAD/year salary contribution

Past positions

Oct 2016 - Sep 2019 **COFUND Fellow** at the Theoretical Physics Department at CERN. Very competitive three-year position <http://cerneu.web.cern.ch/cofund-cern>

Oct 2014 - Sep 2016 **Postdoc** at the Institute for Theoretical Physics of the University of Bern

Oct 2011 - Sep 2014 **Postdoc** at McGill University (Montréal), High Energy Theory group

Oct 2008 - Sep 2011 **Ph.D. student** at the Technische Universität München (TU Munich)

Education

Oct 2008 - Sep 2011 **Ph.D.** at TU Munich. Advisor: Prof. Nora Brambilla, grade: *Summa cum laude*. Thesis details on page 8.

Oct 2005 - Apr 2008 **M. Sc. (Laurea Magistrale) in Physics** at Università Statale di Milano (Milan U.), grade 110/110 *cum laude* (full marks and honours)

Oct 2002 - Oct 2005 **B. Sc. (Laurea) in Physics** at Milan U., grade 110/110 *cum laude*

SUBATECH – 4 rue Alfred Kastler, 44307 Nantes, France

+33 2 51 85 86 51 • [✉ jacopo.ghiglieri@subatech.in2p3.fr](mailto:jacopo.ghiglieri@subatech.in2p3.fr)
[🌐 jacopoghiglieri.pages.in2p3.fr/me](https://www.jacopoghiglieri.pages.in2p3.fr/me) • [👤 sbriglie](#) • [🐦 jacopogh](#)

1/13

Grants

ANR JCJC **Individual grant** from the [Agence Nationale de la Recherche](#) (ANR, France),
Jan 2023 - Dec 2026 under the jeune chercheur (young researcher, JCJC) framework, ca 290k€

Supervision

Postdoctoral researchers

Oct 2023 - Sep 2026 **Supervision** of Dr. Greg Jackson, postdoc at SUBATECH

Ph.D. candidates

Oct 2023 - Sep 2026 **Supervision** of Ph.D. candidate Killian Bouzoud, Nantes Université. Thesis topic: “Automated Thermal Field Theory for Cosmology”

Oct 2020 - Sep 2023 **Supervision** of the Ph.D. of Dr. Eamonn Weitz, Université de Nantes. Thesis title: “Theoretical developments for jets in heavy-ion collisions”

Feb-Aug 2018 **Supervision** of then Ph.D. candidate HyungJoo Kim (Yonsei U., Seoul), during his 6-month stay at CERN under the CERN-Korea CKC program

Master and bachelor students

2020-24 **Supervision** of Master (M2) students Sacha Cormenier and Killian Bouzoud, SUBATECH Master (M1) student Nicolas Bizé, and four Bachelor (L3) students

2016-2017 **Supervision** of Master student Jonathan Gasser, University of Bern

2010-2011 **Co-supervision** of Diploma (Master equivalent) student Matthias Berwein and of Bachelor student Tobias Denk, TU Munich

Teaching

Sep 2023 **Guest Lecturer**: 4x90 min invited lectures on *Effective Field Theories for hot QCD* for the 2023 “Strong2020 HaSP PhD School”, Salamanca, Spain

Jul 2022 **Guest Lecturer**: 3x90 min invited lectures on *Modern perturbative methods* for the 2022 “xQCD PhD School”, Stavanger, Norway

Sep 2021 **Guest Lecturer**: 3x60 min invited lectures on *Thermal QCD* for the 2021 “QCD masterclass” summer school, Saint-Jacut-de-la-Mer, France

Aug-Sep 2017 **Discussion group leader**: CERN/Fermilab summer school (at CERN), 6x90 minutes discussion sessions

Jun 2014 **Guest Lecturer**: University of California, Davis, 3x60 min invited lectures on *Thermal QCD* for the 5th annual JET Collaboration Summer School

2009-2012 **Substitute lecturer** for various courses (Quantum Chromodynamics, Quantum Field Theory and Modern Physics), lectures prepared by myself

2009-2011 **Teaching assistant** at TU Munich for “Thermodynamik und Statistik”, “Introduction to Quantum Field Theory”, “Quantum Mechanics II” and “Introduction to Quantum Chromodynamics”

Institutional responsibilities and positions of trust

2023-present **Member of the International Advisory Committee** of the “Strong and Electroweak Matter” conference series

SUBATECH – 4 rue Alfred Kastler, 44307 Nantes, France

☎ +33 2 51 85 86 51 • ✉ jacopo.ghiglieri@subatech.in2p3.fr
🌐 jacopoghiglieri.pages.in2p3.fr/me • 🔄 [sbriglie](#) • 🐦 [jacopogh](#)

- 2021-present **Member** of the sustainability and social responsibility committee of SUBATECH and **SUBATECH representative** within CNRS/IN2P3 for sustainability and social responsibility
- 2022 **Search committee member** for an associate professor (maître de conférences) position in theoretical physics at Nantes Université

Event organization

- 2022 **Convener** of the *heavy-ion* session of the “QCD@LHC 2022” conference, Orsay, France
- 2019-present **Convener** of the *deconfinement* session of the “Quark confinement and the hadron spectrum” conference series
- 2019 **Workshop organizer** for the “From Euclidean spectral densities to real-time physics” theory institute, CERN, 11-15 March 2019
- 2012-2013 **Seminar organizer** for the High Energy Theory group at McGill university
- 2010 **Conference co-organizer**, Euroflavour2010, Munich, 8-10 September 2010

Service

- 2024 **Committee member** for the [2023 thesis prize](#) of the French QCD research consortium (GdR QCD)
- 2015-2019 **External examiner** for the master’s thesis defences of C. Gastaldi (2015) and S. Bajeot (2019), EPFL, Lausanne, Switzerland
- 2013-present **Referee** for *Physical Review Letters*, *Nature Physics Communications*, *Physical Review C* and *D*, *Physics Letters B*, *Journal of High Energy Physics*, *Journal of Cosmology and Astroparticle Physics*, *Nuclear Physics B*, *European Physical Journal A* and *C* and *Annals of Physics*

Outreach

- 2023-present Lecture/workshop on automation and algorithms for high school students visiting SUBATECH
- Sep 2019 CERN Open Days: outreach at the theoretical physicists’ stand
- Sep 2018 Researchers’ night at CERN: outreach for visitors

Scientific computing and system administration

- Programming and scientific tools C/C++, PYTHON, Numpy/scipy/matplotlib/Cython, FORTRAN 77 (basic), Mathematica, HTCondor (user and administrator)
- Oct 2004-Sep 2007, University of Milan **System administrator** for the Laboratorio di Calcolo e Multimedia, a computer lab in the Department of Physics (lcm.mi.infn.it) with 30+ Linux clients and a server, a webserver and a firewall.

Languages

Italian Mother tongue

English Excellent
French Very good
German Good

Zertifikat Deutsch (year 2001)

Publications

Starting from 2008, I have authored 34 peer-reviewed publications in international journals and one recent preprint. In addition, I have co-authored four reviews/white papers — including an invited *Physics reports* on perturbative thermal QCD and a book chapter — and 10 conference proceedings. Altogether 2402 collected citations (inspirehep.net, as of April 10th, 2024), with a corresponding h-index of 25. The complete publication list can be found on page 5.

Conferences, colloquia and seminars

Summary Active participation as a speaker in the most important international conferences and workshops in the fields of heavy ion collisions, cosmology and QCD. In addition to the invited conference talks and colloquia listed below, I have also given ~ 15 invited talks at workshops and ~ 40 contributed talks and seminars since 2008. These are listed on page 9.

Invited talks at conferences

- 20/06/2022 “Non-equilibrium dynamics and thermalisation in QCD”, invited **plenary** talk at the Strong and Electroweak Matter 2022 conference, Saclay/Paris, France
- 08/04/2022 “Transport properties of the QCD medium”, invited **plenary** talk at the Quark Matter 2022 conference, Krakow, Poland
- Apr. 2020, “Thermal production and interaction rates in the Early Universe”, invited postponed to **plenary** talk at the Progress on Old and New Themes in cosmology (PONT 09/12/2020) conference in Avignon, France
- 01/10/2018 “Photon and weak probes of QCD matter”, invited **plenary** talk at the Hard Probes 2018 conference, Aix-Les-Bains, France
- 27/06/2018 “Transport coefficients of QCD at NLO”, invited **plenary** talk at the Strong and Electroweak Matter 2018 conference, Barcelona, Spain
- 08/12/2017 “Transport coefficients of the quark-gluon plasma in perturbative QCD”, invited talk at the 2017 Zimányi-COST Winter School on Heavy-Ion Physics, Budapest, Hungary
- 02/09/2016 “Electromagnetic probes of the quark-gluon plasma: perturbation theory meets the lattice”, invited talk at the Quark Confinement and the Hadron Spectrum XII conference, Thessaloniki, Greece
- 23/05/2014 “Theoretical aspects of photon production in high energy heavy ion collisions”, invited **plenary** talk at the Quark Matter 2014 conference, Darmstadt, Germany
- 06/11/2013 “Next-to-leading order thermal photon production in a weakly-coupled quark-gluon plasma”, invited **plenary** talk at the Hard Probes 2013 conference, Stellenbosch, South Africa
- 01/09/2013 “Theory of charmonium production and suppression in heavy ion collisions”, invited **plenary** talk at the Charm2013 conference, Manchester, UK

SUBATECH – 4 rue Alfred Kastler, 44307 Nantes, France

☎ +33 2 51 85 86 51 • ✉ jacopo.ghiglieri@subatech.in2p3.fr
🌐 jacopoghiglieri.pages.in2p3.fr/me • 🔄 [sbriglie](https://github.com/sbriglie) • 🐦 [jacopogh](https://twitter.com/jacopogh)

4/13

- 12/04/2013 “The thermal photon rate at next-to-leading order”, invited talk at the Group for Hadronic Physics meeting of the American Physical Society, Denver, USA
- 04/03/2013 “Heavy quarkonium at finite temperature: the Effective Field Theory approach”, invited **plenary** talk at the 77th Annual Meeting of the German Physical Society, in the frame of the dissertation award. Dresden, Germany
- 08/10/2012 “Review of the EFT treatment of quarkonium at finite temperature”, invited **plenary** talk at the Quark Confinement and the Hadron Spectrum X conference, Munich, Germany
- [Invited colloquia](#)
- 06/07/2017 “Sterile neutrino production in the early universe”, theory colloquium (Teilchentee) at the University of Heidelberg, Germany
- 09/06/2017 “Computing jet quenching and the transport coefficients of the Quark-Gluon Plasma”, theory colloquium at the University of Turin, Italy

Publication list

Alphabetically-ordered author lists are the community standard in theoretical high energy physics

Reviews and white papers

- [1] J. L. Barrow et al., *Theories and Experiments for Testable Baryogenesis Mechanisms: A Snowmass White Paper*, [2203.07059](#).
- [2] J. Ghiglieri, A. Kurkela, M. Strickland and A. Vuorinen, *Perturbative Thermal QCD: Formalism and Applications*, *Phys. Rept.* **880** (2020) 1 [[2002.10188](#)].
- [3] S. Biondini et al., *Status of rates and rate equations for thermal leptogenesis*, *Int. J. Mod. Phys.* **A33** (2018) 1842004 [[1711.02864](#)], chapter 4 of the review volume “Leptogenesis: Current Challenges for Model Building, Phenomenology and Non-Equilibrium Field Theory”.
- [4] J. Ghiglieri and D. Teaney, *Parton energy loss and momentum broadening at NLO in high temperature QCD plasmas*, *Int. J. Mod. Phys.* **E24** (2015) 1530013 [[1502.03730](#)], appears also as a chapter in *Quark-Gluon Plasma 5*, ed. X. N. Wang, World Scientific (2016).

Articles

- [5] K. Bouzoud and J. Ghiglieri, *Thermal axion production at hard and soft momenta*, [2404.06113](#).
- [6] J. Ghiglieri, M. Laine, J. Schütte-Engel and E. Speranza, *Double-graviton production from Standard Model plasma*, *JCAP* **04** (2024) 062 [[2401.08766](#)].
- [7] J. Ghiglieri, P. Schicho, N. Schlusser and E. Weitz, *The force-force correlator at the hard thermal scale of hot QCD*, *JHEP* **03** (2024) 111 [[2312.11731](#)].
- [8] J. Ghiglieri, J. Schütte-Engel and E. Speranza, *Freezing-in gravitational waves*, *Phys. Rev. D* **109** (2024) 023538 [[2211.16513](#)].

SUBATECH – 4 rue Alfred Kastler, 44307 Nantes, France

☎ +33 2 51 85 86 51 • ✉ jacopo.ghiglieri@subatech.in2p3.fr
 🌐 jacopoghiglieri.pages.in2p3.fr/me • 🗣️ [sbriglie](#) • 🐦 [jacopogh](#)

- [9] J. Ghiglieri and E. Weitz, *Classical vs quantum corrections to jet broadening in a weakly-coupled Quark-Gluon Plasma*, *JHEP* **11** (2022) 068 [[2207.08842](#)].
- [10] J. Ghiglieri, G. D. Moore, P. Schicho and N. Schlusser, *The force-force-correlator in hot QCD perturbatively and from the lattice*, *JHEP* **02** (2022) 058 [[2112.01407](#)].
- [11] J. Ghiglieri and M. Laine, *Smooth interpolation between thermal Born and LPM rates*, *JHEP* **01** (2022) 173 [[2110.07149](#)].
- [12] Y. Fu, J. Ghiglieri, S. Iqbal and A. Kurkela, *Thermalization of non-Abelian gauge theories at next-to-leading order*, *Phys. Rev. D* **105** (2022) 054031 [[2110.01540](#)].
- [13] S. Biondini and J. Ghiglieri, *Freeze-in produced dark matter in the ultra-relativistic regime*, *JCAP* **03** (2021) 075 [[2012.09083](#)].
- [14] J. Ghiglieri, G. Jackson, M. Laine and Y. Zhu, *Gravitational wave background from Standard Model physics: Complete leading order*, *JHEP* **07** (2020) 092 [[2004.11392](#)].
- [15] J. Ghiglieri and M. Laine, *Sterile neutrino dark matter via coinciding resonances*, *JCAP* **07** (2020) 012 [[2004.10766](#)].
- [16] J. Ghiglieri and M. Laine, *Sterile neutrino dark matter via GeV-scale leptogenesis?*, *JHEP* **07** (2019) 078 [[1905.08814](#)].
- [17] A. M. Eller, J. Ghiglieri and G. D. Moore, *Thermal Heavy Quark Self-Energy from Euclidean Correlators*, *Phys. Rev. D* **99** (2019) 094042 [[1903.08064](#)], [Erratum: *Phys.Rev.D* 102, 039901 (2020)].
- [18] J. Ghiglieri and U. A. Wiedemann, *Thermal width of the Higgs boson in hot QCD matter*, *Phys. Rev. D* **99** (2019) 054002 [[1901.04503](#)].
- [19] J. Ghiglieri and M. Laine, *Precision study of GeV-scale resonant leptogenesis*, *JHEP* **02** (2019) 014 [[1811.01971](#)].
- [20] J. Ghiglieri and H. Kim, *Transverse momentum broadening and collinear radiation at NLO in the $\mathcal{N} = 4$ SYM plasma*, *JHEP* **12** (2018) 049 [[1809.01349](#)].
- [21] J. Ghiglieri, G. D. Moore and D. Teaney, *Second-order Hydrodynamics in Next-to-Leading-Order QCD*, *Phys. Rev. Lett.* **121** (2018) 052302 [[1805.02663](#)].
- [22] J. Ghiglieri, G. D. Moore and D. Teaney, *QCD Shear Viscosity at (almost) NLO*, *JHEP* **03** (2018) 179 [[1802.09535](#)].
- [23] J. Ghiglieri and M. Laine, *GeV-scale hot sterile neutrino oscillations: a numerical solution*, *JHEP* **02** (2018) 078 [[1711.08469](#)].

- [24] J. Ghiglieri and M. Laine, *GeV-scale hot sterile neutrino oscillations: a derivation of evolution equations*, *JHEP* **05** (2017) 132 [[1703.06087](#)].
- [25] J. Ghiglieri and M. Laine, *Neutrino dynamics below the electroweak crossover*, *JCAP* **1607** (2016) 015 [[1605.07720](#)].
- [26] J. Ghiglieri, O. Kaczmarek, M. Laine and F. Meyer, *Lattice constraints on the thermal photon rate*, *Phys. Rev.* **D94** (2016) 016005 [[1604.07544](#)].
- [27] J. Ghiglieri, G. D. Moore and D. Teaney, *Jet-Medium Interactions at NLO in a Weakly-Coupled Quark-Gluon Plasma*, *JHEP* **03** (2016) 095 [[1509.07773](#)].
- [28] J. Ghiglieri and M. Laine, *Improved determination of sterile neutrino dark matter spectrum*, *JHEP* **11** (2015) 171 [[1506.06752](#)].
- [29] J. Ghiglieri and M. Laine, *Gravitational wave background from Standard Model physics: Qualitative features*, *JCAP* **1507** (2015) 022 [[1504.02569](#)].
- [30] J. Ghiglieri and G. D. Moore, *Low Mass Thermal Dilepton Production at NLO in a Weakly Coupled Quark-Gluon Plasma*, *JHEP* **12** (2014) 029 [[1410.4203](#)].
- [31] N. Brambilla, M. A. Escobedo, J. Ghiglieri and A. Vairo, *Thermal width and quarkonium dissociation by inelastic parton scattering*, *JHEP* **05** (2013) 130 [[1303.6097](#)].
- [32] J. Ghiglieri, J. Hong, A. Kurkela, E. Lu, G. D. Moore and D. Teaney, *Next-to-leading order thermal photon production in a weakly coupled quark-gluon plasma*, *JHEP* **05** (2013) 010 [[1302.5970](#)].
- [33] M. Berwein, N. Brambilla, J. Ghiglieri and A. Vairo, *Renormalization of the cyclic Wilson loop*, *JHEP* **03** (2013) 069 [[1212.4413](#)].
- [34] N. Brambilla, M. A. Escobedo, J. Ghiglieri and A. Vairo, *Thermal width and gluo-dissociation of quarkonium in pNRQCD*, *JHEP* **12** (2011) 116 [[1109.5826](#)].
- [35] N. Brambilla, M. A. Escobedo, J. Ghiglieri and A. Vairo, *The spin-orbit potential and Poincaré invariance in finite temperature pNRQCD*, *JHEP* **07** (2011) 096 [[1105.4807](#)].
- [36] N. Brambilla, J. Ghiglieri, P. Petreczky and A. Vairo, *The Polyakov loop and correlator of Polyakov loops at next-to-next-to-leading order*, *Phys. Rev.* **D82** (2010) 074019 [[1007.5172](#)].
- [37] N. Brambilla, M. A. Escobedo, J. Ghiglieri, J. Soto and A. Vairo, *Heavy Quarkonium in a weakly-coupled quark-gluon plasma below the melting temperature*, *JHEP* **09** (2010) 038 [[1007.4156](#)].

- [38] N. Brambilla, J. Ghiglieri and A. Vairo, *The Three-quark static potential in perturbation theory*, *Phys. Rev. D* **81** (2010) 054031 [0911.3541], [Erratum: Phys.Rev.D 107, 019904 (2023)].
- [39] N. Brambilla, J. Ghiglieri, A. Vairo and P. Petreczky, *Static quark-antiquark pairs at finite temperature*, *Phys. Rev.* **D78** (2008) 014017 [0804.0993].
- [40] J. Ghiglieri and M. Paris, *Quantum state reconstruction by entangled measurements*, *Eur. Phys. J.* **D40** (2006) 139.
- Ph.D. thesis
- [41] J. Ghiglieri, *Effective Field Theories of QCD for Heavy Quarkonia at Finite Temperature*, Ph.D. thesis, Munich, Tech. U., 2011. [1201.2920](#).
- Conference proceedings
- [42] J. Ghiglieri, G. D. Moore, P. Schicho, N. Schlusser and E. Weitz, *Hard parton dispersion in the quark-gluon plasma, non-perturbatively*, *PoS HardProbes2023* (2024) 149 [2307.09297].
- [43] J. Ghiglieri, *Transport properties of the QCD medium*, in *29th International Conference on Ultra-relativistic Nucleus-Nucleus Collisions*, vol. 16, p. 11, 2023, [2207.11112](#), DOI.
- [44] J. Ghiglieri, *Energy loss at NLO in a high-temperature Quark-Gluon Plasma*, in *Proceedings, 25th International Conference on Ultra-Relativistic Nucleus-Nucleus Collisions (Quark Matter 2015): Kobe, Japan, September 27-October 3, 2015*, vol. A956, pp. 801–804, 2016, [1601.06545](#), DOI.
- [45] J. Ghiglieri, *The thermal dilepton rate at NLO at small and large invariant mass*, in *Proceedings, 7th International Conference on Hard and Electromagnetic Probes of High-Energy Nuclear Collisions (Hard Probes 2015): Montréal, Québec, Canada, June 29-July 3, 2015*, vol. 276-278, pp. 305–308, 2016, [1510.00525](#), DOI.
- [46] J. Ghiglieri, *Theoretical aspects of photon production in high energy nuclear collisions*, in *Proceedings, 24th International Conference on Ultra-Relativistic Nucleus-Nucleus Collisions (Quark Matter 2014): Darmstadt, Germany, May 19-24, 2014*, vol. A931, pp. 206–215, 2014, [1407.8470](#), DOI.
- [47] J. Ghiglieri, *Next-to-leading order thermal photon production in a weakly-coupled plasma*, in *Proceedings, 6th International Conference on Hard and Electromagnetic Probes of High-Energy Nuclear Collisions (Hard Probes 2013): Cape Town, South Africa, November 4-8, 2013*, vol. A932, pp. 326–333, 2014, [1404.0626](#), DOI.
- [48] J. Ghiglieri, *A brief review of the theory of charmonium suppression in heavy ion collisions*, in *Proceedings, 6th International Workshop on Charm Physics (Charm 2013): Manchester, UK, August 31-September 4, 2013*, 2013, [1311.7399](#).

- [49] J. Ghiglieri, *Review of the EFT treatment of quarkonium at finite temperature*, in *Proceedings, 10th Conference on Quark Confinement and the Hadron Spectrum (Confinement X): Munich, Germany, October 8-12, 2012*, vol. ConfinementX, p. 004, 2012, [1303.6438](#).
- [50] J. Ghiglieri, *Heavy quarkonium spectrum and width in a weakly-coupled quark-gluon plasma*, in *Proceedings, 14th International Conference on Hadron spectroscopy (Hadron 2011): Munich, Germany, June 13-17, 2011*, 2011, [1108.5875](#).
- [51] J. Ghiglieri, *The Polyakov loop correlator at NNLO and singlet and octet correlators*, in *Proceedings, 9th Conference on Quark Confinement and the Hadron Spectrum: Madrid, Spain, 30 Aug-3 Sep 2010*, vol. 1343, pp. 474–476, 2011, [1010.3844](#), DOI.

Seminar list

Invited talks at workshops

- 20/03/2024 “Thermal effects in freeze-in DM production”, talk at the “Quarkonia meet Dark Matter” workshop, TU Munich, Germany
- 14/02/2024 “Classical and quantum corrections in jet quenching”, talk at the “New jet quenching tools to explore equilibrium and non-equilibrium dynamics in heavy-ion collisions” workshop, ECT*, Trento, Italy
- 19/01/2024 “Transport coefficients for heavy quarks and quarkonia”, talk at the “Strong interaction physics of heavy flavors” workshop, Hirscheegg, Austria
- 29/03/2022 “Thermal Field Theory and Cosmology”, online talk at the “Phase transitions in particle physics” workshop, Galileo Galilei Institute, Florence, Italy
- 23/11/2021 “A (perturbative) journey from quarks and gluons to hydrodynamics”, online lecture at the “International workshop on heavy-quark physics”, National Center for Physics, Islamabad, Pakistan
- 14/09/2021 “A theory overview of thermal radiation”, online talk at the “Real and virtual photon production at ultra-low transverse momentum and low mass at LHC” EMMI Rapid Reaction Task Force, GSI, Germany
- 26/07/2021 “QCD kinetic theory at NLO: transport and thermalisation”, online talk at the “Probing QCD at High Energy and Density with Jets” institute, INT, Seattle, USA
- 29/01/2020 “Thermodynamics and transport properties of the quark-gluon plasma: recent advancements”, talk at the “Rencontres de Physique des Particules 2020”, École polytechnique, Palaiseau, France
- 26/11/2018 “QGP dileptons and photons: perturbation theory meets the lattice”, talk at the “Electromagnetic Radiation from Hot and Dense Hadronic Matter” workshop, ECT*, Trento, Italy
- 06/04/2018 “Transport coefficients of QCD at (almost) NLO”, talk at the “Fire and ice: Hot QCD meets cold and dense matter” workshop, Saariselkä, Finland

SUBATECH – 4 rue Alfred Kastler, 44307 Nantes, France

☎ +33 2 51 85 86 51 • ✉ jacopo.ghiglieri@subatech.in2p3.fr
 🌐 jacopoghiglieri.pages.in2p3.fr/me • 🔄 [sbriglie](#) • 🐦 [jacopogh](#)

9/13

- 30/03/2017 “Neutrino kinetic equations”, talk at the “Neutrinos: the quest for a new physics scale” workshop, CERN, Switzerland
- 14/02/2017 “O(g) corrections to the transport coefficients of QCD”, talk at the “QCD in Finite Temperature and Heavy-Ion Collisions” workshop, Brookhaven National Laboratory, USA
- 26/08/2016 “Particle production and equilibration rates: the case of right-handed neutrinos in the broken phase”, talk at the “The Big Bang and the Little Bangs” workshop, CERN, Switzerland
- 03/12/2015 “The NLO dilepton rate meets the lattice”, talk at the “New perspectives on Photons and Dileptons in Ultrarelativistic Heavy-Ion Collisions at RHIC and LHC” workshop, ECT*, Trento, Italy
- 24/09/2015 “Gravitational wave background from Standard Model physics”, invited talk at the “2nd eLISA Cosmology Workshop”, Stavanger, Norway
- 05/08/2015 “NLO effective kinetic theory for jets and thermalization”, invited talk given at the INT workshop “Equilibration Mechanisms in Weakly and Strongly Coupled Quantum Field Theories”, INT, Seattle, USA
- 16/12/2014 “Finite temperature EFTs for quarkonia”, invited talk at the workshop “Ab initio approaches in many-body QCD confront heavy-ion experiments”, Heidelberg, Germany
- 06/08/2014 “Energy loss beyond leading order”, invited talk at the MITP workshop “Jets, particle production and transport properties in collider and cosmological environments”, Mainz, Germany
- 04/04/2013 “The Polyakov loop correlator and the cyclic Wilson loop in perturbation theory and EFTs”, invited talk given at the “Heavy Quarks and Heavy Quarkonia in Thermal QCD” Workshop, ECT*, Trento, Italy
- 02/04/2012 “Heavy quarkonium and the renormalization of the cyclic Wilson loop”, invited talk given at the INT program “Gauge fields in and out of equilibrium”, Institute for Nuclear Theory, Seattle, USA
- 15/02/2011 “Heavy quarkonium in a weakly-coupled plasma in an EFT approach”, invited talk given at the 474th W.E. Heraeus Seminar, Bad Honnef, Germany
- 09/07/2010 “Heavy quark potentials at finite temperature”, invited talk given at the “Quantifying the Properties of Hot QCD Matter” INT Program, Institute for Nuclear Theory, Seattle, USA
- 17/12/2009 “Heavy quarkonia at finite temperature: the EFT approach”, invited talk given at the joint CATHIE/TECHQM Workshop, Brookhaven National Laboratory, USA

Seminars and contributed talks

- 22/02/2024 “Classical and quantum corrections to jet broadening”, seminar at CERN, Switzerland
- 17/10/2024 “Thermal freeze-in production of gravitational waves”, seminar at the University of Basel, Switzerland

SUBATECH – 4 rue Alfred Kastler, 44307 Nantes, France

☎ +33 2 51 85 86 51 • ✉ jacopo.ghiglieri@subatech.in2p3.fr
 🌐 jacopoghiglieri.pages.in2p3.fr/me • 🌐 [sbriglie](#) • 🐦 [jacopogh](#)

10/13

- 27/06/2023 “NLO thermalisation in weakly-coupled QCD” seminar the Centre de Physique Theorique, École polytechnique, Palaiseau, France
- 28/04/2023-05/05/2023 “NLO thermalisation in weakly-coupled QCD” virtual seminar (in two parts) at the University of Cape Town, South Africa
- 28/03/2023 “Hard parton dispersion in the quark-gluon plasma, non-perturbatively”, contributed talk at “Hard Probes 2023”, Aschaffenburg, Germany
- 07/03/2023 “Thermal corrections to Dark Matter production”, invited seminar at the Centre for Cosmology, Particle Physics and Phenomenology, Louvain-la-Neuve, Belgium
- 16/09/2021 “Transport and thermalisation at NLO from kinetic theory”, virtual seminar at the INT, Seattle, USA
- 06/07/2021 “Bottom-up thermalisation at next-to-leading order”, contributed talk at “Rencontres QGP France”, Étretat, France
- 21/05/2021 “Thermal gravitational wave production in the Early Universe”, virtual NT/RBRC seminar at Brookhaven National Laboratory, USA
- 11/06/2020 “Gravitational wave background from equilibrium Standard Model physics”, virtual seminar at the Weizmann institute, Rehovot, Israel
- 13/02/2020 “Thermal width of the Higgs boson in hot QCD matter”, heavy-ion seminar at the IPN, Orsay, France
- 11/02/2020 “Kinetic theory and transport coefficients of hot QCD”, seminar at IPhT, Saclay, France
- 20/11/2019 “Kinetic theory and transport coefficients of hot QCD”, seminar at IGFAE, Santiago de Compostela, Spain
- 19/03/2019 “Kinetic theory and transport coefficients of hot QCD”, seminar at SUBAT-ECH, Nantes, France
- 19/11/2018 “Kinetic theory and transport coefficients of hot QCD”, seminar at EPFL, Lausanne, Switzerland
- 15/05/2018 “Second-order transport coefficients at NLO in pQCD”, contributed talk at “Quark Matter 2018”, Venice, Italy
- 11/12/2017 “Electromagnetic probes of the quark-gluon plasma: perturbation theory meets the lattice”, seminar at the University of Turin, Italy
- 02/11/2017 “Sterile neutrino production in the early Universe”, seminar at the Institut für Kernphysik of the Technical University of Darmstadt, Germany
- 07/02/2017 “O(g) NLO effects in transport coefficients”, contributed talk at “Quark Matter 2017”, Chicago, USA
- 13/07/2016 “Active and sterile neutrino dynamics below the electroweak crossover”, contributed talk at the Strong and Electroweak Matter 2016 conference, Stavanger, Norway
- 25/01/2016 “Computing jet quenching and the transport coefficients of the Quark-Gluon-Plasma”, Strong Interaction seminar, Technische Universität München, Germany

SUBATECH – 4 rue Alfred Kastler, 44307 Nantes, France

☎ +33 2 51 85 86 51 • ✉ jacopo.ghiglieri@subatech.in2p3.fr
 🌐 jacopoghiglieri.pages.in2p3.fr/me • 🌐 sbrieglie • 🐦 jacopogh

11/13

- 24/11/2015 “Gravitational wave background from Standard Model physics”, seminar, University of Helsinki, Finland
- 07/10/2015 “Gravitational wave background from Standard Model physics”, Cosmo Coffee seminar, CERN, Switzerland
- 28/09/2015 “Energy loss and shear viscosity at NLO in a high-temperature QGP”, contributed talk at “Quark Matter 2015”, Kobe, Japan
- 01/07/2015 “The dilepton rate at NLO at small and large invariant mass”, contributed talk at the Hard Probes 2015 conference, McGill University, Montreal, Canada
- 01/11/2013 “The thermal photon rate at NLO (and a sneak peek at jets)”, Heavy Ion Forum seminar, CERN, Switzerland
- 30/10/2013 “The thermal photon rate at NLO (and a sneak peek at jets)”, seminar at the University of Helsinki, Finland
- 24/10/2013 “Higher-order calculations of hard probes in the quark-gluon plasma”, seminar at the Niels Bohr Institute, Copenhagen, Denmark
- 10/10/2013 “The thermal photon rate and jet evolution at NLO”, seminar at the Nuclear Theory Group, Ohio State University, Columbus, US
- 10/09/2013 “Soft and collinear physics in finite-temperature QCD”, seminar at the Institute for Theoretical Physics, Universität Bern, Switzerland
- 05/09/2013 “Photon production and jet evolution at NLO”, seminar at the Institut de Physique Théorique, CEA-Saclay, France
- 11/07/2012 “The photon production rate at NLO”, poster presentation at the Strong and Electroweak Matter 2012 conference, Swansea, UK
- 09/05/2012 “Thermal photon rate at NLO”, talk given at the Effective Field Theory seminar, TU Munich, Germany
- 15/03/2012 “The thermal width of quarkonium in Effective Field Theories”, seminar given for the Nuclear Theory group, Stony Brook University
- 09/01/2012 “Thermal photon production in the quark-gluon plasma”, talk given at the Nuclear and Particle Physics seminar, TU Munich, Germany
- 08/12/2011 “Recent progress in EFTs for Quarkonium at finite temperature”, seminar given at the Nuclear Theory Seminar, Brookhaven National Laboratory, USA
- 16/06/2011 “Heavy quarkonium spectrum and width in a weakly-coupled quark-gluon plasma”, talk given at the Hadron 2011 conference, Munich
- 04/05/2011 “Effective Field Theories for heavy quarkonium at finite temperature”, talk given at the theory seminar, McGill University, Montréal, Canada
- 09/09/2010 “Heavy quarkonium spectrum and width in a weakly-coupled quark-gluon plasma”, talk given at the Euroflavour2010 conference, Garching, Munich
- 31/08/2010 “The Polyakov loop correlator at the next-to-leading order and its relation with the singlet and octet potentials”, talk given at the Quark Confinement and the Hadron Spectrum IX conference, Universidad Complutense, Madrid, Spain

- 22/07/2010 “Finite Temperature Effective Field Theories of QCD for the study of the Quark-Gluon Plasma”, invited talk given at the Excellence Cluster Universe Research Area D day, Garching, Munich
- 02/07/2010 “Polyakov loop correlator at NLO and Singlet and Octet Potentials”, talk given at the Strong and Electroweak Matter 2010 conference, McGill University, Montreal, Canada
- 18/12/2009 “The Polyakov loop and the Polyakov loop correlator in perturbation theory”, seminar given at the Nuclear Theory/RIKEN Seminar, Brookhaven National Laboratory, USA
- 13/10/2009 “Finite Temperature Effective Field Theories of QCD for the study of the Quark-Gluon Plasma”, talk given at the Science Week of the Excellence Cluster Universe, Garching, Munich
- 20/08/2009 “The EFT approach to quarkonium in media: finite T pNRQCD”, talk given at the Effective Field Theories in Particle and Nuclear Physics program, Kavli Institute, Beijing, China
- 20/03/2009 “Static quark-antiquark pairs at finite temperature”, talk given at the DPG Frühjahrstagung 2009, Hadrons and Nuclei Division, Bochum, Germany
- 28/11/2008 “Heavy quarkonia at finite temperature: the EFT approach”, talk given at the 5th Vienna Central European Seminar, Vienna University
- 29/08/2008 “Quarkonium in media: the EFT approach”, seminar given at the Nuclear Theory Group, SUNY Stony Brook, USA
- 14/08/2008 “Quarkonium in media: the EFT approach”, seminar given at the RIKEN seminar, Brookhaven National Laboratory, USA
- 15/05/2008 “Static quark-antiquark pairs at finite temperature”, talk given at the XIII Frascati Spring School, Frascati, Italy