Stephan Guttinger

Office

Byrne House, St German's Road
Egenis, Centre for the Study of Life Sciences
Sociology, Philosophy and Anthropology
University of Exeter, EX4 4PJ

E-mail: s.m.guttinger@exeter.ac.uk Nationality: Swiss
Website: www.guttinger.co.uk

Areas of specialization and competence

AOS: Philosophy of Data; Philosophy of the life sciences; Data Ethics
AOC: Bioethics, Metaphysics

Education

2010	MSc in Philosophy of Science (with distinction) London School of Economics, UK
2006 – 2009	Studies in Philosophy (BSc equivalent), University of Zurich, CH
2006	Ph.D. in Biochemistry, Supervisor: Prof. Ulrike Kutay Swiss Federal Institute of Technology (ETH), Zurich, CH
2002	Master of Science ETH (Biochemistry) Swiss Federal Institute of Technology (ETH), Zurich, CH

Research and teaching positions

2021 –	Lecturer in Philosophy of Data/Data Ethics, University of Exeter, UK
2021	Teaching fellow, Department of Philosophy, Durham University, UK
2018 – 2021	Research associate and guest teacher, London School of Economics, UK
2014 – 2018	Research fellow, Egenis, University of Exeter, UK
2011 – 2014	Postdoctoral research fellow, London School of Economics, UK
2006 – 2009	Postdoctoral research fellow, Institute of Biochemistry, ETH, CH

Publication list

Philosophy (peer-reviewed):

1. Guttinger, S. and Alan C. Love.
modENCODE and the elaboration of functional genomic methodology.
Minnesota Studies in the Philosophy of Science. (**Accepted**)

2. Guttinger, S.
COVID-19 and the need for more history and philosophy of RNA.
History and Philosophy of the Life Sciences, 43(42). (**2021**)

3. Guttinger, S.
Process and Practice: understanding the nature of molecules.
Hyle—International Journal for Philosophy of Chemistry, 27(1): 47-66. (**2021**)

4. Guttinger, S.
The limits of replicability.
European Journal for Philosophy of Science, 10(10). (**2020**)

5. Guttinger, S.
Editing the reactive genome: towards a postgenomic ethics of germline editing.
Journal of Applied Philosophy, 37(1): 58-72. (**2020**)

6. Guttinger, S.
Beyond the genome: the transformative power of functional genomics.
Genomics in Context, edited by James Lowe, published online 2nd August. (**2019**)

7. Guttinger, S.
A new account of replication in the experimental life sciences.
Philosophy of Science, 86(3): 453-471. (**2019**)

8. Guttinger, S.
Trust in Science: CRISPR-Cas9 and the Ban on Human Germline Editing.
Science and Engineering Ethics, 24(4): 1077-1096. **(2018)**

9. Guttinger, S.
A Process Ontology for Macromolecular Biology.
In Nicholson, D. J. & Dupré, J. (eds.), *Everything Flows: Towards a Processual Philosophy of Biology*. Oxford: Oxford University Press. **(2018)**

10. Guttinger, S. and John Dupré.
Genomics and Postgenomics.
The Stanford Encyclopedia of Philosophy, Edward N. Zalta (ed.). (**2016**)

11. Dupré, J. and Guttinger, S.
Viruses as living processes.
Studies in History and Philosophy of Biological and Biomedical Sciences, 59: 109-116. **(2016)**

12. Guttinger, S.
Creating parts that allow for rational design: synthetic biology and the problem of context-sensitivity.
Studies in History and Philosophy of Biological and Biomedical Sciences, 44(2): 199-207. **(2013)**

Commentaries and other non-peer-reviewed output:

1. Guttinger, S.
Purse strings, patients, and personal glory (Book review "The Mutant Project" by E. Kirksey)
Science, 370(6520): 1044. (**2020**)

2. Guttinger, S.
A virus is not a thing.
LSE Philosophy blog, 3-part series. (**2020**)
https://www.lse.ac.uk/philosophy/blog/2020/07/06/a-virus-is-not-a-thing-1/

3. Guttinger, S. and Alan C. Love.
Characterizing scientific failure.
EMBO Reports, 20(9): e48765. (**2019**)

4. Guttinger, S.
The anti-vaccination debate and the microbiome.
EMBO Reports, 20(3): p.e47709. (**2019**)

5. Guttinger, S.
Replications everywhere.
BioEssays, 40: 1800055. (**2018**)

6. Guttinger, S.
The Virome and the Anti-Vaccination Debate.
The Scientist, June. **(2017)**

7. Guttinger, S.
Riding the wave into a crispr future? (Essay review of "A Crack in Creation" by J. Doudna)
Studies in History and Philosophy of Biological and Biomedical Sciences, 67: 32-35. **(2017)**

Life sciences:

1. Doyle, M., Badertscher, L., Jaskiewicz, L., Güttinger, S., ..., Kutay, U., Filipowicz, W.
The double-stranded RNA binding domain of human Dicer functions as a nuclear localization signal.
RNA, 19(9): 1238-52. **(2013)**

2. Fronz, K., Güttinger, S., Burkert, K., Kühn, U., Stöhr, N., Schierhorn, A., Wahle, E.
Arginine methylation of the nuclear poly(a) binding protein weakens the interaction with its nuclear import receptor, transportin.
J. Biol. Chem., 286(38): 32986-94. **(2011)**

3. Wach, JY., Güttinger, S., Kutay, U., Gademann, K.
The cytotoxic styryl lactone goniothalamin is an inhibitor of nucleocytoplasmic transport.
Bioorg. Med. Chem. Lett., 20(9): 2843-6. **(2010)**

4. Bonazzi, S., Eidam, O., Güttinger, S., Wach, J., Zemp, I., Kutay, U., Gademann, K.
Anguinomycins C & D and Derivatives: Total Syntheses, Modeling and Biological Evaluation of the Inhibition of Nucleocytoplasmic Transport.
J. Am. Chem. Soc., 132(4): 1432-42. **(2010)**

5. Güttinger, S., Laurell, E., Kutay, U.
Orchestrating nuclear envelope disassembly and reassembly during mitosis.
Nature Reviews Molecular Cell Biology, 10(3): 178-91. **(2009)**

6. Bonazzi, S., Güttinger, S., Zemp, I., Kutay, U., Gademann, K.
Total synthesis, configuration, and biological evaluation of anguinomycin C.
Angew. Chem. Int. Ed. Engl., 46(45): 8707-10. **(2007)**

7. Güttinger, S., Mansfeld, J., …, Mattaj, I.W., Kutay, U., Antonin, W.
The conserved transmembrane nucleoporin NDC1 is required for nuclear pore complex assembly in vertebrate cells.
Mol. Cell, 22: 93-103. (**2006**)

8. Hasan, S., Güttinger, S., Mühlhäusser, P., Anderegg, F., Bürgler, S., Kutay, U.
Nuclear envelope localization of human UNC84A does not require nuclear lamins.
FEBS Lett., 580: 1263-1268. (**2006**)

9. Kutay, U. and Güttinger, S.
Leucine-rich nuclear-export signals: born to be weak.
Trends Cell Biol., 15: 121-124. (**2005**)

10. Lund, E., Güttinger, S., Calado, A., Dahlberg, J.E. and Kutay, U.
Nuclear export of microRNA precursors.
Science, 303: 95-98. (**2004**)

11. Güttinger, S., Mühlhäusser, P., Koller-Eichhorn, R., Brennecke, J. and Kutay, U.
Transportin2 functions as importin and mediates nuclear import of HuR.
Proc. Natl. Acad. Sci. USA, 101: 2918-2923. (**2004**)

Invited talks and keynote lectures

1. "Ontology and sustainable pig farming"
   Interdisciplinarity, Sustainability and Expert Disagreement. Digital Conference, June **2020**, Norwegian University of Life Sciences (NMBU).
2. "A certain uncertainty: the idea of control in the laboratory"
   Workshop: *Possibility and Certainty in Laboratory Environments*, October 18, **2019**, Institute for Cultural Inquiry, Berlin, DE.
3. "Understanding the nature of molecules: process ontology and scientific practice"
   Bridging the Philosophies of Biology and Chemistry (Keynote lecture). June 25-27, **2019**, University of Paris Diderot, Paris, FR.
4. "Biology and the internet: open science and the case of vaccination"
   Internet and Science: An Analysis from the Structural and Dynamic Complexity. March 14-15, **2019**, University of Ã Coruna, ES.
5. "ENCODE and the nature of functional genomics"
   Workshop: *Perspectives on the Human Genome Project and Genomics*, November 14-16, **2018**, NIH, Bethesda, MD, USA.
6. "'Merely descriptive': On the value of ENCODE and Big Science"
   History of functional genomics program, August 16-17, **2018**, NIH, Bethesda, MD, USA.
7. "A new account of replication in the experimental life sciences"
   Workshop: *Scientific method – testing, experimenting, controlling results*, June 29, **2018**, University Bielefeld, DE.
8. "Proteins, processes, and nature's joints"
   Workshop: *From Thing to Being*, September 28-29, **2017**, University of Dundee, UK.
9. "'Parts and their properties': a useful conceptual framework to tackle the issue of context-sensitivity in synthetic biology?"
   Invited talk at the of the *Centre for Synthetic Biology and Innovation* (CSynBI), September 24, **2012**, Imperial College, London, UK.

Presentations at academic conferences

1. "The many faces of the postgenomic revolution"
   Biennial Meeting of the International Society for the History, Philosophy and Social Sciences of Biology (ISHPSSB), July 7-12, **2019**, Oslo, Norway.
2. "Scientific metaphysics and the theory/practice dichotomy"
   Biennial conference of the European Philosophy of Science Association, September 6-9, **2017**, University of Exeter, UK.
3. "The boundaries of boundaries. Biological membranes and scientific metaphysics"
   Biennial Meeting of the International Society for the History, Philosophy and Social Sciences of Biology (ISHPSSB), July 16-21, **2017**, Sao Paulo, BR.
4. "Far Western blot: a step too far?"
   Sixth International Conference on Integrated History and Philosophy of Science, July 3-5, **2016**, University of Edinburgh, UK.
5. "If you go too Far Western you can't trust your data anymore"
   Biennial conference of the Society for the Philosophy of Science in Practice, June 17-19, **2016**, Rowan University, Glassboro, NJ, USA.
6. "Towards a process ontology for biochemistry"

Biennial conference of the European Philosophy of Science Association, September 23-16, **2015**, Dusseldorf, DE.

7. "The production of change in biological systems"
Biennial Meeting of the International Society for the History, Philosophy and Social Sciences of Biology (ISHPSSB), July 6-10, **2015**, Montreal, CA.
8. "Extending the experimental realm: descriptive and functional experimentation"
Biennial conference of the Society for the Philosophy of Science in Practice, June 24-26, **2015**, Aarhus University, DK.
9. "Synthetic Biology and what it can teach us about uncertain significance and personalized medicine"
Workshop: "Philosophical problems in personalized medicine", May 29-30, **2014**, London School of Economics, London, UK
10. "The nature of exploratory experimentation and its relation to theory in the life sciences"
PSA Biennial Meeting, November 15-17, **2012**, San Diego, CA, USA.
11. "Embodying the context: how synthetic biologists turn a reductionistic vision of biology into reality"
Annual Conference of the British Society for the Philosophy of Science, July 5-6, **2012**, University of Stirling, UK.

Awards and grants

2013 – 2014	Follow-up grant for Advanced Researchers, Swiss National Science Foundation Amount awarded: 56'700 CHF (£39'800).
2011 – 2013	Two-year Fellowship for Advanced Researchers, Swiss National Science Foundation. Amount awarded: 121'540 CHF (£80'800).
2006	Medal of the ETH Zürich for outstanding PhD theses.

Academic activities and service to the profession

- Member of the Management Committee of the Centre for Philosophy of Natural and Social Science, LSE.
- Editorial board *Life Sciences, Society, and Policy*.
- Member of the *PhilInBioMed Network*.
- Referee for: *Philosophy of Science*; *European Journal for Philosophy of Science; Biology & Philosophy; Synthese*; *History and Philosophy of the Life Sciences*; *Studies in History and Philosophy of Biological and Biomedical Sciences*; *Biological Theory*; *Science and Engineering Ethics; Journal for General Philosophy of Science; Science: Nature; Molecular Cell; EMBO Journal;* Oxford University Press (book chapter); Wiley Blackwell (book proposal); European Research Council; Dutch Research Council (NWO).

Languages

- German (native speaker)
- English (fluent)
- French (basic)
- Italian (basic)