

CURRICULUM VITAE

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ACADEMIC ACHIEVEMENTS

- **Ph.D. in Physics**, University of Oslo, Oslo, September 2008, thesis title: “Hard and Soft Physics in pp, pA and AA collisions” (thesis supervisor: Larissa Bravina)
- **Cand.Scient. in Physics**, University of Oslo, Oslo, February 2004, thesis title: “Scalar and tensor fluctuations during inflation” (thesis supervisor: Finn Ravndal)

WORK EXPERIENCE

- **October 2018 - Present:** Researcher at the University in Bergen
 - group leader of Group for Theoretical Atomic, Nuclear and Particle Physics (2020-)
- **November 2015 - September 2018:** Postdoctoral researcher (CERN fellow) at CERN
- **November 2012 - October 2015:** Postdoctoral researcher (Juan de la Cierva Fellow) at the University of Barcelona
- **December 2010 - October 2012:** Postdoctoral researcher at Lund University
- **September 2008 - November 2010:** Postdoctoral researcher at the University of Santiago de Compostela

PARTICIPATION IN RESEARCH PROJECTS

- “Understanding the Early Universe: interplay of theory and collider experiments”, National Science Foundation (Poland), grant within the GRIEG-I program, 2020-2023, **team member** (principal investigator: Stefan Pokorski)
- “Thermalizing jets: new aspects of non-equilibrium physics at colliders”, **principal investigator**, Starting Grant from Trond Mohn Foundation (www.mohnfoundation.no)
- “Holography for the LHC era”, European Research Council, Starting Grant HoloLHC - 306605, 2012-2017, **team member** (principal investigator: David Mateos)

AWARDED GRANTS

- UH-nett Vest grant to establish “Western Norway Network for Nuclear Matter Research” (2018-2019)
- Trond Mohn Foundation Starting Grant (01.10.2018 - 30.09.2022)
- Marie Skłodowska-Curie Individual Fellowship (01.11.2015 - 30.10.2017)
- CERN Fellowship (01.11.2015 - 30.09.2018)

- Juan de la Cierva Fellowship (01.11.2012 - 30.10.2015)

BOARD PARTICIPATION

- Ph.D. thesis evaluation committee: Nikolai Fomin (University of Bergen), October 2020 (thesis supervisor: Anna Lipniacka)
- Ph.D. thesis evaluation committee: Paul Caucal (Universite Paris, Saclay), September 2020 (thesis supervisor: Gregory Soyez, Edmond Iancu)
- Ph.D. thesis evaluation committee: Olja Dordic (University of Oslo), April 2020 (thesis supervisor: Trine Tveter)
- National Science Centre (Narodowe Centrum Nauki) Expert Reviewer (OPUS17 and PRELUDIUM17 grants), Poland
- Ph.D. thesis evaluation committee: Hao Ma (Universidade de Santiago de Compostela), September 2013 (thesis supervisor: Carlos A. Salgado)

REFeree ACTIVITY

Journal of High Energy Physics, Physical Review C, Physical Review D, Physics Letters B, European Physical Journal C, Journal of Physics G, Reports on Progress in Physics

TEACHING EXPERIENCE

- PHYS301 General relativity (University of Bergen), Spring Semester 2020, lecturer
- PHYS333 Relativistic heavy-ion collisions (University of Bergen), Spring Semester 2019, lecturer
- Metodos Matematicos II (University of Barcelona), Spring Semester 2015, teaching assistant (principal lecturer: Joan Sola)
- Metodos Matematicos II (University of Barcelona), Spring Semester 2014, teaching assistant (principal lecturer: Joan Sola)
- Laboratorio Basic per a Enginyeria (University of Barcelona), Spring Semester 2014, teaching assistant (principal lecturer: Joan Parellada)
- FYTN10 Introduction to quantum field theory (Lund University), Spring Semester 2012, teaching assistant (principal lecturer: Johan Rathsman)
- FYS4170 Relativistic quantum field theory (Univeristy of Oslo), Autumn Semester 2007, teaching assistant (principal lecturer: Jan Olav Eeg)

THESIS SUPERVISION

- Bachelor thesis supervisor: Viktor Linders (Lund University), thesis title: "Jet softening and decollimation in heavy-ion collisions" (arXiv:1109.2082 [hep-ph]), 01.05.11-31.07.11

INVITED PRESENTATIONS/TALKS AT CONFERENCES

- "Jet substructure in heavy-ion collisions," **invited talk** at the 11th International Workshop on Boosted Object Phenomenology, Reconstruction and Searches in HEP (BOOST2019), 21.07.2019-26.07.2019, Cambridge, US

- “Parton energy loss in QCD matter - Theory,” **plenary talk** at the 8th International Conference on Hard and Electromagnetic Probes of High-Energy Nuclear Collisions (Hard Probes 2016), 23.09.16-27.09.16, Wuhan, China
- “Is there jet quenching in pPb?,” **plenary talk** at the 1st International Conference on the Initial Stages in High-Energy Nuclear Collisions (IS013), 08.09.13-14.09.13, Illa da Toxa
- “MC implementation of coherence effects - status and perspectives,” invited talk at the workshop *Jet quenching: the interface between theory and experiment* at CERN, 11.02.13-15.02.13, Meyrin
- “Antenna radiation in medium,” invited talk at the *8th International Workshop on High- p_T Physics at LHC*, 20.10.12-24.10.12, Wuhan
- “Monte-Carlos of jet quenching: an overview,” invited talk at the workshop *Jet Modifications in the RHIC and LHC Era (Quark Matter 2012 Satellite Workshop)*, 20.08.12-24.08.12, Wayne State University, Detroit
- “Advancing QCD-based calculations of jet quenching,” **plenary talk** at the *5th International Conference on Hard and Electromagnetic Probes of High-Energy Nuclear Collisions (Hard Probes 2012)*, 27.05.12-01.06.12, Cagliari
- “The ‘stopped jet’ at RHIC and beyond,” invited lecture at the Student Day of the *22nd International Conference on Ultrarelativistic Nucleus-Nucleus Collisions (Quark Matter 2011)*, 23.05.11-27.05.11, Annecy
- “Heavy Ions: theory overview,” invited talk at the *2nd International Workshop on Multiple Partonic Interactions at the LHC (MPI@LHC 2010)*, 29.11.10-03.12.10, Glasgow

TOPICAL LECTURES

- “Hard Probes in Heavy Ion Collisions,” lectures at the H-QM Helmholtz Research School, “Lecture Week - Winter 2016”, 14.02.16-21.02.16, Manigod, France
- “Heavy Ions,” lectures at the Taller de Altas Energias 2014, 12.09.14-27.09.14, Centro de Ciencias de Benasque Pedro Pascual, Benasque, Spain
- “Theory of jet quenching and jet modifications,” lectures at the Summer School of the JET Collaboration, 12.06.13-14.06.13, Ohio University, Columbus, OH, USA
- “Jet quenching, DGLAP equations and Monte-Carlo parton showers,” lectures for the Ph.D. programme “Topical Lectures Research School on Subatomic Physics,” 15.06.11-17.06.11, NIKHEF, Amsterdam, Holland
- “Hard probes in Heavy Ion Collisions,” lectures at the H-QM Helmholtz Research School, “Lecture Week - Spring 2011”, 27.02.11-06.03.11, Manigod, France
- “Heavy Ion Physics,” lectures at the school “AdS/CFT, Dyson-Schwinger equations and hot-dense matter,” 25.10.10-29.10.10, the Kavli Institute of Theoretical Physics China, Beijing, China

ORGANIZATION OF INTERNATIONAL CONFERENCES

- EMMI Rapid Reaction Task Force on “Space-Time Structure of Jet Quenching: Theory and Experiment”, **organizer**, 12.08.2019 - 16.08.2019, GSI, Darmstadt, Germany
- 2nd Heavy-Ion Jet Substructure workshop (Jet Tools 2019), **chair of organizing committee**, 13.05.2019 - 17.05.2019, Bergen, Norway

- 1st Heavy-Ion Jet Substructure workshop and CERN Theory Institute “Novel tools and observables of jet physics in heavy-ion collisions”, **chair of organizing committee**, 21.08.2019 - 01.09.2017, CERN, Geneva, Switzerland
- 3rd International Conference on the Initial Stages in High-Energy Nuclear Collisions (Initial Stages 2016), local and program organizing committee (chair: Guilherme Milhano), 23.05.16-27.05.16, Lisbon, Portugal
- 4th Annual Large Hadron Collider Physics (LHCP2016) Conference, co-convenor of the heavy-ion sessions (program committee co-chairs: Andreas Hoecker, Jim Olsen), 13.06.16-18.06.16, Lund, Sweden

MAIN PUBLICATIONS

- **Sudakov suppression of jets in QCD media**
 - Yacine Mehtar-Tani (Washington U., Seattle), Konrad Tywoniuk (CERN)
 - e-Print: 1707.07361 [hep-ph]
 - Published in: Phys. Rev. D 98 (2018) 5, 051501
- **Groomed jets in heavy-ion collisions: sensitivity to medium-induced bremsstrahlung**
 - Yacine Mehtar-Tani (Washington U., Seattle), Konrad Tywoniuk (CERN)
 - e-Print: 1610.08930 [hep-ph]
 - Published in: JHEP 04 (2017), 125
- **Massless Mode and Positivity Violation in Hot QCD**
 - Nan Su (Bielefeld U.), Konrad Tywoniuk (Barcelona U., ECM and ICC, Barcelona U.)
 - e-Print: 1409.3203 [hep-ph]
 - Published in: Phys.Rev.Lett. 114 (2015) 16, 161601
- **Jet (de)coherence in Pb–Pb collisions at the LHC**
 - Yacine Mehtar-Tani (IPhT, Saclay), Konrad Tywoniuk (ICC, Barcelona U. and Barcelona U., ECM)
 - e-Print: 1401.8293 [hep-ph]
 - Published in: Phys.Lett.B 744 (2015), 284-287
- **Jet physics in heavy-ion collisions**
 - Yacine Mehtar-Tani (Saclay, SPHT), Jose Guilherme Milhano (CERN and Lisbon, IST), Konrad Tywoniuk (Barcelona U., ECM and ICC, Barcelona U.)
 - e-Print: 1302.2579 [hep-ph]
 - Published in: Int.J.Mod.Phys.A 28 (2013), 1340013
- **New picture of jet quenching dictated by color coherence**
 - Jorge Casalderrey-Solana (Barcelona U., ECM and ICC, Barcelona U.), Yacine Mehtar-Tani (Saclay, SPHT), Carlos A. Salgado (Santiago de Compostela U., IGFAE and CERN), Konrad Tywoniuk (Lund U.)

- e-Print: 1210.7765 [hep-ph]
- Published in: Phys.Lett.B 725 (2013), 357-360

- **Jets in QCD Media: From Color Coherence to Decoherence**
 - Y. Mehtar-Tani (Santiago de Compostela U., IGFAE and Santiago de Compostela U.), C.A. Salgado (Santiago de Compostela U., IGFAE and Santiago de Compostela U.), K. Tywoniuk (Lund U.)
 - e-Print: 1102.4317 [hep-ph]
 - Published in: Phys.Lett.B 707 (2012), 156-159

- **Anti-angular ordering of gluon radiation in QCD media**
 - Yacine Mehtar-Tani (Santiago de Compostela U.), Carlos A. Salgado (Santiago de Compostela U.), Konrad Tywoniuk (Santiago de Compostela U.)
 - e-Print: 1009.2965 [hep-ph]
 - Published in: Phys.Rev.Lett. 106 (2011), 122002

- **Heavy ion event generator HYDJET++ (HYDroynamics plus JETs)**
 - I.P. Lokhtin (Moscow State U. and SINP, Moscow), L.V. Malinina (Moscow State U. and SINP, Moscow), S.V. Petrushanko (Moscow State U. and SINP, Moscow), A.M. Snigirev (Moscow State U. and SINP, Moscow), I. Arsene (Oslo U.) et al.
 - e-Print: 0809.2708 [hep-ph]
 - Published in: Comput.Phys.Commun. 180 (2009), 779-799

- **Charmonium dissociation and recombination at RHIC and LHC**
 - A. Capella (Orsay, LPT), L. Bravina (Oslo U. and SINP, Moscow), E.G. Ferreira (Santiago de Compostela U.), A.B. Kaidalov (Moscow, ITEP), K. Tywoniuk (Oslo U.) et al.
 - e-Print: 0712.4331 [hep-ph]
 - Published in: Eur.Phys.J.C 58 (2008), 437-444