

**EMPLOYMENT**

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| Principal Investigator, Project 'PExAI: Predicting and explaining with AI', funded by the Hellenic Foundation for Research and Innovation, Dep. of History and Philosophy of Science, University of Athens | 02/2026- 01/2028 |
| Marie Skłodowska-Curie Post-Doctoral Fellow, Project 'CREACAL: Chemical reactions as Causes and Laws', Dep. of History and Philosophy of Science, University of Athens                                     | 7/2023- 06/2025  |
| Post-Doctoral Research Associate in the NoMoS project, PI: Stathis Psillos, Dep. of History and Philosophy of Science, University of Athens                                                                | 07/2022- 6/2023  |
| Teaching Fellow, Dep. of History and Philosophy of Science, University of Athens                                                                                                                           | 10/2021-09/2022  |
| Post-Doctoral Research Associate in the ERC-funded 'The Metaphysical Unity of Science' project, University of Bristol                                                                                      | 07/2019- 09/2021 |
| Hourly-paid Teacher, University of Bristol                                                                                                                                                                 | 2015- 2021       |

**EDUCATION**

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| PhD in Philosophy, University of Bristol<br>Thesis title: A Philosophical Analysis of the Relation between Chemistry and Quantum Mechanics: the case of a single inert molecule<br>Supervisor: James Ladyman               | 2014- 2019 |
| MSc Philosophy of Science, LSE<br>Courses: Rationality & Choice, Set Theory & Logic, Philosophy of Science<br>Dissertation: On the universality and ambiguity of the 2nd law of thermodynamics<br>Supervisor: Miklos Redei | 2012- 2013 |
| MEng Chemical Engineering, National Technical University of Athens<br>Grade: GPA 2:1 (7.66/10)<br>Dissertation: Energy-saving measures on buildings: Financial and Cost-Benefit Analysis<br>Supervisor: Danae Diakoulaki   | 2006- 2012 |

**RESEARCH INTERESTS**

**General issues in Philosophy of Science:** Reduction, Emergence, Scientific Realism, Models & Idealisations, Feminist Philosophy of Science  
**Metaphysics of Science:** Laws, Causation, Natural kinds, Metaphysics of relations  
**History and Philosophy of Chemistry:** Chemical bonds, Quantum chemistry, Molecular structure

**PUBLICATIONS**Books

*AI in Chemistry* (contract signed / submission May 2026) Elements in Philosophy of Chemistry Series, ed. by P. Thyssen (Cambridge: Cambridge University Press)

*Chemistry's Metaphysics* (2024). Elements in Metaphysics Series, ed. by T. Tahko (Cambridge: Cambridge University Press)

Peer-reviewed articles

- 1 Prediction and discovery in the search for chemical elements (in press) In: *The Perils and Promises of Prediction: Historical & Epistemological Perspectives*, Arabatzis T., Arapostathis S., Katsaloulis I. & A. Tympas (eds.) Boston Studies in the Philosophy & History of Science. Cham: Springer Nature

- 2 Reframing the Reduction-Emergence Debate around Chemistry In: Bryant, A. and Yates, D., (eds.) *Rethinking Emergence*. (in press) Oxford University Press
- 3 Chemical causal relations across different levels of description In: Ioannidis, S., Psillos, S. & Seifert V.A. (eds.) *Laws and powers in the Metaphysics of Science*. (in press) Routledge
- 4 Why water may not be a natural kind after all *Análisis Filosófico* (in press)
- 5 Philosophy of Chemistry: Concepts, ideas and open questions In: *Bilimlerin Felsefesi*, ed. by M. Efe Ateş and Dinçer Çevik (in press) (AKADEMİM YAYINLARI)
- 6 The Many Laws of the Periodic Table *Philosophy of Science*. (2025) pp. 1-10. doi:10.1017/psa.2025.10131
- 7 Franklin, A. and Seifert, V., The Problem of Molecular Structure Just Is the Measurement Problem *British Journal for the Philosophy of Science*, (2024) 75 doi: [doi.org/10.1086/715148](https://doi.org/10.1086/715148). (2024 BJPS Popper Prize)
- 8 The value of laws in chemistry. *Foundations of Chemistry* (2024) 26, 355–368 <https://doi.org/10.1007/s10698-024-09523-z>
- 9 The Chemical Bond is a Real Pattern. *Philosophy of Science* (2022) 1-47. doi:10.1017/psa.2022.17
- 10 Do Molecules Have Structure in Isolation? How Models Can Provide the Answer. In: Lombardi, O., Martínez González, J.C., Fortin, S. (eds) *Philosophical Perspectives in Quantum Chemistry*. Synthese Library, (2022) vol 461. Springer, Cham. [https://doi.org/10.1007/978-3-030-98373-4\\_6](https://doi.org/10.1007/978-3-030-98373-4_6)
- 11 The strong emergence of molecular structure, *European Journal for Philosophy of Science*, (2020) 10(3), 1-25. <https://doi.org/10.1007/s13194-020-00308-7>
- 12 Seifert, V., Ladyman, J., & Blumenthal, G. Referring to chemical elements and compounds: Colourless airs in late-eighteenth-century chemical practice', In *What is a chemical element? A collection of essays by chemists, philosophers, historians, and educators*, ed. by E. Scerri, E. Ghibaudi (2020) (Oxford: Oxford University Press)
- 13 The role of idealisations in describing an isolated molecule. *Foundations of Chemistry*, (2020) 22(1), 15-29. <https://doi.org/10.1007/s10698-019-09342-7>
- 14 Reduction and Emergence in Chemistry, *Internet Encyclopedia of Philosophy* (2019) <<https://iep.utm.edu/red-chem/>>
- 15 An alternative approach to unifying chemistry with quantum mechanics. *Foundations of Chemistry*, (2017) 19(3), 209-222.

Book reviews, Press & Online sources

- 1 'What makes a scientific breakthrough truly chemical?', *Chemistry World*, Royal Society of Chemistry (2025)
- 2 'The conceptual challenge of consumer safety', *Chemistry World*, Royal Society of Chemistry (2025)
- 3 'Chemical reactions as causes? (Part III)', *Jargonium* (2025)
- 4 'What the smell of benzene tells us about the world', *Chemistry World*, Royal Society of Chemistry (2025)
- 5 'How feminist bioethics can improve women's health', *Chemistry World*, Royal Society of Chemistry (2025)
- 6 'Chemical reactions as causes? (Part II)', *Jargonium* (2024)
- 7 'The limits of discovery', *Chalk Magazine* (2025)
- 8 'Symbols and tables in chemistry', *Chemistry World*, Royal Society of Chemistry (2025)
- 9 'Classifications, racial discrimination and Covid-19', *Chemistry World*, Royal Society of Chemistry (2025)

- 10 'The moral theories behind climate deadlock', *Chemistry World*, Royal Society of Chemistry (2025)
- 11 Seifert, V. Alexander Bird: Knowing Science. Oxford: Oxford University Press, 2022, 304 pp., €67.88 (Hardback), ISBN: 9780199606658. *J Gen Philos Sci* (2025). <https://doi.org/10.1007/s10838-024-09699-0>
- 12 Seifert, V. (2024). Why do philosophers disagree on how the sciences relate? A metaphilosophical analysis (Version 1). *Zenodo*. <https://doi.org/10.5281/zenodo.14411529>
- 13 Seifert, V.A. 'Chemical reactions as causes?', *Jargonium* (2024)
- 14 Seifert, V.A. 'Did AI just win the Nobel prizes in physics and chemistry?', *Chemistry World*, Royal Society of Chemistry (2024)
- 15 'How much science should there be in philosophy?', *Chemistry World*, Royal Society of Chemistry (2024)
- 16 'There's more to alchemy than its mystical nature', *Chemistry World*, Royal Society of Chemistry (2024)
- 17 'The nuances of chemical confirmation', *Chemistry World*, Royal Society of Chemistry (2024)
- 18 'Taking a feminist standpoint on chemistry', *Chemistry World*, Royal Society of Chemistry (2024)
- 19 'The rise of techno-science', *Chemistry World*, Royal Society of Chemistry (2024)
- 20 'Finding truth in beauty', *Chemistry World*, Royal Society of Chemistry (2023)
- 21 'Predicting and discovering in chemistry', *Chemistry World*, Royal Society of Chemistry (2023)
- 22 'When did chemists start to believe in atoms?', *Chemistry World*, Royal Society of Chemistry (2023)
- 23 'Chemistry's history through the feminist lens', *Chemistry World*, Royal Society of Chemistry (2023)
- 24 'Let's promote a feminist philosophy of chemistry!', *Jargonium* (2023)
- 25 'Is water H<sub>2</sub>O? Is gold Au?', *Chemistry World*, Royal Society of Chemistry (2023)
- 26 'Does the periodic table reveal laws of nature?', *Chemistry World*, Royal Society of Chemistry (2023)
- 27 Seifert, V.A. In search of the elements. *Metascience* 32, 121–124 (2023). <https://doi.org/10.1007/s11016-022-00825-6>
- 28 'How do we know that we know', *Chemistry World*, Royal Society of Chemistry (2022)
- 29 'Are plants alive?', *Chemistry World*, Royal Society of Chemistry (2022)
- 30 Ladyman, J. & Seifert, V.A. 'The contributions of Geoffrey Blumenthal: From Copernicus's astronomy to Lavoisier's chemistry', *Jargonium* (2022)
- 31 'In search of the chemical bond', *Chemistry World*, Royal Society of Chemistry (2022)
- 32 'Philosophical mysteries around chemical reactions', *Chemistry World*, Royal Society of Chemistry (2022)
- 33 Open questions on emergence in chemistry. *Commun Chem* 5, 49 (2022).
- 34 'The different shades of sexist science', *Chemistry World*, Royal Society of Chemistry (2022)
- 35 'Rethinking our relationship to nature', *Chemistry World*, Royal Society of Chemistry (2021)
- 36 Science as a product of culture', *Chemistry World*, Royal Society of Chemistry (2021)
- 37 Franklin, A., and Seifert, V. A. 'Going Quantum with Chemistry's Structures', *BJPS Short Reads* (2021)
- 38 'What's Revolutionary about the Chemical Revolution', *Chemistry World*, Royal Society of Chemistry (2021)

## Vanessa A. Seifert

- 39 'Great expectations: How values influence decisions in Chemistry', *Chemistry World*, Royal Society of Chemistry (2021)
- 40 'Puzzles in Chemistry and how philosophy helps solve them', *Chemistry World*, Royal Society of Chemistry (2021)
- 41 'Idealisations to the Rescue', *Chemistry World*, Royal Society of Chemistry (2021)
- 42 'Are chemical entities real?', *Chemistry World*, Royal Society of Chemistry (2020)
- 43 'Strong Emergence in Chemistry', *Jargonium* (2020)
- 44 'Why do we still do chemistry?', *Chemistry World*, Royal Society of Chemistry (2020)
- 45 'Philosophy of Chemistry- is that a thing?!', *Jargonium* (2020)
- 46 'From quarks to quails- can the different sciences be unified?', *The Conversation* (2020)
- 47 'The philosophy of chemistry ... and what it can tell us about life, the universe and everything', *The Conversation* (2016)
- 48 Seifert, V. A. (2016) 'Essays in the Philosophy of Chemistry.' *International Studies in the Philosophy of Science*, 30:4, 415-417, 2016 (Book review)

## CONFERENCES, WORKSHOPS, SYMPOSIA

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### Invited Talks

|                                                                                                                 |      |
|-----------------------------------------------------------------------------------------------------------------|------|
| FunMo workshop, Durham University                                                                               | 2025 |
| National Workshop in Philosophy of Science, Mumbai                                                              | 2025 |
| Emergence in Philosophy and Science workshop, Cusano University                                                 | 2025 |
| Women and Correspondence in the Nineteenth Century Workshop, University of Athens                               | 2025 |
| BioFun workshop, University College London                                                                      | 2025 |
| Units, Symbols, and Terminology in the Physical Sciences in and for the Digital Era, Royal Society of Chemistry | 2025 |
| Dwain L Ford Guest Lecture Series of Andrews University                                                         | 2025 |
| Munich Center for Mathematical Philosophy (MCMP) Colloquium, LMU                                                | 2025 |
| Emergence, Causality, & Complexity Workshop, Aachen University                                                  | 2024 |
| XXVIII National Congress of the Italian Chemical Society, Milan                                                 | 2024 |
| CEFISES Seminar, UC Louvain*                                                                                    | 2024 |
| Departmental talk, University of Athens                                                                         | 2024 |
| Public Lecture, Royal Society of Chemistry Lancashire and District local section                                | 2024 |
| Physics at the Interface workshop, Durham University                                                            | 2023 |
| MetaScience Final Event, University of Bristol                                                                  | 2023 |
| Helsinki Philosophy (TINT): Perspectives on Science seminar, University of Helsinki                             | 2023 |
| Cardiff Philosophy Visiting Speakers, Cardiff University                                                        | 2022 |
| Emergence and Reduction in Science and Metaphysics, University of Lisbon                                        | 2022 |
| Seminar on Metaphysics of Science (CEFISES), UC Louvain*                                                        | 2022 |

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| The Nature of Quantum Objects, Dep. of Philosophy, Un. of Geneva                                                                                               | 2022 |
| Harvard Foundations of Physics Mini-workshop on the Quantum Measurement Problem*<br>Incl. Panel Discussion with Lev Vaidman, David Chalmers and Kelvin McQueen | 2021 |
| Meeting of the Strathclyde Computational and Theoretical Chemistry Hub, Un. of Strathclyde                                                                     | 2021 |
| Department of Chemistry Weekly Seminar, Ben-Gurion University of the Negev                                                                                     | 2021 |
| Forum for Philosophy, London School of Economics*<br>Panel discussion: A theory of everything?, with Philip Ball and Jessica Wilson                            | 2021 |
| Wochenendseminar zur Philosophie der Physik, University of Bremen                                                                                              | 2020 |
| ADHOC Association for the Discussion of the History of Chemistry, University of Cambridge                                                                      | 2020 |
| FraMEPhys- MetaScience Workshop, Oxford                                                                                                                        | 2019 |
| IV POND Conference: Science and Objectivity, University of Barcelona                                                                                           | 2019 |
| PHASE-chimie Philosophie, Histoire, Anthropologie, Sociologie et Epistémologie de la Chimie, University Paris 7                                                | 2019 |
| Real Patterns Workshop, University of Bristol                                                                                                                  | 2018 |
| Structure, Mechanism and Explanation in the Sciences, Durham University                                                                                        | 2018 |
| Association for the Discussion of the History of Chemistry, HPS, University of Cambridge                                                                       | 2018 |
| <i><u>Participation in conferences</u></i>                                                                                                                     |      |
| PSA Around the World, online                                                                                                                                   | 2025 |
| 16th Conference of the Italian Society for Analytic Philosophy, Turin                                                                                          | 2025 |
| Society in the Metaphysics of Science conference, UCI Lugano                                                                                                   | 2025 |
| 29th Biennial meeting of the Philosophy of Science Association, New Orleans                                                                                    | 2024 |
| The Metaphysics of Chemistry- First International Workshop, UC Louvain                                                                                         | 2024 |
| 27th Annual conference of the International Society for the Philosophy of Chemistry                                                                            | 2024 |
| The Joint Session of the Aristotelian Society and Mind Association, University of Birmingham                                                                   | 2024 |
| 15th Biennial Congress of the International Society for the History of Philosophy of Science (HOPOS24), University of Vienna                                   | 2024 |
| Conference for the 25 years of the Graduate Program in Chemical Education, University of Athens                                                                | 2024 |
| 25th Conference of the International Society for the Philosophy of Chemistry Conference, Buenos Aires                                                          | 2023 |
| NoMoS Conference, University of Athens                                                                                                                         | 2023 |
| 7th Panhellenic Conference in Philosophy of Science, University of Athens                                                                                      | 2022 |
| 6th Italian Conference in Analytic Metaphysics and Ontology, University of L' Aquila                                                                           | 2022 |
| 27th Biennial Meeting of the Philosophy of Science Association (PSA), Baltimore                                                                                | 2021 |
| The 95th Joint Session of the Aristotelian Society and Mind Association*                                                                                       | 2021 |
| 24th Conference of the International Society for the Philosophy of Chemistry Conference, Buenos Aires (w/ A. Franklin)*                                        | 2021 |
| Departmental Seminar, Philosophy Dep., University of Bristol                                                                                                   | 2021 |
| 23rd Conference of the International Society for the Philosophy of Chemistry, University of Torino                                                             | 2019 |
| Emergence: conceptual and philosophical aspects, Dutch Institute for Emergent Phenomena                                                                        | 2019 |
| Formal Methods and Science in Philosophy III, Inter-University Centre Dubrovnik                                                                                | 2019 |

## Vanessa A. Seifert

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| XX Taller d'Investigació en Filosofia, University of Valencia                                       | 2019 |
| 5th Panhellenic Conference in Philosophy of Science, University of Athens                           | 2018 |
| 26th Biennial Meeting of the Philosophy of Science Association (PSA), Seattle                       | 2018 |
| 22nd Conference of the International Society for the Philosophy of Chemistry, University of Bristol | 2018 |
| Ninth European Congress of Analytic Philosophy, LMU                                                 | 2017 |
| 21st Conference of the International Society for the Philosophy of Chemistry, Paris                 | 2017 |
| International IHPS Forum Leeds, University of Leeds                                                 | 2017 |
| Second London Philosophy of Science Graduate Conference, UCL                                        | 2016 |
| 20th Conference of the International Society for the Philosophy of Chemistry, Florida               | 2016 |
| Philosophy of Science in a Forest (PSF 2016), Kaap Doorn, The Netherlands                           | 2016 |
| Workshop in the History and Philosophy of Chemistry, University of Bristol                          | 2016 |

### Symposia participations

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| SciData Conference, Brisbane                                                               | 2025 |
| 10th Biennial meeting of the European Philosophy of Science Association (EPSA25)           | 2025 |
| Annual conference of the British Society for the Philosophy of Science (BSPS 2025)         | 2025 |
| 27th International Congress of History of Science and Technology, New Zealand              | 2025 |
| 8th Panhellenic Conference on Philosophy of Science                                        | 2024 |
| Annual conference of the British Society for the Philosophy of Science (BSPS 2024)         | 2024 |
| 7th Panhellenic Conference in Philosophy of Science, University of Athens                  | 2022 |
| 28th Biennial Meeting of the Philosophy of Science Association (PSA), Pittsburgh           | 2022 |
| 8th Biennial European Philosophy of Science Association (EPSA) Conference, Un. of Torino   | 2021 |
| British Society for the Philosophy of Science Annual (BSPS) Conference, University of Kent | 2021 |
| 6th Panhellenic Conference in Philosophy of Science, University of Athens                  | 2020 |
| 7th Biennial European Philosophy of Science Association (EPSA) Conference, Un. of Geneva   | 2019 |
| British Society for the Philosophy of Science Annual (BSPS) Conference, Durham University  | 2019 |

*\*Recordings of these talks can be found on Youtube*

## TEACHING

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| University of Athens                                                       | 2021-present |
| 1. Feminist Philosophy of Science (Undergraduate)                          |              |
| 2. Philosophy of Science (Dept. of Chemistry- Postgraduate)                |              |
| 3. 17th-18th century philosophy (Undergraduate)                            |              |
| 4. Special issues in Philosophy of Science (Undergraduate)                 |              |
| 5. History and Philosophy of Chemistry (Dept. of Chemistry- Undergraduate) |              |
| University of Bristol                                                      | 2015- 2021   |
| 1. Introduction to Philosophy A (Undergraduate)                            |              |
| 2. Introduction to Metaphysics (Undergraduate)                             |              |
| 3. Realism and Normativity (Undergraduate)                                 |              |
| 4. Introduction to Philosophy B (Undergraduate)                            |              |
| 5. Philosophy of Physics (Undergraduate- postgraduate)                     |              |

## REVIEWS, OUTREACH & OTHER ACTIVITIES

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**Reviewer** for *Perspectives on Science, Foundations of Chemistry, Studies in History and Philosophy of Modern Physics, Analysis, Ergo, Journal for General Philosophy of Science, Chemistry-a European Journal, European Journal for the Philosophy of Science, Journal of Chemical Education, Synthese,*

**Writer** of column Thought Experiments, *Chemistry World* magazine, Royal Society of Chemistry

**Section Editor** of Philosophy of Chemistry in 'Comprehensive Philosophy of Science' (Editor-in-Chief, Sven-Ove Hansson, pub. by Elsevier)

**Co-creator, co-editor & Writer** of [jargonium.com](http://jargonium.com)

**Member of the scientific committee** for the 2026 Beilstein Dialogues Symposium of the Beilstein Institute 2026

**Co-editor** of *Laws and powers in the Metaphysics of Science*. Routledge (In Press) 2026

**Member** of the program committee of the Society for the Metaphysics of Science (SMS) 2022, 2024, 2025, 2026 conference 2026

**Member** of the programme committee of the 10th Biennial Conference of the European Philosophy of Science Association (EPSA25) 2025

Participation in the **Researchers at School** initiative of the ERC with the talk "Philosophising about Science" delivered to students of the Protupo Evaggeliki Sxoli Smyrnis 2024

**Member** of the organising committee of the 7th Panhellenic Conference on Philosophy of Science, University of Athens 2022

**Co-host** of the International Society for the Philosophy of Chemistry Annual Conference, Bristol 2018

**Co-organiser** of the Workshop on the History and Philosophy of Chemistry, Un. of Bristol 2016

**Assistant content producer** of the Centre of Science and Philosophy, University of Bristol 2015

**Interview** in *BBC Radio*, *Chem Magazine* (published by *American Chemical Society*), *Physics World* <[link](#)>, *ScienceMe* podcast (in Greek)

## GRANTS & AWARDS

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2024 BJPS Popper Prize Winner for the paper "The problem of molecular structure just is the measurement problem, co-written with A. Franklin 2024

Marie Skłodowska-Curie Post-Doctoral Fellow, Project 'CREACAL: Chemical reactions as Causes and Laws' 2022

SHAC Award 2022 (Subject Development award from the Society for the History of Alchemy and Chemistry) for the further development of *Jargonium* 2022

PSA2018 Travel Grant, Philosophy of Science Association, USA 2018

Jacobsen Studentship, The Royal Institute of Philosophy 2017- 2018

Darwin Trust of Edinburgh Postgraduate Studentship 2014- 2017