GRANT FISHER

Associate Professor (Tenured)
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British Citizen

RESEARCH

Philosophy of science and technology, especially scientific models and history and philosophy of chemistry; philosophy of biomedical science.

EDUCATION

2004 Ph.D.	Philosophy, University of Leeds Dissertation: *Model Construction in Organic Chemistry* Advisor: Steven French
1999 Master of Arts	History and Philosophy of Science, University of Leeds Dissertation: *The Semantic View of Theories and Chemistry: Representing Hierarchical Structures and Dynamical Structures* Advisor: Steven French
1998 B.Sc. (Honours)	History and Philosophy of Science, University College London

ACADEMIC APOINTMENTS

2013 –	Associate Professor, Graduate School of Science and Technology Policy. Korea Advanced Institute of Science and Technology
2010 - 2013	Associate Professor, School of Humanities and Social Science; Adjunct Professor, Graduate School of Science and Technology Policy. Korea Advanced Institute of Science and Technology
2008 – 2010	Fixed-term Lecturer in Humanities, Boğaziçi University, Istanbul, Turkey
2005 – 2008	Research Fellow in Philosophy of Science, Department of Science & Technology Studies, University College London *Evidence in the Natural Sciences*. Project Leader: Hasok Chang. Part of the UCL Research Programme: *Evidence, Inference and Enquiry: Towards an Integrated Science of Evidence*. Principle Investigator: Philip Dawid

2004 – 2005	Temporary Lecturer in Philosophy of Science, Department of Philosophy, University of Leeds
2003 – 2004	Temporary Lecturer in History of Science, Department of Philosophy, University of Durham

HONORARY POSITIONS

2018 – 2022	Honorary Research Associate, Department of Science and Technology Studies, University College London

ACADEMIC SERVICES

2017	International Society for the Philosophy of Chemistry Scientific Committee
2016 –	Associate Editor, *Foundations of Chemistry* (Springer SCI)

ACADEMIC PUBLICATIONS

Books

Scerri, Eric and Fisher, Grant (Eds.) *Essays in the Philosophy of Chemistry* (Oxford: Oxford University Press, 2016).

Special issues

Fisher, Grant, Gelfert, Axel and Friedrich Steinle (Eds.), "Exploratory Models and Exploratory Modelling in Science", *Perspectives on Science* 29 (4) (July-August 2021).

Articles and chapters

Fisher, Grant "Stem Cell Toxicology: Ethical and Epistemic Constraints on *In Vitro* Models", *HYLE – International Journal for Philosophy of Chemistry* 27 (2021): 67-89.

Fisher, Grant. "Content, Design, and Representation in Chemistry", *Foundations of Chemistry* 19 (1) (2017): 17-28.

Fisher, Grant. "Diagnostics in Computational Organic Chemistry". *Foundations of Chemistry*, 18 (3) (2016): 241-262.

Fisher, G. (2016) "Divergence, Diagnostics, and a Dichotomy of Methods", in Eric Scerri & Grant Fisher (Eds.). *Essays in the Philosophy of Chemistry* (Oxford: Oxford University Press), pp. 306-331.

Fisher, Grant. "Orbital Symmetry, Idealization, and the Kairetic Account of Scientific Explanation", in Eric Scerri and Lee McIntyre (Eds.). *Philosophy of Chemistry – Growth of a New Discipline. Boston Studies on the Philosophy and History of Science*, Vol. 306 (2015) (Dordrecht: Springer), pp. 201-218.

Chang, Hasok. and Fisher, Grant. "What the Ravens Really Teach Us: The Intrinsic Contextuality of Evidence", in William Twining, Philip Dawid and Dimitra Vasilaki (Eds.). *Evidence, Inference and Enquiry – Proceedings of the British Academy*, Vol. 171 (Oxford: Oxford University Press 2011), pp. 345-370.

Fisher, Grant. "Synthesizing the Philosophy of Chemistry". *Metascience*, 16 (2007): 455-459.

Fisher, Grant. "The Autonomy of Models and Explanation: Anomalous Molecular Rearrangements in Early Twentieth-century Physical Organic Chemistry." *Studies in History and Philosophy of Science A*, 37 (2006): 562-584.

Fisher, Grant. "Explaining Explanation in Chemistry." *The Annals of the New York Academy of Sciences*, Vol. 988 (2003): 16-21.

Proceedings.

Fisher, Grant. "Understanding in Chemistry: Models, Explanation, and Contextuality" *Exploring Science – Contributions from History, Philosophy and Education of Science. Proceedings of the first Asian Regional Conference of the International History, Philosophy, and Science Teaching Group* (2012)

Fisher, Grant. "Models, Methods, and Autonomy in Physical Organic Chemistry" *Proceedings of the Korean Society for Analytic Philosophy* (2011)

Other publications

Fisher, Grant (2016) "Diagnostics and the 'Deconstruction' of Models", Phil-Sci Archive.

INVITED TALKS

2019	"Chemical Legacies and the 'New Age' of Toxicology. Laboratoire Sphere, University Paris Diderot.
2017	"Between Philosophy and Science: Philosophy of Science in Britain", *SNU in London Lecture*, Seoul National University
2016	"Mapping, Making, and Exploration in Chemistry". *Exploration and Epistemic Corruption in Science*, Department of Philosophy, National University of Singapore
2016	"Diagnostics and the 'Deconstruction' of Models". Special session on Philosophy of Chemistry, *Philosophy of Science Association Biennial Meeting*, Atlanta, GA
2015	Invited participant in the *Epistemology of Technology and Technoscience Group*, Faculty of Arts and Social Sciences, National University of Singapore
2014	"It Might Work, But Do We Want It? Emerging Biomedical Science, Contextual Robustness, and Public Policy", *Graduate School of Science and Technology Policy Colloquium*
2012	"Passions and Punctilios: Models, Methods, and Controversies in Late Twentieth Century Physical Organic Chemistry". *Unit for the History and Philosophy of Science Colloquium*, University of Sydney
2012	"Passions and Punctilios: Models, Methods, and Understanding in Twentieth Century Physical Organic Chemistry". *Department of Philosophy and Science, Technology, and Society Joint Colloquium*, National University of Singapore
2012	"Towards an Interventionist Account of Scientific Understanding". *Integrated History and Philosophy of Science in Practice Workshop*, National University of Singapore
2009	"What is Philosophy of Science and What is it Good For?", *Boğaziçi University Science Club*, Istanbul
2008	"Evidence in the Context of Action". *Department of Philosophy Colloquium*, University of California Santa Cruz, CA
2008	"Chemistry between Sciences", *Hypotheses and Heuristics Workshop*, Department of Philosophy, University of Bristol

2006	Hasok Chang and Grant Fisher. "What the Ravens Really Teach Us: The Intrinsic Contextuality of Evidence". *Centre for Philosophy of the Natural and Social Sciences (research seminar on evidence)*, London School of Economics, 24 April 2006
2004	"What can Philosophy of Art Teach us about Models and the Resources of Representation in Science?", *History and Philosophy of Science Colloquium*, Department of Philosophy, University of Leeds, UK

CONFERENCE PRESENTATIONS

2021	"Innovation, Incomplete Theorization, and the Promise and Perils of Practical Pursuit in Biomedicine", Pursuit-worthiness in Scientific Inquiry, Eindhoven University of Technology
2019	"The Ethics and Epistemology of Stem Cell Toxicology Models", First International Conference on Bridging the Philosophies of Biology and Chemistry, Laboratoire Sphere, University Paris Diderot.
2018	"'Make It So!' *Star Trek* as Narrative Sandbox for Philosophical Enquiry", Discovering Star Trek: Exploring the Societies and Technologies of an Imagined Future, KAIST.
2018	With HyeJeong Han and Richard Sung. "Disruptive innovation, predictive analytics, and the soft determinism of the fourth industrial revolution". 4S (Society for Social Studies of Science) Annual Conference, Sydney Australia
2018	"Innovation by incomplete theorization: The case of direct cell reprogramming", Society for Philosophy of Science in Practice (SPSP), University of Ghent, Belgium.
2017	"The Fourth Industrial Revolution: Prospects and Problems", *Perspectives on the Fourth Industrial Revolution*, KAIST
2017	"Technical Fixes in Biomedical Science: The Case of Direct Cell Reprogramming", *Philosophy of Industry-funded Science*, Underwood College, Yonsei University, Seoul
2017	"Chemistry and Concurrent Exploratory Science", *International Society for the Philosophy of Chemistry Summer Symposium*, Laboratory Sphere, University Paris Diderot
2016	"Computational Diagnostics and Scientific Modelling in an Exploratory Mode", *3rd Conference on Contemporary Philosophy in East Asia*, Seoul National University
2016	"Content, Design, and Representation in Chemistry", *International Society for the Philosophy of Chemistry Summer Symposium*, Florida Atlantic University, Boca Raton, FL
2014	"Convergence and Contestation: The Epistemology and Ethics of Contemporary Stem Cell Research and Policy", *Second International History, Philosophy and Science Teaching Group Asia Regional Conference*, National Taiwan Normal University, Taipei
2014	With Buhm Soon Park. "Checks and Balances: Orbital Symmetry and Quantitative Methods in Late Twentieth Century Quantum Chemistry", *Fifth Conference of Integrated History and Philosophy of Science (&HPS5)*, University of Vienna
2014	"Contextual Robustness, Practical Ethics, and Public Policy", *New Zealand Bioethics Conference*, University of Otago, Dunedin
2013	"Applied Philosophy of Science and the 'Dilemma of Power and Truth'", *Asia-Pacific Science, Technology and Society Network Biennial Conference (APSTSN),* National University of Singapore
2012	"Understanding in Chemistry: Models, Explanation, and Contextuality", *Exploring Science – Contributions from History, Philosophy and Education of Science. The first Asian regional conference of the International History, Philosophy, and Science Teaching Group*, Seoul National University
2011	"Models, Methods and Autonomy in Physical Organic Chemistry", *Korean Society for Analytic Philosophy Conference*, Hangnam University, Seoul
2007	With Gianluca Baio and Amanda Helper "Are Expert Opinions Giving Us Both Sides of the Story?",. *Evidence, Inference and Facts: An Interdisciplinary Conference*. The British Academy, London

2007	With Hasok Chang. "Evidence, Inference and Action: Towards a New Philosophy of Evidence". *Evidence, Inference and Facts: An Interdisciplinary Conference.* The British Academy, London, December 2007.
2007	With Hasok Chang. "Epistemic Action and the 'Problem' of Prediction and Accommodation", *UCL Evidence Research Satellite Meeting. Evidence, Inference and Enquiry: Towards and Integrated Science of Evidence*, UCL.
2007	"Total Evidence and Empirical Indispensability". *First Biennial Conference of the Society for the Philosophy of Science in Practice*. University of Twente, the Netherlands
2004	"Developmental Models in the Early History of Pericyclic Reactions: The Cope and Claisen Rearrangements". *International Society for the Philosophy of Chemistry Summer Symposium*, University of Durham, UK
2000	"Floating Models". *British Society for the Philosophy of Science Annual Conference*, University of Sheffield, UK

OTHER TALKS

2007	"Why Taking Account of All (Or Even More) Evidence Isn't Always Better for Scientific Practice". *Department of Science and Technology Studies Annual Research Day*. University College London
2005	"Evidence and the Pragmatics of Explanation: Is 'Understanding' Epistemically Relevant?", informal talk given for the *Evidence, Inference, and Enquiry Programme Postdoctoral Researchers' Meeting*, University College London
2002	"Peering Into the Toolbox: Models and Representation in Chemistry". Informal Research Seminar. Division of History and Philosophy of Science, University of Leeds.
1999	"Model Autonomy and the Nuclear Shell Model". Informal Research Seminar. Division of History and Philosophy of Science, University of Leeds.

CONFERENCES AND WORKSHOP ORGANIZATION

2017	*Perspectives on the Fourth Industrial Revolution*, KAIST (Research Assistants: Hye Jeong Han and Richard Sung)
2017	With Bennett Holman, *Philosophy of Industry Funded Science*, Yonsei University (*Perspectives on the Fourth Industrial Revolution* satellite workshop)
2016	With the Graduate School of Information Security, KAIST. *Cyber Workshop: What do Security People Do and Why*, short workshop with Hinne Hettema, I.T. Security Lead, University of Auckland
2015	With Buhm Soon Park, *Practical Ethics, Responsible Innovation, and New Regulatory Regimes of Science and Technology*, Graduate School of Science and Technology Policy, KAIST
2008	*Styles and Ways of Knowing*, Third Annual Integrated History and Philosophy of Science Workshop, University College London. Funded by the British Society for the Philosophy of Science and the British Society for the History of Science
2007	*Evidence, Inference, and Facts*, The British Academy, funded by the Economic and Social Research Council and The Leverhulme Trust. Member of conference organization committee (PI: Philip Dawid, University College London)
2002	*British Society for the History of Science Postgraduate Conference*, Division of History and Philosophy of Science, University of Leeds. Member of conference organization committee

GRANTS AND AWARDS

2021	Research Innovation Award from the College of Liberal Arts and Convergence Science, KAIST
2017	KRW 20,000,000 (USD 18,000 approx.) for KAIST Interdisciplinary Research on the 4th Industrial Revolution
2015	Springer notable reviewer
1999 – 2003	Arts and Humanities Research Board Postgraduate Doctoral Studentship
1998 – 1999	British Academy Postgraduate Studentship awarded for Master's Degree study

OTHER RESEARCH ACTIVITIES

2013 – 2015	Advisor to the KAIST School of Business and Technology Management project on Genetically Modified Organisms (Principle Investigator: Hong-Tak Lim).
2006 – 2008	*Evidence in the Natural Sciences* research group coordinator, Department of Science and Technology Studies, University College London (Project Leader: Hasok Chang)
2007 – 2008	*Pragmatism, Phenomenology, and Pluralism*, research group coordinator, Department of Science and Technology Studies, University College London (Project Leader: Hasok Chang)
2005 – 2008	*Evidence, Inference and Enquiry* coordinator of interdisciplinary postdoctoral research group (PI: Philip Dawid)

PROFESSIONAL MEMBERSHIP

- British Society for the Philosophy of Science
- Philosophy of Science Association
- Society for Philosophy of Science in Practice

TEACHING EXPERIENCE

Graduate Supervision (Master's thesis)

2022 –	Monika Didziulyte
2021 –	Jiyeon Nam
2016 – 2018	Richard Sung. "On Superintelligence, Crisis, Power, and Governmentality: A Foucauldian Perspective on the Conceptualization of the Existential Crisis from Superintelligence". Passed December 15th 2017.
2016 –	Yeseul Kim. "Technical Convergence and Policy Divergence: Trans-border Technologies and New Models of Policy Making at the International Level"
2017 – 2019	HyeJeong Han. "Dissecting the Opacity of Machine Learning: Judicial Decision Making As a Case Study". Passed December 11th, 2018.

Graduate Supervision (Ph.D.)

2018 – present	Richard Sung. *Across the Adverse Paths: On Method Validation in Data-Centric Toxicology*. Proposal exam passed 2021
2019 – present	HyeJong Han. *Pursuit in Practice: Lessons from Drug Design*

Graduate courses

2013 – present	*The Ethics and Governance of Emerging Technologies*. Bioethics, nanoethics, ethics of artificial intelligence, and technology governance. KAIST Graduate School of Science and Technology Policy
2011 – present	*Philosophy of Science Policy*, KAIST Graduate School of Science and Technology Policy. Philosophical issues in science and technology policy, and environmental policy
2008	*Interdisciplinary Studies of Evidence*. University College London Graduate School Skills Development Program. Course designed and Philosophy of Science workshop taught.

Other graduate teaching

2010 – 2012	*STP Graduate Preseminars*. Teaching incoming students central texts in Science and Technology Studies (mainly Kuhn's *Structure of Scientific Revolutions*)

Undergraduate courses

2010 – present	*Philosophy of Science*. KAIST
2015 – 2018	*Applied Ethics for Public Policy.* Bioethics, environmental ethics and policy. KAIST
2015 – 2018	*Knowledge and Power.* Explores relationships between politics and scientific knowledge, drawing on recent philosophy of science, STS, feminist epistemology, and Foucault. KAIST
2014 – present	*Utopia and Dystopia.* Explores positive and negative visions of alternative societies resulting from technological development. KAIST
2013	*Bioethics*. KAIST
2012	*Environmental Ethics*. KAIST
2011	*Introduction to Design Communication*. Project Advisor for "Go Green! Promoting Eco-awareness". Assist students to design policies and technologies to increase awareness of impact on local environment. KAIST
2010	*Topics in Philosophy: History of Modern Western Philosophy*. KAIST
2009 – 2010	*HUM 102 Cultural Encounters.* Humanities Program, Boğaziçi University. Literature, art, science, and philosophy from the Renaissance to the twentieth century. Collaborative teaching
2008 – 2009	*HUM 101 Cultural Encounters*. Humanities Program, Boğaziçi University. Literature, art, science, and philosophy from antiquity to the Middle Ages. Collaborative teaching.
2005	*How Science Works*. Department of Philosophy, University of Leeds. Introductory Philosophy of Science
2004	*Progress and Revolutions in Science*. Department of Philosophy, University of Leeds. Advanced Philosophy of Science
2003 – 2004	*History of Science*. Department of Philosophy, Durham University. Introductory History of Science from antiquity to the twentieth century. Co-taught with David Knight
2003 – 2004	*Science and Religion in the Nineteenth Century*. Department of Philosophy, Durham University. Advanced undergraduate History of Science. Co-taught with David Knight

2003 - 2004	*Two Cultures? 1750-1870*. Department of Philosophy, Durham University. Advanced undergraduate History of Science addressing the relationships between science, art and the humanities. Co-taught with David Knight

Teaching assistant

1999 - 2003	Department of Philosophy, University of Leeds: Theories and Observations in Science, The Mind, Introduction to Theoretical Philosophy, Introduction to Ethics, Reason and Argument, History of Psychology, The Scientific Revolution, Introductory History of Science, How Science Works, Progress and Revolutions in Science, Technology and Society I (introductory History and Philosophy of Technology).

COMMITTEES AND OTHER SERVICES

2017	Member, KAIST Vision 2031 Committee and Globalization Sub-committee, KAIST
2014	Chair, Postdoctoral Fellow Search Committee, Graduate School of Science and Technology Policy, KAIST
2013 –	Member, Degree Committee, Graduate School of Science and Technology Policy, KAIST
2012 –	Member, Admissions Committee for International Students, Graduate School of Science and Technology Policy, KAIST
2012	Member, Foreign Faculty Committee for Overseas Undergraduate Admissions, KAIST
2011 –	Member, Admissions Committee, Graduate School of Science and Technology Policy, KAIST
1999 – 2000	Graduate coordinator of Level 1 Courses in History and Philosophy of Science, Department of Philosophy, University of Leeds. Administering HPS tutorials, recruiting tutors, tutor peer review