

PERSONAL INFORMATION

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| 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

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| Function | Chargé de recherche – ATLAS experiment |
| Institute | Centre de Physique des Particules de Marseille |
| Date | from November 2018 |
| Main research activities | 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) Analysis $HH \rightarrow bb\tau\tau$ 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) Coordinator of the Run 3 di-Higgs analysis framework (2023-2024) 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 |

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