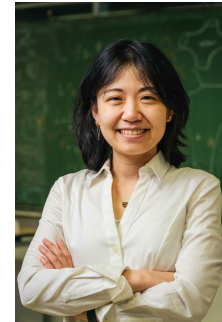


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Education

- 2012 - 2015** **Ph.D.** in Particle Physics - Université Grenoble Alpes, France
Mention Bien (or cum laude) *Thesis - Search for Supersymmetry and Dark Matter particles in the single photon final state with the ATLAS detector* (Advisors: dr. M.H. Genest and dr. F. Malek)
- 2011 - 2012** M.Sc. in Particle and Nuclear Physics - Lanzhou University, China
First Class (or cum laude) - Thesis exemption honour (direct to Ph.D.)
- 2007 - 2011** B.E. in Nuclear Technology - Lanzhou University, China
First Class (or cum laude) - Postgraduate exam exemption honour (direct to M.Sc.)

Employment

- 2020 - Pres.** Assistant Professor, High Energy Physics department, Radboud University, Nijmegen, The Netherlands.
- 2017 - 2020** Project Scientist, Deutsches Elektronen-Synchrotron (DESY), Hamburg, Germany.
- 2015 - 2017** Postdoctoral researcher at the Institute of High Energy Physics (IHEP) of the Chinese Academy of Sciences and later (2016-2017) “Chung-Yao Chao” Fellow at the Center for Excellence in Particle Physics of Chinese Academy of Sciences, China; fully based at CERN, Geneva.

Leadership and Responsibilities

Present

- 2024 - Pres.** Member of CERN ECFA-DRD7 Collaboration.
- 2023 - Pres.** Member of RU IMAPP Grant Support Team.
- 2023 - Pres.** Member of CERN ECFA-DRD3 Collaboration.
- 2022 - Pres.** Member of Nikhef Diversity and Inclusive Committee.
- 2021 - Pres.** Coordinator of RU IMAPP-HEP engineer and technician efforts.
- 2021 - Pres.** Member of Dutch CERN Contact Committee.
- 2020 - Pres.** Member of ATLAS TDAQ Collaboration.
- 2020 - Pres.** Member of ATLAS Collaboration.

Past

- 2021 - 2025** Coordinator of HGTD DAQ/Luminosity/Control group.
- 2019 - 2020** Member of DESY Beam Telescope support team.
- 2018 - 2020** Member of young scientists in High Energy Physics (yHEP) in Germany.
- 2017 - 2020** Member of EUDAQ2 support team for the beam telescope and test beam community.
- 2017 - 2020** Task Leader of EU AIDA-2020 Project.
- 2018** Member of IEEE NSS-MIC 2018 Conference Information & Promotion (CIP).
- 2015 - 2017** Member of CMS Collaboration and convener of the Software Release Validation group of the Physics Performance & Dataset Project (PPD) at CMS.
- 2015 - 2016** Member of CERN LHC Dark Matter Forum.
- 2012 - 2015** Member of ATLAS Collaboration.

Teaching

- 2020 - Pres.** Radboud University, Nijmegen
- Q3-Q4 (from 2020): Instrumentation in Particle Physics (master course);
 - Q4 (from 2021): Subatomic Physics (bachelor course);
- 2017 - 2020** DESY, Hamburg
- Coach of the FLC Journal Club for graduates and young postdocs exploring various scientific papers.
 - (2018) Hands-on tutorial for summer students on “Analyzing data with ROOT framework” at DESY.
- 2019** CERN, Geneva
- Hands-on tutorial for scientists on a widely used trigger data acquisition system called “EUDAQ2 and AIDA TLU” in the Beam Telescopes and Test Beams Workshop at CERN.
- 2011 - 2012** Lanzhou University, China
- Teaching Assistant for undergraduate courses:
- Introduction to Nuclear Physics
 - Engineering Drawing

Supervision of students

- 2020 - Pres.** Radboud University, Nijmegen, NL
As assistant professor, I co-/supervised
- 1* Bachelor internship (2021) on irradiated LGAD sensor studies using HGTD test beam data;
 - 1* Bachelor internship (2023-2024) on Heavy Neutral Lepton search in a VBS channel with two same-sign tau leptons;
 - 1* Master thesis on [permanent magnet based MRI](#) (co-supervision);
 - 1* Master thesis on [LGAD characterisation](#);
 - 1* Master thesis on LGAD test beam analysis (angled data, inter-pad data).
 - 1* Master thesis on [track-time association performance study with HGTD](#).
 - ongoing: 1* PhD student in ATLAS/Detector R&D.
- 2017 - 2020** DESY, Hamburg, Germany
As a Post-doc, I supervised several students on a day-to-day basis:
- 1* PhD, 1* MPhys as summer student and 3* BPhys (two as summer student, one for a 5-month intern) students working on semiconductor detector with the AIDA-2020 Project;
 - 2* high school graduate students (3-month intern) working on the environmental control system with the AIDA-2020 Project.

- 2015** LPSC, Grenoble, France
As a PhD, I co-supervised
- 1* MPhys student in searching for dark matter in single photon final state at ATLAS.

Outreach

- 2016 - Pres.** Official CERN tour guide.
- 2017** Official guide for DESY Open Day and Hamburg Science Night.
- 2013** Co-organizer of the Gezhi Forum of the Chinese Student and Researcher Union in Grenoble, France, aiming at sharing state-of-art knowledge among different Scientific fields.
- 2010** Member of the local organizer team for the 6th joint meeting of Chinese physicists worldwide (OCPA6) - International Conference on Physics Education and Frontier Physics Research.

Awards and Honors

- 2018** Performance award for superb and outstanding work in detector development, DESY, Germany
- 2016-2017** Chung-Yao Chao Fellowship, CAS Center for Excellence in Particle Physics, China
- 2015** Best poster award at 35th Physics in Collision, Coventry, UK

Publications with major contributions

- M. Wu, “A High-Granularity Timing Detector for the ATLAS Phase-II Upgrade”, [10.7566/JPSCP.42.011026](#), *JPS Conf. Proc.* **42**, 011026 (2024)
- M. Wu, “FELIX: Readout upgrade for the ATLAS Trigger DAQ system in HL-LHC”, [10.1016/j.nima.2022.167994](#), *Nucl.Instrum.Meth.A* 1048 (2023) 167994
- The ALTAS Collaboration, “Search for Majorana neutrinos in same-sign WW scattering events from pp collisions at $\sqrt{s} = 13$ TeV”, [10.1140/epjc/s10052-023-11915-y](#)
- M. Wu et al, “Lycoris – a large-area, high resolution beam telescope”, [10.1088/1748-0221/16/10/P10023](#), *JINST* 16 (2021) 10, P10023
- U. Kraemer et al, “First performance results of the Lycoris large area strip beam telescope”, 2019 IEEE NSS/MIC Conference Proceedings, [10.1109/NSS/MIC42101.2019.9059775](#)
- M. Wu et al, “Development of a large active area beam telescope based on the SiD microstrip sensor”, [10.1016/j.nima.2019.162864](#), *Nucl.Instrum.Meth.A* 958 (2020) 162864
- The ATLAS/CMS Dark Matter Forum, “Dark Matter Benchmark Models for Early LHC Run-2 Searches: Report of the ATLAS/CMS Dark Matter Forum”, [10.1016/j.dark.2019.100371](#), *Phys.Dark Univ.* 27 (2020) 100371
- Y. Liu et al, EUFAQ2 – A Flexible Data Acquisition Software Framework for Common Test Beams, [10.1088/1748-0221/14/10/P10033](#), *JINST* 14 (2019) 10, P10033
- M. Wu et al, “Lycoris: A large area beam telescope based on hybrid-less strip silicon sensor”, 2018 IEEE NSS/MIC Conference Proceedings, [10.1109/NSSMIC.2018.8824667](#)
- U. Kraemer, D. Tsionou, M. Stanitzki and M. Wu, “LYCORIS - A Large Area Strip Telescope”, International Workshop on Future Linear Colliders (LCWS2017) Proceedings, [arXiv: 1801.08505\[physics.ins-det\]](#)

- The CMS Collaboration, “Search for new diboson resonances in the dilepton + jets final state at $\sqrt{13}$ TeV with 2016 data”, [CMS-PAS-HIG-16-034](#), Preliminary Result (** I am one of the authors of its corresponding internal note, but not sure for the CMS authorship status at that time.*)
- WU, Mengqing, “Dark matter searches with the ATLAS detector”, conference proceeding for the 35th International Symposium on Physics in Collision (PIC 2015), [ATL-PHYS-PROC-2015-153](#)
- WU, Mengqing, “Search for Supersymmetry and Dark Matter particles in the single photon final state with the ATLAS detector”, PhD thesis, [CERN-THESIS-2015-122](#)
- The ATLAS Collaboration, “Search for new phenomena in events with a photon and missing transverse momentum in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector”, [10.1103/PhysRevD.91.012008](#), *Phys.Rev.D* 92 (2015) 5, 059903
- The ATLAS Collaboration, “Search for new phenomena in events with a photon and missing transverse momentum in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector”, [ATLAS-CONF-2014-051](#), Preliminary Result

Project Report, Technical Notes

- M. Wu, “Silicon strip reference tracker at DESY”, EU project AIDA-2020 Deliverable Report, [AIDA-2020-D15.2](#)
- M. Wu, “Environmental control system at DESY”, EU project AIDA-2020 Deliverable Report, [AIDA-2020-D15.3](#)
- M. Wu and F. Lars, “User Manual Slow Control System”, EU Project AIDA-2020 Scientific/Technical Note, [AIDA-2020-NOTE-2019-005](#)
- M. Wu, “User Manual of the environmental control system at DESY”, EU Project AIDA-2020 Scientific/Technical Note, [AIDA-2020-NOTE-2017-007](#)

Presentations

Conference

“Pileup suppression with timing detectors”, *12th edition of the Large Hadron Collider Physics Conference (LHCP2024)*, Boston, USA, 3-7 Jun 2024.

(to-be-published) presentation: [ATL-COM-HGTD-2024-011](#)

Note: due to visa issue, Simone Pagan Griso (LBNL) kindly agreed to present the talk for me.

“A High-Granularity Timing Detector for the ATLAS Phase-II Upgrade”, *31st International Workshop on Vertex Detectors (Vertex2022)*, Tateyama, Japan, 23-28 October 2022.

Published presentation: [ATL-HGTD-SLIDE-2022-568](#)

“FELIX: readout upgrade for the ATLAS Trigger DAQ system in HL-LHC”, *15th Pisa Meeting on Advanced Detectors - Edition 2022 (PM2021)*, La Biodola - Isola d'Elba, Italy, 22-28 May 2022.

Published presentation: [ATL-DAQ-SLIDE-2022-203](#)

“Development of a large active area beam telescope based on the SiD micro-strip sensor”, *15th Vienna Conference on Instrumentation (VCI2019)*, Vienna, Austria, 18-22 February 2019.

Published presentation: [AIDA-2020-POSTER-2019-001](#)

“The LYCORIS Telescope at the DESY II Test Beam Facility”, *7th Beam Telescopes and Test Beams Workshop (BTTB7)*, Zurich, Switzerland, 14-18 January 2019.

Published presentation: [AIDA-2020-SLIDE-2019-005](#)

“LYCORIS: A large area beam telescope based on hybrid-less strip silicon sensor”, *2018 IEEE Nuclear Science Symposium and Medical Imaging Conference (IEEE2018 NSS/MIC)*, Sydney, Australia, 10-17 November 2018.

Published presentation: [AIDA-2020-POSTER-2019-002](#)

“LYCORIS, a large area strip telescope for the DESY test beam”, *Asian Linear Collider Workshop 2018 (ALCW2018)*, Fukuoka, Japan, 28 May - 1 June 2018.

Published presentation: [AIDA-2020-SLIDE-2019-004](#)

“TPC R&D activities at DESY”, *Asian Linear Collider Workshop 2018 (ALCW2018)*, Fukuoka, Japan, 28 May - 1 June 2018.

“Development of a large area strip telescope for the DESY II Testbeam Facility”, *6th Beam Telescopes and Test Beams Workshop (BTTB6)*, Zurich, Switzerland, 16-19 January 2018.

Published presentation: [AIDA-2020-SLIDE-2018-004](#)

“Environmental slow control system for the DESY II Testbeam Area”, *6th Beam Telescopes and Test Beams Workshop (BTTB6)*, Zurich, Switzerland, 16-19 January 2018.

Published presentation: [AIDA-2020-SLIDE-2018-005](#)

“Experimental results on di-photon, ZZ and WW resonances from ATLAS and CMS”, *QCD@LHC2016*, Zurich, Switzerland, 22-26 August 2016. (**Selected** by CMS, on behalf of the ATLAS and the CMS collaborations)

“Dark matter searches with the ATLAS detector”, *35th International Symposium on Physics in Collision (PIC 2015)*, Coventry, UK, 15-19 September 2015. (**Selected** by ATLAS, on behalf of the ATLAS collaboration)

Workshop & Annual Meeting

“DAQ: Phase-II Readout system”, *ATLAS TDAQ Week 2023*, Kyoto, Japan, 18-22 Sep 2023.

“Using AIDA common DAQ tools - Silicon Strip Tracker”, *AIDA-2020 Final Annual Meeting*, Online edition, 28-30 April 2020.

“Status of Si tracker DAQ”, *AIDA-2020 Fourth Annual Meeting*, Oxford, UK, 2-5 April 2019.

“WP15.3 - Improvements of the DESY test beam infrastructure: D15.2 Status”, *AIDA-2020 Fourth Annual Meeting*, Oxford, UK, 2-5 April 2019.

“A hybrid-less Strip Telescope for the DESY II Test Beam Facility”, *Matter and Technologies (MT) Programme Fifth Annual Meeting*, Jena, Germany, 5-7 March 2019. **Published presentation:** [AIDA-2020-SLIDE-2019-006](#)

“Development of a beam telescope based on a hybrid-less micro-strip sensor”, *Matter and Technologies (MT) Programme Fifth Annual Meeting*, Jena, Germany, 5-7 March 2019. **Published presentation:** [AIDA-2020-POSTER-2019-004](#)

“Silicon tracker integration”, in the session of “WP5: Data acquisition system for beam tests”, *AIDA-2020 Third Annual Meeting*, Bologna, Italy, 24-27 April 2017.

“WP15.3 Improvements of the DESY test beam infrastructure”, in the session of “WP15: Upgrade of beam and irradiation test infrastructure”, *AIDA-2020 Third Annual Meeting*, Bologna, Italy, 24-27 April 2017.

“Search for new physics in monophoton final state using 20.3fb⁻¹ of 8TeV ATLAS Data”, *Workshop Physique ATLAS France 2014 (PAF 2014)*, Puy-en-Velay, France, 24-26 November 2014. (**Selected** PhD student talk)

“Search for new phenomena in events with a photon and missing transverse momentum in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector” *ATLAS Week – Poster Session*, CERN, Geneva, Switzerland, 6-10 October 2014.

“Compress squark and dark matter studies”, *7th France China Particle Physics Laboratory Workshop (FCPPL 2014)*, Clermont-Ferrand, France, 8-10 April 2014. (**Selected** PhD student talk)

Seminar

“Detectors R&D for future colliders”, seminar at the [HEF Department Seminar](#), Nijmegen, 27 Mar 2023.

“Experimenting at the energy frontier”, **invited** colloquium at the *IMAPP afternoon*, Nijmegen, 21 Mar 2023.

“Fast timing detector R&D at ATLAS for HL-LHC”, **invited** seminar at the [PKU-SJTU Collider Physics Forum for Junior Scholars](#), Online, 6 Jan 2023.

“Experimental Essential - Detectors”, seminar at the [HEF Department Seminar](#), Nijmegen, 25 May 2021.

“Introduction to the DESY Test Beam infrastructure and its New Improvements”, **invited** seminar at the [School of Information Science and Technology of ShanghaiTech Univeristy](#), Shanghai, China, 25 May 2018.

“A large area strip silicon telescope at DESY test beam”, **invited** seminar at the 277th Department Engineering Physics Forum of Tsinghua University, Beijing, China, 24 May 2018.

“Introduction to Dark Matter Searches with the ATLAS detector at LHC”, **invited** seminar at [the Department of Physics of Tsinghua University](#), Beijing, China, 9 October 2015.

“The monophoton analysis in the ATLAS experiment”, *Ph.D. Seminar*, LPSC Grenoble, France, 10 June 2014.

“Search for Supersymmetry and Dark Matter - Data analysis based on the ATLAS experiment at LHC”, **invited seminar** at the School of Nuclear Science and Technology of Lanzhou University, Lanzhou, China, 18 December 2013.

“Higgs Hunter - Introduction to the Physics Nobel Prize 2013”, **invited** seminar at *2nd Gezhi Forum*, Chinese Student and Researcher Union (UCECF), Grenoble, France, 30 November 2013.