SOPHIE RITSON - CV

RESEARCH AND TEACHING AREAS

Areas of specialisation
Philosophy of science in practice, science and technology studies, and science and values

Areas of competence
History and philosophy of modern sciences and technologies, and ethics of sciences and technologies

APPOINTMENTS

University of Melbourne, Australia – Advisor (Research Collaboration) 2023 -
Chancellery Research and Enterprise
Period of leave 2024 - 2025

Period of leave 2026 - 2027

University of Melbourne, Australia – Tutor 2021
Historical and Philosophical Studies (History and Philosophy of Science)

University of Klagenfurt, Austria – Postdoctoral Research Fellow 2016 - 2020
Department of Science Communication and Higher Education Research

University of Sydney, Australia – Lecturer 2013 - 2016
School of History and Philosophy of Science

HONORARY AND VISITING POSITIONS

University of Melbourne – Honorary Fellow 2023 -
School of Historical and Philosophical Studies

University of Sydney – Honorary Associate 2016 - 2021
School of History and Philosophy of Science

University of Edinburgh – Eidyn Academic Visitor 2019
School of Philosophy, Psychology and Language Sciences

COLLABORATIONS

Event Horizon Telescope Collaboration (EHT) 2025 -
Global collaboration (over 200 participants from over 20 countries)

Next Generation Event Horizon Telescope Collaboration (ngEHT) 2022 -
Global collaboration (over 500 participants from over 30 countries)
History, Philosophy, and Culture Working Group (Academic Co-Lead Collaborations group)

Epistemology of the Large Hadron Collider 2016 - 2020
Collaboration of universities from Austria, Germany, Switzerland, and the USA
'Producing Novelty and Securing Credibility: LHC Experiments in an STS perspective'

EDUCATION

University of Sydney 2012 - 2016
Ph.D. (History and Philosophy of Science)

University of Cambridge 2014 - 2015
Visiting Student (History and Philosophy of Science)

University of Melbourne 2006 - 2011
B.Sc, First Class Honours
Majors: Physics and History and Philosophy of Science

PEER REVIEWED PUBLICATIONS

Boone, R; Sorgner, H; et al. (Forthcoming) "Democratic by Design? Reconstructing, Assessing, and Rethinking the Governance of Participatory, Large Scientific Collaborations" Journal of Responsible Innovation

Ritson, S. (2023) “Something from Nothing: ‘Non-discovery’ and Transformations in High Energy Experimental Physics at the Large Hadron Collider” in Ivanona, M. & Murphy, A (Eds) *Aesthetics of Experiments,* Routledge

Galison, P.; Doboszewski, J.; Elder, J.; Martens, N.C.M.; Ashtekar, A.; Enander, J.; Gueguen, M.; Kessler, E.A.; Lalli, R.; Lesourd, M.; et al. (2023) “The Next Generation Event Horizon Telescope Collaboration: History, Philosophy, and Culture” *Galaxies* 1, 0.

Ritson, S. (2021) “Creativity and the Self-coupling of the Higgs: Comparing dual models of measurements at the LHC” *Synthese* 199, pp. 11887–11911

Ritson, S. (2021) “Constraints and Divergent Assessments of Fertility in Non-Empirical Physics in the History of the String Theory Controversy”, invited contribution to a special issue on “Non-Empirical Physics from a Historical Perspective” *Studies in History and Philosophy of Science* 90 pp. 39-49

Ritson, S. & Staley, K. (2020) “How Uncertainty Can Save Measurement from Circularity and Holism” *Studies in History and Philosophy of Science* 85 pp. 155-165

Ritson, S. (2019) “Probing Novelty at the LHC: heuristic appraisal of disruptive experimentation” *Studies in History and Philosophy of Science Part B: Studies in History and Philosophy of Modern Physics* 69 pp. 1-11

Ritson, S. (2016) “‘Crackpots’ and ‘Active Researchers’: The String Wars, ArXiv, and the Blogosphere” *Social Studies of Science* 46:4 pp. 607-628

Ritson, S. & Camilleri, K. (2015) “Contested Boundaries: String Theory and Ideological Debates in Fundamental Physics” in *Perspectives on Science* 23:2 pp. 192-277

Camilleri, K. & Ritson, S. (2015) “The Role of Heuristic Appraisal in Conflicting Assessments of String Theory” in *Studies in History and Philosophy of Science Part B: Studies in History and Philosophy of Modern Physics* 51 pp. 44-56

MANUSCRIPTS IN PREPARATION

Papers

Ritson, S. (In preparation) “When is the past History: The curious case of the 750 GeV bump at the LHC”

Ritson, S. (In preparation, in collaboration) “Why Trust a Collaboration?”

INTERNATIONAL GRANT SUCCESS

‘Why Trust a Collaboration’, Riksbankens Jubileumsfond Sweden, 250 950 kr (co-authored with Haixin Dang, Siska De Baerdemaeker, and Paula Muhr)

‘Producing Novelty and Securing Credibility: LHC Experiments in an STS perspective’ Austrian Science Fund, €408,450 (co-authored with Professor Martina Merz, Professor Peter Mättig, and Helene Sorgner). Part of the ‘Epistemology of the Large Hadron Collider’ grant proposal to the DFG and FWF, awarded approximately AUD 3.3 million

PUBLIC ENGAGEMENT

Sophie Ritson on ‘Collaboration in Science’ – The HPS Podcast – Conversations from History, Philosophy and Social Studies of Science
https://www.hpsunimelb.org/the-hps-podcast/episode/7b9d1f17/s3-ep-7-sophie-ritson-on-collaboration-in-science
Ritson, S. & Martens, N.C.M A unique collaboration using a virtual Earth-sized telescope shows how science is changing in the 21st century (2023) *The Conversation*
https://theconversation.com/a-unique-collaboration-using-a-virtual-earth-sized-telescope-shows-how-science-is-changing-in-the-21st-century-201556

Philosophy at the Large Hadron Collider: An Interview with Sophie Ritson (2019) *Forum*
https://blogs.unimelb.edu.au/shaps-research/2019/11/29/philosophy-at-the-large-hadron-collider-an-interview-with-sophie-ritson/

PROFESSIONAL SERVICE

National Grant review: Swiss National Science Foundation (Switzerland) and National Science Foundation (USA)

Editing: Guest Editor Virtual Special Issue 'Why Trust a Collaboration' *Studies in History and Philosophy of Science*

Peer Review: British Journal for Philosophy of Science, Centaurus, Philosophia, Philosophy Compass, Synthese, Studies in History and Philosophy of Science, Studies in History and Philosophy of Science Part B: Studies in History and Philosophy of Modern Physics, Social Studies of Science

PRESENTATIONS

Select invited presentations

Ritson, S. (2025) "Why Trust a Collaboration" History and Philosophy of Science Seminar Series, The University of Melbourne, Melbourne, Australia

Ritson, S. (2022) "Something from Nothing: 'Non-discovery' and Transformations in High Energy Experimental Physics at the Large Hadron Collider" Centre for Science Studies Colloquium, Aarhus University, Denmark

Ritson, S. (2022) "Collaborations and Creativity" *History Philosophy and Culture Next Generation Event Horizon Telescope Workshop* Black Hole Institute, Harvard University, Cambridge, USA

Leonelli, S., Macleod, M., & Ritson, S. (2021) Round Table Discussion: The Future of Interdisciplinary Philosophy, *International Workshop on Interdisciplinarity and Philosophy of Science* National Yang Ming Chiao Tung University, Taiwan

Ritson, S. (2021) "Something from Nothing: 'Non-discovery' and Transformations in High Energy Experimental Physics at the Large Hadron Collider" History and Philosophy of Science Seminar Series, The University of Melbourne, Melbourne, Australia

Ritson, S. (2021) "Aiming for Ugliness: 'Non-discovery' and Transformations in High Energy Experimental Physics at the Large Hadron Collider" *Aesthetics of Experiments Workshop*, University of Cambridge, Cambridge, UK

Ritson, S. (2020) "The String Theory Controversies", invited as a contribution to a workshop on *Theory and evidence in light of the dynamics of the scientific community*, Philosophy Department, The University of Durham, Durham, UK (Cancelled due to COVID-19)

Ritson, S. (2020) "Probing Novelty at the LHC: heuristic appraisal of disruptive experimentation", The Sigma Club at The Centre for Philosophy of Natural and Social Science, London School of Economics, London, UK

Ritson, S. (2019) "Creativity and measurement at the LHC", Physics Department, The University of Edinburgh, Edinburgh, UK

Ritson, S. (2019) "Creativity and measurement at the LHC", School of Philosophy, Psychology and Language Sciences, The University of Edinburgh, Edinburgh, UK

Ritson, S. (2019) "Controversial constraints on non-empirical physics", *Non-Empirical Physics from a Historical Perspective Workshop*, Max Planck Institute for the History of Science, Berlin, Germany

Ritson, S. (2018) "Controversy in High Energy Physics: 'Post-empirical' science and determining future directions", The Center for Particle Physics of Marseilles, Marseilles, France

Ritson, S. (2017) "Blogs as a Source: Examining Boundaries, Values and Crackpots in High Energy Physics", The University of Applied Arts Vienna, Vienna, Austria

Merz, M. & Ritson, S. (2017) "The '750 GeV Bump' in the Light of the Tri-Relation between Media, Theory, and Experiment", Philosophy Department, University of Vienna, Vienna, Austria

Ritson, S. & Camilleri, K. (2013) "The String Debates: Rhetoric and Ideology in Fundamental Physics", History and Philosophy of Science Seminar Series, The University of Melbourne, Melbourne, Australia

Select conference presentations (refereed)

Ritson, S. (2025) “Why Trust a Collaboration”, Australasian Association for the History, *Philosophy, and Social Studies of Science Conference*, Brisbane, Australia

Ritson, S. (2023) “Communicating Uncertainty: The curious case of the 750 GeV bump at the LHC”, Australasian Association for the History, *Philosophy, and Social Studies of Science Conference*, Sydney, Australia

Ritson, S. (2022) “Something from Nothing: ‘Non-discovery’ and Transformations in High Energy Experimental Physics at the Large Hadron Collider”, *History of Science Association Conference*, Chicago, USA

Ritson, S. & Staley, K. (2021) “The Problem of Circular Theory Dependence in Measurement: Uncertainty to the Rescue”, *Philosophy of Science Association Conference*, Baltimore, USA (Postponed due to COVID-19)

Ritson, S. (2021) “Something from Nothing: 'Non-discovery' and Transformations in High Energy Experimental Physics at the Large Hadron Collider”, *Australasian Association for the History, Philosophy and Social Studies of Science Conference*, Wollongong, Australia

Ritson, S. (2021) “Aiming for Ugliness: ‘Non-discovery’ and Transformations in High Energy Experimental Physics at the Large Hadron Collider”, *European Philosophy of Science Association*, Turin, Italy

Ritson, S. (2021) “Aiming for Ugliness: ‘Non-discovery’ and Transformations in High Energy Experimental Physics at the Large Hadron Collider”, *British Society for Philosophy of Science*, Kent, UK

Ritson, S. (2019) “Probing Novelty at the LHC: heuristic appraisal of disruptive experimentation”, *The British Society for Philosophy of Science Conference*, Durham, UK

Ritson, S. (2018) “Measurement and machine learning at the Large Hadron Collider (LHC): The Higgs self-coupling as a case study”, *Measurement at the Crossroads Conference*, Paris, France

Ritson, S. (2018) “The Case of the ‘750 GeV’: Exploring ‘non-discovery’ and transformations in high energy experimental physics at the Large Hadron Collider”, *Society for the Social Studies of Science Conference*, Sydney, Australia

Sorgner, H. & Ritson, S. (2018) “Non-knowledge and future high-energy physics technologies”, *Ignorance and non-knowledge: what consequences for democratic governance, politics and policy?*, Vienna, Austria

Ritson, S. (2017) “‘Large (Virtual) Research Infrastructures: The high-energy physics blogosphere and ‘non-discovery’”, *Society for the Social Studies of Science Conference*, Boston, USA

Ritson, S. (2017) “Controversial appraisals of “promise” in high energy physics”, *The British Society for Philosophy of Science Conference*, Edinburgh, UK

Ritson, S. (2014) “‘Crackpots’ and ‘Active Researchers’: The String Wars, ArXiv, and the Blogosphere”, *Australasian Association for the History, Philosophy and Social Studies of Science Conference,* Katoomba, Australia

Ritson, S. (2013) “Dualities in Superstring Theory: From ‘oddity’ to Epistemic Strategy”. Presented as part of the panel “Epistemic Strategies in 20th Century Physics and Cosmology: Reshaping Spaces, Structures and Styles” at the *History of Science Society Annual Meeting*, Boston, USA

Carter, M. & Ritson, S. (2013) “Blogs as a Domain of Scientific Discourse: The Construction of New Knowledge in the Blogosphere”. Published in *Proc. Computing and Information Systems Doctoral Colloquium*, Melbourne, Australia p.7

Ritson, S. (2012) “The String Debates: Rhetoric and Ideology in Fundamental Physics” at the *Australasian Association for the History, Philosophy and Social Studies of Science Conference*, Sydney, Australia

TEACHING

University of Melbourne

“Thinking About Science Past and Present” — 2025, 2026
Guest lectures

“Thinking About Science Past and Present” — 2021
Tutor

Epistemology of the Large Hadron Collider Research Unit

“The practice approach in history and philosophy of science” — 2018

Responsible for designing and leading the Postdoc and PhD workshop
International Summer School “Particle Physics at the Crossroads”

University of Klagenfurt, Austria

“Ethical Regimes of Knowledge Production and Indigenous Tissue Samples” 2017
Masters level subject (Masters in Science and Technology Studies)
Responsible for designing the seminar syllabus, delivered all lectures

University of Sydney

“Science Ethics and Society” 2016
Course Coordinator and Lecturer
Advanced undergraduate Science and Technology Studies subject

“What is this thing called Science?” 2016, 2015, 2014
Course Coordinator and Lecturer
Introductory undergraduate history and philosophy of science subject

“What is this thing called Science?” 2013, 2012
Tutor
Introductory undergraduate philosophy of science subject

“Bioethics” 2016, 2013
Tutor
Undergraduate ethics subject