

PERSONAL INFORMATION

Name	Thomas STREBLER
Email	strebler@cppm.in2p3.fr
Nationality	French
Date of birth	06/04/1990



RESEARCH ACTIVITIES

I am a chargé de recherche at CPPM and a member of the ATLAS experiment at CERN, with a research program focused on Higgs boson physics and detector performance for the LHC and HL-LHC. My work combines physics analyses, advanced reconstruction algorithms, and detector upgrade studies, with a particular emphasis on tracking and flavour tagging. I have held several coordination roles within ATLAS, including Convener of the Inner Tracking Combined Performance group and the Upgrade Physics group, where I led performance studies and physics projections for the Phase-II Inner Tracker. I am actively involved in searches and measurements related to Higgs production, including ttH and di-Higgs processes, and in the development of machine-learning techniques for jet and object tagging. I also contribute to major ATLAS publications and strategy documents and regularly supervise PhD students and early-career researchers.

PROFESSIONAL EXPERIENCE

Function	Chargé de recherche – ATLAS experiment
Institute	Centre de Physique des Particules de Marseille
Date	from November 2018
Main research activities	<p>Convener of the Inner Tracking Combined Performance group (2024-2026) Editor of the publication on the expected ITk tracking performance IDTR-2023-01 submitted to JINST (2024)</p> <p>Analysis $HH \rightarrow b\bar{b}\tau\tau$ Run 3 (2023-) Scientific coordinator of the ANR-funded research project DIVE DiHiggs in VBF Events, in collaboration with IJCLab and LPNHE Development of a GNN tagging algorithm for boosted $H \rightarrow \tau\tau$ jets Co-supervision of the PhD thesis of Leonardo Splendori (2023-2026)</p> <p>Coordinator of the Run 3 di-Higgs analysis framework (2023-2024)</p> <p>Convener of the Upgrade Physics group (2021-2023) Coordination of performance studies and physics analysis projections for HL-LHC Editor of the ATLAS-CMS White Paper for the US Snowmass 2021 prospective exercise ATL-PHYS-PUB-2022-018</p>

Other activities	<p>Convener of the subgroup Upgrade Tracking (2019-2021) Performance studies for the update of the ITk layout Analysis contact and editor of the Upgrade Tracking PUB notes ATL-PHYS-PUB-2021-024 + ATL-PHYS-PUB-2021-040 Contributions to the amendment of the Trigger & Data Acquisition TDR on EF Tracking ATLAS-TDR-029-ADD-1</p> <p>b-tagging performance studies for HL-LHC (2018-) Analysis contact and editor of the Flavour Tagging PUB notes ATL-PHYS-PUB-2020-005 + ATL-PHYS-PUB-2022-047</p> <p>Tests of radiation hardness of the RD53 ITk pixel chips (2018-2023)</p> <p>Analysis ttH $H \rightarrow b\bar{b}$ Run 2 (2018-2023) Development of DNN discriminants for the Higgs pT spectrum measurement Co-supervision of the PhD thesis of Neelam Kumari (2019-2022) Publications JHEP 06 (2022) 97 + HIGG-2020-24 submitted to EPJC (2024)</p> <p>Head of the local organising committee for the EPS-HEP 2025 conference (2022-) Major international conference on high-energy physics, more than 750 participants expected Organising committee covering six CNRS research units</p> <p>Member of the organising committee of the JRJC (2022-) Week of seminar organised for the PhD students from French institutes</p> <p>Member of the organising committee of the Higgs Hunting conference (2022-) Topical conference on Higgs physics, with around 150 participants every year in Orsay & Paris</p>
Function Institute Date Main research activities	<p>Research associate – CMS experiment High Energy Physics group – Imperial College – LONDRES October 2017 - October 2018</p> <p>Jet trigger performance studies for the HGCal upgrade Preparation of the $R(K)/R(K^*)$ analysis with parking data ttH analysis in multilepton final states Analysis contact and editor of the publication JHEP 08 (2018) 066, evidence for ttH production in the multilepton final states Publication Phys. Rev. Lett. 120 (2018) 231801, combination and observation of the ttH production</p> <p>Convener of the Tau trigger subgroup</p>
Function Institute Date Main research activities	<p>PhD student – CMS experiment Laboratoire Leprince-Ringuet – École Polytechnique – PALAISEAU October 2014 - September 2017</p> <p>Development and commissioning of the new Level-1 EGamma hardware trigger CMS 2016 Achievement Award</p> <p>ttH analysis in multilepton final states with taus Development of a discriminant based on the Matrix Element Method Analysis contact and editor of the Physics Analysis Summary HIG-17-003</p>