

African Institute for Mathematical Sciences
 AIMS Research Centre
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www.linkedin.com/in/claire-david-particles
 French citizen, Canadian permanent resident
 Quadrilingual: French (native), English, German, Spanish

PROFILE

Experimental particle physicist • Data scientist • Lecturer • Science educator

- 10+ years experience in data analysis and particle detector R&D at TRIUMF, CERN, DESY, FNAL
- 10+ years of science advocacy as public speaker, panellist and mentor in Europe, North America & Africa
- 5+ years as university lecturer on physics & data science, teaching in English, French and German

Interests: Machine learning for particle physics, AI for humanity, education in Africa, sustainability

EMPLOYMENT

- from Nov. 2023 **African Institute for Mathematical Sciences (AIMS) South Africa**
 Program & Research Manager [AI For Science](#) Master's, funded by Google DeepMind
 Resident Researcher in Machine Learning
- 2022 – 2023 **On leave for educational projects in Africa**
 Lecturer and public speaker on machine learning and experimental particle physics
[Ambassador of McDonald Institute](#), Canada's astroparticle physics network
 Countries: South Africa, Senegal, Benin, Togo, Ghana, Congo RDC, Cameroon and Rwanda
- 2019 – 2023 **Department of Physics & Astronomy, York University, Canada**
Fermi National Accelerator Laboratory (FNAL), USA
 Assistant Professor jointly appointed as Research Scientist (FNAL)
 Co-launched the Canadian effort on the Deep Underground Neutrino Experiment (DUNE)
- 2016 – 2019 **Deutsches Elektronen-Synchrotron (DESY), Hamburg, Germany**
 Postdoctoral Research Fellow; ATLAS Experiment, CERN
 Observation of Higgs boson's rare production mode $t\bar{t}H$; tracker prototype thermal validation

EDUCATION

- 2010 – 2016 **Ph.D. in Particle Physics, University of Victoria, Canada**
 "Search for Supersymmetry using a Higgs boson in the decay cascade with the ATLAS detector at the CERN Large Hadron Collider"
 Supervisors: Prof. R. McPherson and Prof. M. Lefebvre
 GPA: 8.63/9
- 2005 – 2010 **M. Eng. in Applied Physics at INSA Toulouse, France**
 Specialization Nanophysics and Instrumentation
 Rank: top 5%
- 2009 **Institut für Physik, Humboldt Universität Berlin, Germany** (exchange semester)

RESEARCH HIGHLIGHTS

2019 – 2022 **As Assistant Professor at York University & Scientist at FNAL**

- **DUNE-Canada:** secured 3-year funding from NSERC to launch first Canadian effort (3 PIs); 5-year infrastructure funding with CFI to build a cryogenic facility for R&D on DUNE near detector’s [ArgonCube](#) technology
- **DUNE Computing Consortium:** led the first R&D on an interactive analysis facility for DUNE using columnar computing; re-designed and co-organized three DUNE Computing tutorials [arXiv:2310.07342](#); created DUNE Computing’s wiki + official & automated [glossary](#)

2016 – 2019 **As Post-doctoral Fellow, Deutsches Elektronen-Synchrotron (DESY)**

- **Observation of $t\bar{t}H(\rightarrow b\bar{b})$ process:** validated Boosted Decision Trees (BDT) input distributions from different Monte Carlo generators; developed interface to add final discriminants Matrix Element Method and BDT scores in official code; led the estimate of fakes background i.e. mis-identified leptons (one-lepton channel) [Phys.Lett. B 784 \(2018\) 173-191](#)
- **ATLAS inner tracker upgrade for High-Luminosity LHC Project:** validated the sensor support structure design after leading a team (3 engineers, 3 technicians, 4 students) to deliver first measurements of the prototype’s thermal performance: defined, instrumented and developed the data acquisition interface of infrared tests for three consecutive data taking campaigns (2016 – 2018); designed the structure components for the production database
- **DESY test beam facility with EUDET telescopes:** led first measurements of radiation length (X/X₀) of the sensor support structure for ATLAS Inner Strip tracking detector.

2011 – 2016 **As Graduate Student Research Associate, University of Victoria**

- **Search for Supersymmetry:** contributed to analysis of $H \rightarrow b\bar{b}$ channel and responsible for reinterpreting the search as part of Run 1 summary paper in the context of the 19-parameter phenomenological minimal supersymmetric standard model (pMSSM) [JHEP 10 \(2015\) 134](#)
- **ATLAS Liquid Argon Calorimeter Operation:** software on-call expert during 2012 data taking, co-organized software expert training; created web-portal for shifters, still in use (2023); developed plugin revision to filter error messages on ATLAS Online Software

OUTREACH HIGHLIGHTS

2022 – 2023 **In Africa**

- **Science & Technology Week Festival, Democratic Republic of the Congo**

Keynote speaker, talks on experimental particle physics in schools & universities; taught sub-atomic physics to high school students selected for animating booths at the Village of Science; introduced CERN and ATLAS to 5,000+ Congolese students

- **AIMS Tour:** talk “Experimental Particle Physics with ATLAS and DUNE” given in 8 countries, led women-only round-tables, mentored students on their projects & career paths

2019 – 2023 **DUNE science: the Deep Underground Neutrino Experiment explained**

Public speaking, SURF’s Festival Neutrino Day (Lead, USA); VIP visit of SURF’s mine with YouTuber Physics Girl, radio broadcast, online livestreams about neutrino physics

2011 – 2023 **The ATLAS Experiment at the CERN Large Hadron Collider**

Public speaking (in English & French), animator of ATLAS Masterclasses, demonstrator & tour guide of DESY & TRIUMF laboratories, ATLAS Virtual Visits at CERN

TEACHING EXPERIENCE IN AFRICA

- Sept. 2023 **Introduction to Machine Learning, AIMS South Africa**
Format: three-week block of graduate courses totalling 40 hours of lectures and tutorials
Second version of course below, adapted for the new [AI For Science](#) Master's [course website](#)
- Jan. – May **Machine Learning in Particle Physics, AIMS Senegal, South Africa & Ghana**
Created original course diving into the mathematics of basic machine learning algorithms
Customised hands-on in python inspired from collider physics, flipped classrooms
Student-led debate on ethics in AI & guest lectures featuring collaborators
- Feb. 2019 **Life of a Particle: Stochastic Modelling in Particle Physics, AIMS Ghana**
Co-Lectured with Dr. Sam Meehan, led hands-on Monte Carlo methods in python
- Mar. 2023 **Learn The Math Behind Neural Networks! Univ. of Johannesburg, South Africa**
One-day workshop: theory (3h) and practice in python (3h); for all academic levels [slides](#)
- Dec. 2022 **Introduction to Machine Learning, ASP2022, Gqebera, South Africa** [slides](#)

PREVIOUS TEACHING EXPERIENCE

- 2019 – 2022 **York University: Special Relativity and Introduction to Modern Physics**
For 2nd year Physics majors; in-person teaching (Fall 2019); online (Fall 2020 and Fall 2021)
- Sept. 2018 **Autumn School For High Energy Physics, Maria Laach, Germany** [website](#)
Invited tutor, mentored students for their graduate projects on particle physics *in German*
- 2015 – 2016 **TRIUMF Junior Research School, Vancouver, Canada**
Invited lecturer: “The Higgs Boson mechanism”; for Singaporean college students

SUPERVISION & MENTORING

Post-doctoral level

- 2021 – 2022 Tejin Cai; prototyping an interactive analysis facility for DUNE on Compute Canada cloud

Graduate level

- Apr. 2022 Alfred Ferwerda; member of M. Sc. Graduate Advisory Committee, CERN ALPHA experiment
- 2019 – 2020 Darij Starko; local supervisor of ATLAS authorship qualification task, flavour tagging group
- 2016 – 2019 Jan-Hendrik Arling; technical Ph.D. co-supervisor, ATLAS upgrade – now postdoc. at DESY
- 2016 – 2017 Yasiel Delabat; local supervisor of ATLAS authorship qualification task, ITk upgrade

Undergraduate level

- 2021 Amin Jafarov; NSERC USRA recipient; BDT studies; searches for long-lived particles (LLP) with ATLAS; now in Medical School, University of Central Lancashire, UK
- 2021 Majd Salam; YorkU co-op student; first BDT studies for an ATLAS LLP search
- 2021 Anita Nasiri; YorkU co-op student; LLP event 3D visualisation in ATLAS
- 2018 Anja Beck; DESY summer student; ITk upgrade; now: Ph.D. at Warwick University, UK
- 2016 Maximilian Caspar; DESY summer student; ITk upgrade; now: Ph.D. at DESY, Germany
- 2011 Philipp Koenig; co-supervisor, ATLAS Higgs group; now postdoc. at U. Bonn, Germany

RESEARCH GRANTS

As principal investigator

2022 – 2023	Compute Canada Fast Track Competition (one-year extension)	CAD \$23,339
2021 – 2022	Compute Canada Resources Competition: <i>Interactive Analysis Facility for the Deep Underground Neutrino Experiment</i>	CAD \$32,225
2021 – 2022	NSERC Discovery COVID-19 Extension (non competitive)	CAD \$50,000
2020 – 2021	NSERC Subatomic Physics Discovery Individual Grant: <i>The Higgs boson and the top quark in the ATLAS detector: gateway to new physics</i>	CAD \$50,000
2019 – 2023	Internal Research Fund (Startup) York University	CAD \$110,000

As co-principal investigator

2022 – 2027	Canadian Foundation for Innovation (CFI) John R. Evans Leaders Fund (JELF) For building a cryogenic facility at York University; co-applicant: D. Harris <i>Next generation of neutrino detector for the Deep Underground Neutrino Experiment</i>	CAD \$250,000
2020 – 2023	NSERC Subatomic Physics Discovery Project Grant: Launch of the DUNE-Canada group with co-applicants D. Harris & N. Ilic <i>Neutrinos exposed: from the cosmos to deep underground</i>	CAD \$465,000

AWARDS & RECOGNITIONS

2020	York University Minor Research Grant & Junior Faculty Fund	CAD \$3,100
2018	Deutsches Elektronen-Synchrotron (DESY) Merit Bonus <i>For validating the thermal performance of ATLAS future inner tracker prototype</i>	€3,200
2017	Deutsches Elektronen-Synchrotron (DESY) Merit Bonus <i>For the first infrared measurements of ATLAS inner tracker sensor structures</i>	€3,200
2016	DESY Postdoctoral Fellowship in High Energy Physics division	
2012	Nora and Mark de Goutiere Memorial Fellowship	CAD \$10,000
2011	Nominated for Vanier Scholarship by Physics Department of University of Victoria	
2011	University of Victoria Entrance Award	CAD \$10,000

POSITIONS OF RESPONSIBILITY

2022 – 2023	Ambassador of McDonald Institute , Canada's astroparticle physics network
2021 – 2022	Particle Physics Division Vice-Chair of Canadian Association of Physicists, elected member
2020 – 2022	Co-convener of DUNE Training & Documentation working group
2019 – 2020	Institute contact (York University) of ATLAS Inner Tracker production database
June 2021	Session convener at CAP Congress, Neutrino session

MEMBERSHIPS

2023 – now	South African Institute of Physics (SAIP), active member
2020 – 2022	Canadian Association of Physicists (CAP), member
2019 – 2022	Institute of Particle Physics (IPP), member

SELECTED PUBLICATIONS

ATLAS author: 2013 – 2023 | DUNE author: 2020 – 2023

Inspire profile: [Claire.David.1](#)

Listed below are the publications to which I have significantly contributed:

ORCID: [0000-0002-1794-1443](#)

- 2023 **Sustainable HECAP+ Initiative**, Environmental sustainability in basic research: a perspective from HECAP+, [arXiv:2306.02837](#), [sustainable-hecap-plus platform](#)
- 2022 **DUNE Collaboration**, Design, construction and operation of the ProtoDUNE-SP Liquid Argon TPC, [JINST 17 P01005](#)
- 2021 **ATLAS Collaboration**, Search for exotic decays of the Higgs boson into long-lived particles in pp collisions at $\sqrt{s} = 13$ TeV using displaced vertices in the ATLAS inner detector, [JHEP 11 \(2021\) 229](#)
- 2021 **DUNE Collaboration**, Deep Underground Neutrino Experiment (DUNE) Near Detector Conceptual Design Report, [FERMILAB-PUB-21-067-E-LBNF-PPD-SCD-T](#)
- 2020 **Poley L., Sawyer C. et al.**, The ABC130 barrel module prototyping programme for the ATLAS strip tracker, [JINST 15 P09004](#)
- 2020 **DUNE Collaboration**, Long-baseline neutrino oscillation physics potential of the DUNE experiment, [Eur. Phys. J. C 80, 978](#)
- 2018 **ATLAS Collaboration**, Observation of Higgs boson production in association with a top quark pair at the LHC with the ATLAS detector, [Phys.Lett. B 784 \(2018\) 173-191](#)
- 2018 **ATLAS Collaboration**, Search for the standard model Higgs boson produced in association with top quarks and decaying into a $b\bar{b}$ pair in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector, [Phys. Rev. D 97 \(2018\) 072016](#)
- 2018 **Albertsson, K. and others**, Machine Learning in High Energy Physics Community White Paper [arXiv:1807.02876](#), [FERMILAB-PUB-18-318-CD-DI-PPD](#)
- 2017 **ATLAS Collaboration**, Technical Design Report for the ATLAS Inner Tracker Strip Detector [CERN-LHCC-2017-005](#), [ATLAS-TDR-025](#)
- 2015 **ATLAS Collaboration**, Summary of the ATLAS experiment's sensitivity to supersymmetry after LHC Run 1 – interpreted in the phenomenological MSSM, [JHEP 10 \(2015\) 134](#)
- 2015 **ATLAS Collaboration**, Search for direct pair production of a chargino and a neutralino decaying to the 125 GeV Higgs boson in $\sqrt{s} = 8$ TeV pp collisions with the ATLAS detector, [Eur. Phys. J. C \(2015\) 75:208](#)
- 2013 **ATLAS Collaboration**, Search for chargino and neutralino production in final states with one lepton, two b -jets consistent with a Higgs boson, and missing transverse momentum with the ATLAS detector in 20.3 fb¹ of $\sqrt{s} = 8$ TeV pp collisions, [ATLAS-CONF-2013-093](#)
- 2011 **Axen, D. and others**, Diamond detector irradiation tests at TRIUMF, [JINST 6 P05011 \(2011\)](#)

PROCEEDINGS

- 2018 **David, C.**, A new strips tracker for the upgraded ATLAS ITk detector, [Proceedings of PSD11, JINST 13 C01003](#)
- 2016 **David, C.**, Search for chargino and neutralino production with a Higgs boson in the decay chain in one or three leptons final state events with ATLAS, [Nucl. Part. Phys. Proc. 273-275 \(2016\) 2400-2402](#)
- 2014 **David, C.**, New ATLAS results in SUSY searches for 3rd generation squarks and electroweak production, [EPJ Web of Conferences 71, 00034 \(2014\)](#)

 EDITORIAL ACTIVITIES

- 2021 **DUNE Vertical Drift Conceptual Design Report**, selected reviewer, Trigger & Data Acquisition
- 2019 **Editorial Board member of ATLAS publication:** Configuration and performance of the ATLAS b -jet triggers in Run 2, *Eur. Phys. J. C* **81** (2021) 1087
- 2019 **Referee for Journal of Instrumentation**, nominated by peers
- 2017 **Referee for Journal of Instrumentation**, nominated by peers

 PRESENTATIONS AT INTERNATIONAL CONFERENCES

- 2023 **11th Large Hadron Collider Physics Conference, Belgrade, Serbia**
Invited talk: [Statistics on participation of emerging countries in LHC and other experiments](#)
- 2019 **Conference on Flavor Physics and CP Violation, FPCP, Victoria, Canada**
Invited talk: [Higgs boson couplings to quarks at the ATLAS experiment](#)
- 2018 **Conference on Standard Model at LHC, Berlin, Germany**
Young Scientist talk: [Search for \$t\bar{t}H\$ production in the \$H \rightarrow b\bar{b}\$ channel](#)
- 2017 **11th International Conference on Position Sensitive Detectors, MK, UK**
Invited plenary talk: [A new strips tracker for the upgraded ATLAS ITk detector](#)
- 2016 **Lake Louise Winter Institute, Alberta, Canada**
Invited plenary talk: [Search for supersymmetry with the ATLAS detector in final states with leptons, jets and missing transverse momentum](#)
- 2014 **International Conference on High-Energy Physics, Valencia, Spain**
Poster presentation: [Search for chargino and neutralino production with a Higgs boson in the decay chain with one or three leptons final state events](#)
- 2013 **International Conference on New Frontiers in Physics, Kolymbari, Greece**
Invited talk: [ATLAS results in SUSY searches for 3rd generation squarks and electroweak production](#)

 PRESENTATIONS AT FUNDING AGENCIES & INSTITUTIONAL REVIEWS

- 2021 **Institute of Particle Physics (IPP) Annual General Meeting (online)**
Invited talk: [Deep Underground Neutrino Experiment: current status, Canadian effort & funding](#)
- 2018 **DESY-wide “Program-Oriented Funding” (POF¹) Evaluation, Hamburg, Germany**
Invited poster: [ATLAS and CMS tracker end-caps for the High-Luminosity LHC](#) (co-author Dr. J. Keaveney) & official tour guide for reviewers of the Helmholtz Association
- 2016 **Helmholtz Programme Matter and the Universe, Mainz, Germany**
Invited poster: [Anatomy of ATLAS and CMS strip tracker end-caps for High-Luminosity LHC](#)
- 2013 **TRIUMF International Review Committee, Canada**
Invited poster: [Search for Higgs production in supersymmetric decay cascades with ATLAS](#)
- 2013 **VIP visit of the ATLAS control room, CERN, Geneva, Switzerland**
Invited speaker for special visit with P. Young (chair of the TRIUMF Board of Management) and G. Patry (CEO of the Canada Foundation for Innovation)

¹POF is a DESY-wide evaluation for planning the next seven-year funding period.

SELECTED PRESENTATIONS AT LOCAL CONFERENCES

- 2023 **Canadian Astroparticle Physics Community Meeting, Kingston, Canada**
Invited to “[Pop-Up Pizza & Career Talk](#)” to report on the special year 2022 – 2023 spent in Africa
- 2023 **Women in Mathematics and its Applications, One-Day Workshop, AIMS South Africa**
Invited talk: [Emmy Noether, The Large Hadron Collider, DUNE... and you](#)
- 2021 **Canadian Association of Physicists’ Congress, Canada (online)**
Invited talk: [Deep Underground Neutrino Experiment: Review and Recent Progress](#)
- 2021 **Third Summer Particle Astrophysics Workshop, Queen’s University, Canada (online)**
Plenary talk: [The Deep Underground Neutrino Experiment: DUNE](#)
- 2020 **Winter Nuclear & Particle Physics Conference, Banff, Canada**
Plenary talk: [Higgs boson physics and upgrade work with ATLAS at the Large Hadron Collider](#)
- 2019 **HTop Workshop, DESY, Germany**
Plenary talk: [Small backgrounds in the leptonic channels](#)
- 2018 **Preliminary Design Review ITk Strip Local Support Structures, CERN, Switzerland**
Final presentation of [Results on thermo-mechanical petal prototypes](#) – passing review
- 2018 **Forum on Tracking Detector Mechanics, Valencia, Spain**
Plenary talk: [Thermo-mechanical characterization of Petals as Local Support Structures for the ATLAS ITk Strip Detector.](#)
- 2018 **HTop Workshop, CERN, Switzerland**
Invited talk: [Fakes and other backgrounds in \$ttH\(b\bar{b}\)\$ leptonic channels](#) (co-author Mellenthin, J.)
- 2018 **Poster session ATLAS Week, CERN, Switzerland**
Poster presentation: [Search for \$ttH \rightarrow b\bar{b}\$](#)
- 2014 **LHCC, CERN, Switzerland**
Poster: [Search for charginos, neutralinos and sleptons in 1 or 2 leptons final state events with ATLAS](#) (co-author Ueno, R.)

COLLOQUIA

- Oct. 2023 **Université de Montréal, Département de Physique, Montréal, Canada**
Invited colloquium: [Half a year in Africa: AI, AIMS & opportunities](#) | [slides](#)
- May 2023 **East African Institute for Fundamental Research (EAIFR), Kigali, Rwanda**
Invited talk: “From the smallest to the largest: a journey from particle physics to astrophysics”
Co-presented with Dr. Nour Skaf

[In Africa] “A journey inside matter: experimental particle physics with ATLAS and DUNE”
Talk presented in the following African institutes/universities:
- May 2023 **University of Ghana, Department of Physics, Accra, Ghana** | [slides](#)
- May 2023 **AIMS Rwanda, Kigali, Rwanda** | [slides](#)
- Apr. 2023 **AIMS Cameroon, Limbé, Cameroon** | [slides](#)
- Mar. 2023 **International Chair in Mathematical Physics & Applications, Cotonou, Benin** | [slides](#)

COLLOQUIA – CONTINUED

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- Apr. 2023 **Université de Lomé & CERME, Lomé, Togo**
[The ATLAS Experiment at CERN: A detector, an analysis and an upgrade program](#)
- Mar. 2023 **AIMS South Africa, Muizenberg, South Africa**
 “How I became a scientist: the backstory not read on my CV”
- Sept. 2020 **McGill Physical Society Colloquium, Montréal, Canada – online**
[Data analysis and detector development with ATLAS at the Large Hadron Collider \(YouTube\)](#)
- Mar. 2019 **York University Dept. of Physics & Astronomy Colloquium, Toronto, Canada**
 Invited speaker: [Sorting needles in a haystack and cooling a ‘sandwich’: data analysis and detector development with ATLAS at the Large Hadron Collider](#)

EVENT ORGANIZATION

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- 2023 – 2024 **Siyakhula, AIMS 20th Birthday Celebration, Muizenberg, South Africa**
 Organizing committee member; 6-day festival planned on March 17 – 22, 2024 | [website](#)
- May 2021 **International Conference on Technology & Instrumentation in Particle Physics**
 Poster session organizer using the GatherTown platform | [website](#)
- May 2021 **DUNE Computing Tutorial: extended version: 3-day format (online)**
 Addition of an interactive platform, quizzes and Q&A sessions with experts
- Jan. 2021 **DUNE Computing Tutorial: one-day workshop (online)**
 Main organizer, teaching the basics of DUNE computing to new members
- 2019 **ATLAS Higgs & Top Quark Workshop (HTop), DESY, Hamburg, Germany**
 Member of the Local Organizing Committee, contributions on poster and logistics

SERVICES

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- Sept. 2022 **Creator of webpage “Sustainability in HECAP+”:** sustainable-hecap-plus.github.io
 To advocate for fairer & more sustainable practices in Physics, including High Energy Physics
- Jun. 2022 **Canadian Association of Physicists’ Congress, Hamilton, Canada**
 Judge for the Best Student Competition, division Particle Physics
- 2020 – 2021 **York University Physics & Astronomy Department Weekly Colloquium, co-chair**
 Co-organizing the weekly colloquium series for the Fall and Winter terms.
- 2020 – 2021 **Fermilab Neutrino Division postdoc hiring committee, member**
- Mar. 2021 **York University Spring Open House Department Fair Committee, member**
- Nov. 2020 **York University Adjudication Committee for Tenure and Promotion, member**
- 2019 – 2020 **York University Faculty of Science Award Committee, member**
- 2007 – 2008 **Founder & spokesperson of a new mentoring system at INSA Toulouse**
 Designed & implemented project where students with difficulties can choose a mentor among their professors. Approved by administration as a new dedicated commission.
 System still active in 2023.

PUBLIC ENGAGEMENT

Public Talks

- 2023 **Science & Technology Week Festival, Democratic Republic of the Congo**
Invited keynote speaker, Université Kongo, Mbanza-Ngungu, shared talk with Dr. Nour Skaf: “From the smallest to the largest: a journey from particle physics to astrophysics”; invited speaker “Experimental Particle Physics with ATLAS and DUNE” in Kinshasa (both talks in French)
- 2023 **International college-preparatory school “Dakar Academy”, Senegal**
Invited speaker: “A journey inside matter: experimental particle physics” to 200+ students
- 2022 **Sanford Underground Research Facility’s Science Festival “Neutrino Day”, USA**
Keynote speaker at Lead’s Opera House about DUNE science
- 2015 **Science Innovation & Technology Speaker Series, Richmond, British Columbia, Canada**
Invited talk, [The Triumphant Discovery of the Higgs Boson](#)
- 2014 **Cafés Scientifiques of Alliance Française, organized by French consulate in Vancouver**
Invited talk: [La triomphante découverte du boson de Higgs : pourquoi, comment, et maintenant ?](#)

Panels

- 2023 **Science & Technology Week, Democratic Republic of the Congo**
Invited panellist “Science and technology for sustainable development in Africa” – in French
- 2023 **11th Large Hadron Collider Physics Conference, Belgrade, Serbia**
Invited panellist, [Challenges for emerging countries to join/participate in LHC experiments](#)
- 2020 **30th International Linear Accelerator Conference, Liverpool, UK (online)**
Invited panellist, [Women in Science and Engineering: Should I stay or should I go now?](#)
- 2013 **Vancouver International Film Festival, screening of “Particle Fever”, Vancouver, Canada**
Invited speaker to the panel discussion with movie producer & cast Prof. David Kaplan
- 2011 **Emily Carr University of Art and Design, Vancouver, Canada**
Panel speaker on project pairing physicists with students to show the parallels between art and science
[“But hbar? Particle Interactions in Physics and Arts: Artistic Transformation”](#)

On YouTube

- 2021 **Royal Astronomical Society of Canada Toronto, Speaker’s Night, Canada** [link](#)
Invited speaker of [livestream event](#): “What is DUNE? Embark on the underground telescope to pierce the secrets of matter!”
- 2021 **Allan I. Carswell Observatory, TeleTube series, at York University, Canada** [link](#)
Invited speaker: “The Triumphant Discovery of the Higgs Boson at the Large Hadron Collider”
- 2020 **“The Drift” series, Sanford Underground Research Facility (SURF), USA** [link](#)
Featured in video “What is so special about neutrinos?” on SURF’s Youtube channel
- 2020 **Neutrino Day, SURF’s Free Science Festival (online)** [link](#)
Featured in video “DUNE scientists answer your questions”

PUBLIC ENGAGEMENT – CONTINUED

Science Festivals

- 2023 **Science & Technology Week, Kinshasa, Democratic Republic of the Congo**
 Trained high school students in particle physics
 Animation leader at the ATLAS booth, Village of Sciences 5,000+ high school students
- 2022 **Sanford Underground Research Facility’s Science Festival “Neutrino Day”, USA**
 VIP visit of SURF underground facilities with Youtuber Dianna Cowern aka Physics Girl
 Live broadcast interview for South Dakota radio about DUNE and Neutrino Day
- 2017 **DESYDAY, Deutsches Elektronen-Synchrotron, Hamburg, Germany**
 Organizer of ATLAS exhibition & speaker during DESY laboratory’s open house 20,000+ visitors
- 2015 **TRIUMF tour guide, Vancouver, Canada**
 Led monthly tours for high schools, graduate students and the general public
- 2014 **ATLAS Masterclass, University of Victoria, Canada**
 International one-day hands-on on particle physics for high-school students using CERN’s real data
 Invited talk, [Data analysis with ATLAS at the LHC](#)
 Organized by Victoria Subatomic Physics & Accelerator Research Centre ([VISPA](#))
- 2013 **TRIUMF’s Open House, Vancouver, Canada**
 Volunteer at the ATLAS booth 1,200+ visitors

ATLAS Virtual Visits

- Livestream connecting a classroom to the ATLAS Experiment’s Control Room at CERN [website](#)
- 2023 **With Lycée Liziba in Kinshasa, Democratic Republic of the Congo**
 Lycée Liziba is a girls’ school in Kinshasa that provides a high-quality education in a safe and nurturing environment.
- 2023 **With Malaika School, Lubumbashi, Democratic Republic of the Congo**
 The Malaika School provides a free lifeline to over 400 girls by offering free, accredited primary and secondary education.
- 2013 **Europe Day Symposium in Vancouver, Canada** [video](#)
- 2012 **TELUS World of Science Celebration, Vancouver, Canada** [video](#)