

# FELIX CREUTZIG

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## PROFESSIONAL EXPERIENCE

- since 2017      **Chair of Sustainability Economics of Human Settlements**  
Technical University Berlin
- since 2012      **Mercator Research Institute on Global Commons and Climate Change**  
Head of Working Group: Land Use, Infrastructures and Transport
- 2012/2013      **Princeton Institute for International and Regional Studies**  
Visiting Associate Research Scholar
- 2012/2013      **Dahrendorf Working Group Chair: Infrastructure and Climate Change**
- 2009-2012      **Economics of Climate Change, Technical University Berlin**  
Group leader: Sustainable Human Settlements and Infrastructures
- 2008-2009      **Berkeley Institute of the Environment, University of California, Berkeley**  
Postdoctoral Fellow: Climate Change Mitigation in the Transportation Sector
- 2008            **Energy Foundation China, Beijing.** Consultant

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## EDUCATION

- 2003-2007      **Humboldt Universität zu Berlin, Berlin, Germany**  
PhD in Biophysics (Dr. rer. nat.): *Sufficient Encoding of Dynamical Systems - From the Grasshopper Auditory System to General Principles*
- 2005            **Hebrew University, Jerusalem, Israel**  
Project: *Dynamical Systems and Information Theory*
- 2003-2004      **Studienkolleg zu Berlin, Berlin, Germany**  
Project: *The Role of Actors and their Beliefs in the Protection of Floodplains in Croatia and Austria*
- 2002-2003      **Cambridge University, Cambridge, UK**  
Advanced Mathematics and Theoretical Physics, Part III  
Master of Advanced Study, with merits
- 2002            **Harvard Medical School, Boston, MA, USA**  
Lab work in molecular neuroscience
- 2000-2002      **Albert-Ludwigs-Universität Freiburg, Germany**  
Medical Studies, Physikum, bachelor equivalent (2.0, top 5%)
- 1999-2002      **Albert-Ludwigs-Universität Freiburg, Germany**  
Physics, Vordiplom, bachelor equivalent (1.0, top 1%)
- 1992-1999      **Leibnizschule Hannover, Germany**  
Abitur (1.0): Biology, Mathematics, Politics, Ancient Greek

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## UNIVERSITY TEACHING

2017	Lecture <i>Urbanization and Global Environmental Change</i> Technische Universität Berlin
2014	Lecture <i>Land Use, Infrastructures and Climate Change</i> Technische Universität Berlin (together with O. Edenhofer)
2013	Lecture <i>Land Use, Infrastructures and Climate Change</i> Technische Universität Berlin (together with O. Edenhofer)
2012	Seminar <i>Behavioral Economics of Mobility</i> Technische Universität Berlin (together with L. Mattauch)
2012	Lecture <i>Land Use, Infrastructures and Climate Change</i> Technische Universität Berlin (together with O. Edenhofer)
2011	Seminar <i>Sustainability Sciences</i> Technische Universität Berlin (together with L. Mattauch)
2011	Lecture <i>The Spatial Economics of Climate Change</i> Technische Universität Berlin (together with O. Edenhofer)
2010	Lecture <i>Geographical Economics and Climate Change</i> Technische Universität Berlin (together with O. Edenhofer)
2009	Lecture <i>Geographical Economics and Climate Change</i> Technische Universität Berlin (together with O. Edenhofer)
2005-2006	Seminar <i>Mathematics for Biologists</i> Humboldt Universität zu Berlin

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## SUMMER SCHOOL CONVENING

2013	<i>Sustainable and Low Carbon Urban Systems</i> (with Helga Weisz) German National Merit Foundation, Leysin, Switzerland
2011	<i>Defining Sustainable Transport</i> (with Elizabeth Deakin) German National Merit Foundation, Überlingen, Germany

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## SUPERVISION AT TECHNISCHE UNIVERSITÄT BERLIN

PhDs	Blanca Fernandez (magna cum laude, 2016), Christopher Bren d'Amour, Steffen Lohrey co-supervised: Linus Mattauch (summa cum laude, 2015)
Master	Freya Hofmann in Urban Mobility David Kapfer in Land Use Economics Georg Hubmann in Urban Design Anissa Suatmodi in Urban Mobility Franziska Bauer in Sustainable Land Use
Postdocs	Tim Beringer, Peter Agoston, Sohail Ahmad, Tiziana Susca

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## FUNDING HISTORY

2014-2016	Postdoctoral Scholarship of the Humboldt Foundation, Sohail Ahmad, ca. 75.000€
2013-2015	PhD Scholarship of the Böll Foundation, Blanca Fernandez, ca. 45.000€
2014-2016	PhD Scholarship of the Stiftung der Deutschen Wirtschaft, Christopher Bren d'Amour, ca. 45.000€
2010-2011	One Planet Mobility, 95.000€ (PI: F. Creutzig)
2009-2010	CITIES (Car Industry, Road Transport and an International Emission Trading Scheme - Policy Options), 107.000€ (PIs: F. Creutzig, O. Edenhofer)

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## SCIENTIFIC COMMITTEES AND MEMBERSHIPS

2016-2017	Member of Green Growth Knowledge Platform Sustainable Infrastructure Research Committee
2016	Lead Author of the 2nd State of the Carbon Cycle Report (SOCCR-2) for the US government
since 2015	Member of the Scientific Advisory Board of Klimafakten
2014	Lead Author of the 2nd UCCRN Assessment Report on Climate Change and Cities (Chapter 4 - <i>Equity and Environmental Justice</i> )
2010–2014	Lead Author for the IPCC 5th Assessment Report, Working Group III (Chapter 8 on Transport, Technical Summary, Summary for Policy Maker) Contributing Author to Chapter 12 on Human Settlements, Infrastructures and Spatial Planning and to Chapter 11 on Agriculture, Forestry and Land Use, for which <b>leading the Crosscut on Bioenergy</b> , coordinating 22 authors
2012/2013	Member of the Dahrendorf Academic Board
2010	Lead Analyst to the Knowledge Module 9: Energy Efficient End-use: Transport
2010	Contributing Author to the IPCC Special Report on Renewable Energy Sources and Climate Change Mitigation for Chapter 9 and Chapter 11
2009-2011	Chair of Netzwerk Europa (Alumni Organization of the Studienkolleg zu Berlin)
2005-2009	Founder of Berliner Luft - Sustainable Transport for Berlin. NGO promoting public transportation, cycling and walking modes in Berlin.
since 2004	German Physical Society - DPG

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## JOURNAL SERVICE

**Editorial Board:** Global Sustainability

**Advisory Board:** Environmental Research Letters

**Guest Academic Editor:** PLOS ONE

**Reviewer:** Science, Nature Climate Change, Nature Sustainability, Proceedings of the National Academy of Sciences, Environmental Research Letters, Journal of Industrial Ecology, Global Environmental Change, Current Opinion in Environmental Sustainability, Regional Environmental Change, Transport

Policy, Energy Policy, Climatic Change, Ecological Economics, Energies, Global Change Biology Bioenergy, Environment and Planning B, International Journal of Sustainable Transportation, Transport Research D, Science of the Total Environment, Environment Development and Sustainability, Renewable and Sustainable Energy Reviews, Umweltpolitik und Umweltrecht, Annals of the American Association of Geographers, European Research Council, Asian Development Bank, African Academy of Sciences

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#### AWARDS AND SCHOLARSHIPS

2017	Piers Sellers Price Winner
2008–2009	European Recovery Program Scholarship
2006	Stipend for <i>Methods in Computational Neuroscience</i> , MBL, Woods Hole, MA
2004–2006	Boehringer Ingelheim Fonds Scholarship
2003–2004	Studienkolleg zu Berlin, Hertie Foundation, Award and Scholarship
2002–2003	Cambridge European Trust Scholarship
1999–2007	German National Merit Foundation, Award and Scholarship

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#### WORKSHOP CONVENING AND ORGANIZATION

2013	Organizing a workshop on <i>Transport-sector inclusion into EU ETS: Contrasting the Engineering and the Economics perspective</i>
2013	Organizing and Chairing Lord-Dahrendorf-Workshops on <i>Low-Carbon Infrastructures, Co-Benefits and Land Taxation in European Cities</i> and <i>A European Energiewende as a European Common Good?</i>
2013	Organizing a Workshop with Thomas Pogge and Ottmar Edenhofer dedicated to <i>Global Public Good Provision</i>
2012	Organizing and Chairing a Workshop at Technical University Berlin on <i>Land Rents, Infrastructures and Climate Change</i>
2009	Chairing a side event at COP15, Copenhagen, on <i>Driving home solutions: transport emissions trading and regional adaptation information</i>
2009-2011	Chairman of <i>Netzwerk Europa</i> - Alumni-Organization of the Studienkolleg zu Berlin, convening seminars, projects and alumni-meetings.  As chair of <i>Netzwerk Europa</i> , the alumni society of the Studienkolleg zu Berlin, I was engaged in building up a community of more than 300 European students and scholars by organizing regular workshops and alumni meetings from 2009-2011.
2010	Co-Chairing <i>Ambivalence in Providing Humanitarian Aid</i> , Chorin
Jul 2009	Co-Chair, <i>The Future of European Cities in Times of Climate Change</i> , for <i>Netzwerk Europa</i> ; funded by the Hertie Foundation; in Berlin.
Oct 2006	Co-Chairing and Organizing <i>Power &amp; Rationality: The Future of Energy Supply</i> , funded by the German National Merit Foundation and the Böll Foundation; in Tübingen.
May 2001	Co-Chairing and Organizing, Alumni Meeting of Members of the Schülerakademie - 300 people; 28 courses; in Kirchheim.

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## LANGUAGES

Native	German
Fluent	English, French
Basic	Hebrew, Italian, Spanish

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## PEER-REVIEWED PUBLICATIONS

*\*read abstract or upload PDFs by click on title*

54. *Govern land as a global commons*  
**F. Creutzig** (2017) *Nature* 546.7656: 28-29
53. *The underestimated potential of solar energy to mitigate climate change*  
**F. Creutzig**, P. Agoston, J. C. Goldschmidt, G. Luderer, G. Nemet, R. Pietzcker (2017)  
*Nature Energy* 2:17140  
[Media: Washington Post - Spiegel Online - Sueddeutsche - Carbon Brief - scinexx - Solarserver - 3sat vox](#)
52. *Lifting peripheral fortunes:  
Upgrading transit improves spatial, income and gender equity in Medellin*  
B. Fernandez Milan, **F. Creutzig** (2017) *Cities* 70:122-134
51. *Urban infrastructure choices structure climate solutions*  
**F. Creutzig**, P. Agoston, J. Minx, J. Canadell, R. Andrew, C. Le Quere, G. Peters, A. Sharifi, Y. Yamagata, S. Dhakal (2016) *Nature Climate Change* 6:1054-1056  
[Media: Oekonews - The Conversation](#)
50. *Future urban land expansion and implications for global croplands*  
C. Bren d'Amour, F. Reitsma, G. Baiocchi, S. Barthel, B. Güneralp, K. Erb, H. Haberl, **F. Creutzig** (corresponding author), K. Seto (2016) *PNAS*, doi: 10.1073/pnas.1606036114  
[Media: The Guardian - Deutschlandfunk - Gizmodo - Der Standard - innovations report - La Razon - Forskning - Slate - ANSA - Taiwan Environmental Information Center - scinexx - das Wissensmagazin - dailygreen](#)
49. *Financing Public Capital through Land Rent Taxation: A Macroeconomic Henry George Theorem*  
L. Mattauch, J. Siegmeier, O. Edenhofer, **F. Creutzig**, CESIFO WORKING PAPER NO. 4280
48. *Beyond technology: Demand-Side Solutions to Climate Change Mitigation*  
**F. Creutzig**, B. Fernandez, H. Haberl, R. Khosla, Y. Mulugetta, K. Seto. (2016) *Annual Review of Environment and Resources*
47. *From targets to action: rolling up our sleeves after Paris*  
B. Knopf, S. Fuss, G. Hansen, **F. Creutzig**, J. Minx, O. Edenhofer (2017) *Global Challenges* 1.2
46. *Climate Change, Equity and Sustainable Development Goals: An Urban Perspective*  
D. Reckien, **F. Creutzig**, B. Fernandez, S. Lwasa, M. Tovar-Restrepo, D. McEvoy, D. Satterthwaite (2017) *Environment and Urbanization* 29.1: 159-182
45. *Teleconnected food supply shocks*  
C. Bren d'Amour, L. Wenz, M. Kalkuhl, J. Steckel, **F. Creutzig**. *Environmental Research Letters* 11:035007  
[Media: Entwicklungspolitik Online - EurAktiv](#)
44. *Municipal policies accelerated urban sprawl and public debts in Spain*  
B. Fernandez Milan, **F. Creutzig** (2016) *Land Use Policy* 54:103-115

43. *A systematic framework of location value taxes reveals dismal policy design in most European countries*  
B. Fernandez, D. Kapfer, **F. Creutzig** (2016) 51:335-349
42. *Biophysical and economic limits to negative CO<sub>2</sub> emissions*  
P. Smith, S. Davis, **F. Creutzig**, S. Fuss, J. Minx, B. Gabrielle, E. Kato, R. B. Jackson, A. Cowie, E. Kriegler, D.P. van Vuuren, J. Rogelj, P. Ciais, J. Milne, J.G. Canadell, D. McCollum, G. Peters, R. Andrew, V. Krey, G. Shrestha, P. Friedlingstein, T. Gasser, A. Grübler, W. K. Heidug, M. Jonas, C. D. Jones, F. Kraxner, E. Littleton, J. Lowe, J. R. Moreira, N. Nakicenovic, M. Obersteiner, A. Patwardhan, M. Rogner, E. Rubin, A. Sharifi, A. Torvanger, Y. Yamagata, J. Edmonds, C. Yongsung (2016) Nature Climate Change 6:42-50.  
[Media: Stuttgarter Zeitung](#)
41. *Does bioenergy production affect sustainable development? Systematic review of scientific knowledge*  
C. Robledo-Abad, C., H.J. Althaus, G. Berndes, S. Bolwig, E. Corbera, **F. Creutzig**, J. Garcia-Ulloa, A. Geddes, J. S. Gregg, H. Haberl, S. Hanger, R.J. Harper, C. Hunsberger, R. K. Larsen, Ch. Lauk, S. Leitner, J. Lilliestam, H. Lotze-Campen, B. Muys, M. Nordborg, M. Olund, B. Orłowski, A. Popp, J. Portugal-Pereira, J. Reinhard, L. Scheiffle, P. Smith. Global Change Biology - Bioenergy (2016)
40. *Avoiding Carbon Lock-In: Policy Options for Advancing Structural Change*  
L. Mattauch, **F. Creutzig**, O. Edenhofer (2015) Economic Modelling 50:49-63
39. *Transport – A Bottleneck to Climate Change Mitigation?*  
**F. Creutzig**, P. Jochem, O. Edelenbosch, L. Mattauch, D. van Vuuren, D. McCollum, J. Minx (2015) Science 350:911-912  
[Media: Süddeutsche Zeitung - telepolis - Spiegel Online -Verkehrsrundschau - FAZ - ecomento - energyload.eu](#)
38. *Evolving Narratives of Low-Carbon Futures in Transportation*  
**F. Creutzig** (2015) Transport Reviews, doi: 10.1080/01441647.2015.1079277
37. *Towards typologies of urban climate and global environmental change*  
**F. Creutzig** (2015) Environmental Research Letters 10 101001
36. *CO<sub>2</sub> Emissions from Direct Energy Use of Urban Households in India*  
S. Ahmad, G. Baiocchi, **F. Creutzig** (2015) Environmental Science & Technology, doi: 10.1021/es505814g
35. *Reducing urban heat wave risk in the 21st century*  
B. Fernandez, **F. Creutzig** (2015) Current Opinion in Environmental Sustainability 14:221-231
34. *A 'Sustainability Window' of Urban Form*  
S. Lohrey, **F. Creutzig**, (2016) Transport Research D 45:96-111
33. *Happy or Liberal? Making sense of behavior in transport policy design*  
L. Mattauch, M. Ridgeway, **F. Creutzig** (2015) Transport Research D, in print
32. *A Conceptual Framework for an Urban Areas Typology to Integrate Climate Change Mitigation and Adaptation*  
W. Solecki, D. Balk, A. Bigio, C. G. Boone, **F. Creutzig**, M. Fragkias, P. Romero-Lankao, S. Lwasa, P. Marcotullio, K. C. Seto, T. Zwickel (2015) Urban Climate 14:116-137
31. *A Global Typology of Urban Energy Use and Potentials for an Urbanization Mitigation Wedge*  
**F. Creutzig**, G. Baiocchi, R. Bierkandt, P.-P. Pichler, K. C. Seto (2015) PNAS 112:6283: 6288 (IF: 9.81)  
[Media: Süddeutsche Zeitung - Deutschlandfunk - BBC - Haaretz - Der Standard - Scientific American - Le Scienze](#)
30. *A Spatial Typology of Human Settlements and their CO<sub>2</sub> Emissions in England*  
G. Baiocchi, **F. Creutzig**, J. Minx, P.-P. Pichler (2015) Global Environmental Change 34:13-21 (IF:7.78)

29. *Closing the Emission Price Gap*  
O. Edenhofer, M. Jakob, **F. Creutzig**, C. Flachsland, S. Fuss, M. Kowarsch, K. Lessmann, L. Mattauich, J. Siegmeier, J. C. Steckel (2015) *Global Environmental Change* 31:132-143 (IF:7.78)
28. *Economic and ecological views on climate change mitigation with bioenergy and negative emissions*  
**F. Creutzig** (2014) *Global Change Biology - Bioenergy* (IF: 4.25), doi:10.1111/gcbb.12235
27. *How Fuel Prices Determine Public Transport Infrastructure, Modal Shares and Urban Form*  
**F. Creutzig** (2014) *Urban Climate* 10:63-76
26. *Bioenergy and climate change mitigation: an assessment*  
**F. Creutzig**, N.H. Ravindranath, G. Berndes, S. Bolwig, R. Bright, F. Cherubini, H. Chum, E. Corbera, M. Delucchi, A. Faaij, J. Fargione, H. Haberl, G. Heath, O. Lucon, R. Plevin, A. Popp, C. Robledo-Abad, S. Rose, P. Smith, A. Stromman, S. Suh, O. Masera (2014) *Global Change Biology - Bioenergy* 7:916-944 (IF: 4.25)
25. *Catching two European birds with one renewable stone: Mitigating climate change and Eurozone crisis by an energy transition*  
**F. Creutzig**, J. C. Goldschmidt, P. Lehmann, E. Schmid, F. v. Blücher, C. Breyer, B. Fernandez, M. Jakob, B. Knopf, S. Lohrey, T. Susca, K. Wiegandt (2014) *Renewable & Sustainable Energy Reviews* 38:1015-1028 (IF: 5.51)  
[Media: Handelsblatt - Deutsche Welle Griechenland](#)
24. *Challenging the European Climate Debate: Can Universal Climate Justice and Economics be Reconciled with Particularistic Politics?*  
**F. Creutzig**, M. Hedahl, J. Rydge, K. Szulecki (2014) *Global Policy*, 5(s1), 6-14 (IF: 1.21)
23. *Changing the resilience paradigm*  
I. Linkov, T. Bridges, **F. Creutzig**, J. Decker, C. Fox-Lent, W. Kröger, J. H. Lambert, A. Levermann, B. Montreuil, J. Nathwani, R. Nyer, O. Renn, B. Scharte, A. Scheffler, M. Schreurs, T. Thiel-Clemen (2014) *Nature Climate Change* 4:407-409 (IF: 14.47)
22. *Using Attributional Life Cycle Assessment to Estimate Climate-Change Mitigation Benefits Misleads Policy Makers*  
R. Plevin, M. Delucchi, **F. Creutzig** (2014) *Journal of Industrial Ecology* 18(1):73-83 (IF: 2.28)
21. *Urban Climate Change Mitigation in Europe – Looking At and Beyond the Role of Population Density*  
A. Baur, M. Thess, B. Kleinschmit, **F. Creutzig** (2013) *J. Urban Plann. Dev.* 140(1), 04013003 (IF: 0.93)
20. *Livelihood impacts of biofuel crop production: mediating factors and implications for governance*  
C. Hunsberger, S. Bolwig, E. Corbera, **F. Creutzig** (2014), *Geoforum* 54:248-260 (IF: 2.70)
19. *Integrating Place-Specific Livelihood and Equity Outcomes into Global Assessments of Bioenergy Deployment*  
**F. Creutzig**, C. Hunsberger, S. Bolwig, E. Corbera (2013) *Environmental Research Letters* 8:035047 (IF: 3.58)
18. *On the Sustainability of Renewable Energy Sources*  
O. Edenhofer, K. Seyboth, **F. Creutzig**, S. Schlömer (2013) *Annual Review of Environment and Resources* 38:169-200 (IF: 4.97)
17. *Carbon footprints of cities and other human settlements in the UK*  
J. Minx, G. Baiocchi, T. Wiedmann, J. Barrett, **F. Creutzig**, K. Feng, M. Förster, P.-P. Pichler, H. Weisz, K. Hubacek (2013) *Environmental Research Letters* 8:035039 (IF: 3.58)
16. *Decarbonizing Urban Transport in European Cities: Four Cases Show Possibly High Co-benefits*  
**F. Creutzig**, R. Mühlhoff, J. Römer (2012) *Environmental Research Letters* 7:044042 (IF: 3.58)

15. *Reconciling top-down and bottom-up modeling on future bioenergy deployment.*  
**F. Creutzig**, A. Popp, R. Plevin, G. Luderer, J. Minx, O. Edenhofer (2012) *Nature Climate Change* 2: 320-327 (IF: 14.47)  
[Media: Süddeutsche Zeitung](#)
14. *Can Bioenergy Assessments Deliver?*  
**F. Creutzig**, C. v. Stechow, D. Klein, C. Hunsberger, N. Bauer, A. Popp, O. Edenhofer (2012) *Economics of Energy & Environmental Policy* 1(2)
13. *Carbon Lock-Out: Advancing Renewable Energy Policy in Europe*  
P. Lehmann, **F. Creutzig**, M.-E. Ehlers, N. Friedrichsen, C. Heuson, L. Hirth, R. Pietzcker, *Energies* (2012) 5: 323-354 (IF: 1.87)
12. *Climate policies for road transport revisited (I): Evaluation of the current framework*  
**F. Creutzig**, E. McGlynn, J. Minx, O. Edenhofer (2011) *Energy Policy* 39(5):2396-2406 (IF: 3.38)  
[Media: ZEIT](#)
11. *Climate policies for road transport revisited (II): Closing the policy gap with cap-and-trade*  
C. Flachsland, S. Brunner, O. Edenhofer, **F. Creutzig** (2011) *Energy Policy* 39(4):2100-2110 (IF: 3.38)
10. *Trapped in tremendous congestion - Can Beijing find a road towards harmonious and sustainable transport?*  
**F. Creutzig**, M. Thess, J. Zhou, M. Replogle (2011) *The Journal of Urban Transport of China*, 9(2)
9. *Compressed Air Vehicles: Drive Cycle Analysis of Vehicle Performance, Environmental Impacts, and Economic Costs*  
A. Papsion, **F. Creutzig**, L. Schipper (2010) *Transport Research Record: Journal of the Transportation Research Board* 2191:67-74
8. *Mobilität im Wandel - Wie der Klimaschutz den Transportsektor vor neue Herausforderungen stellt*  
**F. Creutzig**, O. Edenhofer. *Internationales Verkehrswesen* 62(3):1-6, 2010
7. *Timescale-invariant pattern recognition by feed-forward inhibition and parallel signal processing*  
**F. Creutzig**, J. Benda, S. Wohlgemuth, A. Stumpner, B. Ronacher, A. V. M. Herz, *Neural Computation* 22:1-18, 2010 (IF: 2.34)
6. *Economic and environmental potential of compressed-air cars*  
**F. Creutzig**, A. Papsion, L. Schipper, D. M. Kammen. *Environ. Res. Lett.* 4:044011, 2009 (IF: 3.58)  
[Media: New York Times - Environmental Research Web - Wired - BNET - Slashdot - The Cost of Energy - The Truth About Cars - UC Berkeley News - Depleted Cranium - Cars.Myloger - Fast Company - Auto Slug](#)
5. *The Post-Copenhagen Roadmap Towards Sustainability: Differentiated Geographic Approaches, Integrated Over Goals*  
**F. Creutzig**, D. M. Kammen. *Innovation*, Vol 4 (4): 301-321, 2009
4. *Climate Change Mitigation and Co-Benefits of Feasible Transport Demand Policies in Beijing*  
**F. Creutzig**, D. He. *Transportation Research D* 14:120-131, 2009 (IF: 1.32)
3. *The Past-Future Information Bottleneck of Dynamical Systems*  
**F. Creutzig**, A. Globerson and N.Tishby. *Physical Review E* 79, 041925, 2009 (IF: 2.48)
2. *Time-Scale Invariant Stimulus Decoding in an Insect Auditory System*  
**F. Creutzig**, S. Wohlgemuth, J. Benda, A. Stumpner, B. Ronacher, A.V.M. Herz. *Journal of Neuroscience* 29(8): 2575:2580, 2009 (IF: 8.66)
1. *Predictive Coding and the Slowness Principle: an Information-Theoretic Approach*  
**F. Creutzig**, H. Sprekeler. *Neural Computation* 21(4):1026-1041, 2008 (IF: 2.34)



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## ASSESSMENT REPORTS

### As Lead Author:

10. Chapter 4: Urban Systems (2017) K. Gurney, S. Pincetl et al. The Second State of the Carbon Cycle Report (SOCCR-2)
9. Chapter 6: Equity and Environmental Justice. D. Reckien, S. Lwasa, F. Creutzig et al (2017). In: Climate Change and Cities: Second Assessment Report of the Urban Climate Change Research Network [C. Rosenzweig et al., (eds.)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA
8. Chapter 8: Transport. R. Sims, R. Schaeffer, **F. Creutzig** et al. (2014) In Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA
7. IPCC 2014 Summary for Policymakers O. Edenhofer et al. (2014) In Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA
6. IPCC 2014 Technical Summary O. Edenhofer et al. (2014) In Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA
5. Chapter 9: Energy end-use: Transport S. Kahn Ribeiro, M.J. Figueroa, **F. Creutzig** et al. (2012) In: Global Energy Assessment: Toward a Sustainable Future. ISBN:9780521182935. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

### As Contributing Author:

4. Chapter 11: Agriculture, Forestry and Other Land Use (AFOLU) P. Smith, M. Bustamente et al. – **F. Creutzig leading the Bioenergy Appendix** (2014) In Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA
3. Chapter 12: Human Settlements, Infrastructure and Spatial Planning K. Seto, S. Dhakal et al. (2014) In Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA
2. Sathaye et al. (2011) Chapter 9: Renewable Energy in the Context of Sustainable Development In: IPCC Special Report on Renewable Energy Sources and Climate Change Mitigation, IPCC [O. Edenhofer, R. Pichs - Madruga, Y. Sokona, K. Seyboth, P. Matschoss, S. Kadner, T. Zwickel, P. Eickemeier, G. Hansen, S. Schlömer, C. von Stechow (eds.)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA

1. Mitchell et al. (2011) Chapter 11: Policy, Financing and Implementation In: IPCC Special Report on Renewable Energy Sources and Climate Change Mitigation, IPCC [O. Edenhofer, R. Pichs - Madruga, Y. Sokona, K. Seyboth, P. Matschoss, S. Kadner, T. Zwickel, P. Eickemeier, G. Hansen, S. Schl umer, C. von Stechow (eds)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA
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## BOOKS

3. *Low Carbon Land Transport*  
D. Bongardt, **F. Creutzig**, H. H ging, K. Sakamoto, , S. Bakker, S. Gota, S. B hler-Baedeker. Earth Scan, 978-1-84971-377-1, 2013
  2. *Energie, Macht, Vernunft: Der umfassende Blick auf die Energiewende*  
**F. Creutzig**, J.C. Goldschmidt. Shaker, ISBN 978-3-86858-070-9, 2008
  1. *Sufficient Encoding of Dynamical Systems - From the Grasshopper Auditory System to General Principles* PhD Thesis, Humboldt-Universit t zu Berlin, 2008
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## BOOK CHAPTERS AND REPORTS

18. *Unbequeme, aber notwendige Entscheidungen - Dichtere Bebauung und h here Treibstoffpreise als Wege aus der Klimakrise*  
**F. Creutzig** (2017) pp. 20-12 in: Entwicklung findet Stadt. Misereor.
17. *Book Review – Beyond GDP: Measuring Welfare and Assessing Sustainability, Marc Fleurbaey, Didier Blanchet. Oxford University Press Inc. (2013)*  
**F. Creutzig**, L. Mattauch (2013) Ecological Economics doi: 10.1016/j.ecolecon.2013.06.006 (IF: 2.86)
16. * konomische Aspekte eines nachhaltigen Landmanagements*  
D. Kirschke, A. H ger, S. Noleppa, V. Beckmann, **F. Creutzig**, H. Karl, E. Kulke, J. Siegmeier, P. Weingarten (2013). Deutsche Nationalbibliothek.
15. *Transport Demand Management in Beijing, China: Progress and Challenges*  
**F. Creutzig**, A. Thomas, D. M. Kammen, E. Deakin. In Low Carbon Transport in Asia: Capturing Climate and Development Co-benefits, edited by E. Zusman, A. Srinivasan, and S. Dhakal, Earthscan, London, ISBN 9781844079148, 2011
14. *Nachhaltige Infrastrukturen - kann Europa von Israel lernen?*  
**F. Creutzig**, C. Keller, M. Braunschweig, L. Hirth, D. Stoyanova, J. Strelnikova, K. Wiegandt, C. Grosse Wiesmann. Projekt Europa 2010/11, Studienkolleg zu Berlin
13. *Der Weg zu einem nachhaltigen st dtischen Transportwesen*  
R. M hlhoff, **F. Creutzig** (2011) pp.105-109 In Urban Futures 2050 - Szenarien und L sungen f r das Jahrhundert der St dte, Heinrich-B ll-Stiftung, Berlin, ISBN 978-3-86928-057-8.
12. *Developing a pragmatic approach to assess urban metabolism in Europe.*  
J. Minx, **F. Creutzig**, V. Medinger, T. Ziegler, A. Owen, G. Baiocchi (2010). Report to the European Environment Agency, Stockholm Environment Institute and Technische Unversit t Berlin.
11. *CITIES: Car industry, road transport and an international emission trading scheme - policy options.*  
**F. Creutzig**, Flachsland, C., McGlynn, E., Minx, J., Brunner, S., Edenhofer, O. (2010). A report commissioned by BMW.
10. *Getting the carbon out of transportation fuels*  
**F. Creutzig**, D.M. Kammen. In H. J. Schellnhuber, M. Molina, N. Stern, V. Huber and S. Kadner

(Eds.), *Global Sustainability - A Nobel Cause*. Cambridge, UK: Cambridge University Press, ISBN-13: 9780521769341, 2010

9. *Beyond the Fossil City: Towards low Carbon Transport and Green Growth*  
D. Bongardt, M. Breithaupt, **F. Creutzig**, Report commissioned by the GTZ for COP15, Copenhagen, 2009. Final version presented at the Fifth Regional EST Forum, 23 - 25 August 2010, Bangkok, Thailand.
8. *Travel Demand Management in Beijing: Opportunities for Green, High-Tech, Equitable Transport*  
M. Replogle, M. Kondransky, L. Daizong, Y. Liu, W. Y. Wen, R. Weinberger, J. Kaehny, M. Rufo, **F. Creutzig**, Prepared by Institute for Transportation and Development Policy and the China Sustainable Energy Program, The Energy Foundation, 2009
7. *Ökonomische Anreize und kollektives Handeln in Zeiten des Klimawandels*  
**F. Creutzig**. In: *Energie, Macht, Vernunft: Der umfassende Blick auf die Energiewende*, Shaker, ISBN 978-3-86858-070-9, 2008
6. *Über die Legitimation einer Machtelite*  
**F. Creutzig**, P. Fahr. In: *Energie, Macht, Vernunft: Der umfassende Blick auf die Energiewende*, Shaker, ISBN 978-3-86858-070-9, 2008
5. *Macht - ein philosophischer Zugang*  
**F. Creutzig**, E.-M. Jung. In: *Energie, Macht, Vernunft: Der umfassende Blick auf die Energiewende*, Shaker, ISBN 978-3-86858-070-9, 2008
4. *Globale Treibhausgassteuer und Emissionshandel: Eine Frage des Instruments oder der Ausgestaltung?*  
R. Schäfer, **F. Creutzig**. In: *Ablasshandel gegen Klimawandel? Marktbasierende Instrumente in der globalen Klimapolitik und ihre Alternativen*, VSA-Verlag, ISBN 978-3-89965-291-8, 2008
3. *Urbanes Stadtklima: Ohne Auto, dafür mit Zukunft*  
**F. Creutzig**, B. Knierim. In: *Klima der Gerechtigkeit*, VSA-Verlag, ISBN 978-3-89965-243-7, 2007
2. *Institutionelles Setting von Konflikten beim Schutz von ökologisch wertvollen Feuchtgebieten in Kroatien und Österreich*  
**F. Creutzig**, J. Janssen, K. Palamarz, N. Szoeko. In: *Projekt Junges Europa*, Wehrhahn, Hannover, ISBN 3-86525-018-1, 2005.
1. *From predictive coding to percept - a computational approach*  
**F. Creutzig**. In: *Geist und Wissenschaft. Interdisziplinäre Perspektiven* (Hrsg. Ansgar Lyssy), Peter-Lang-Verlag, ISBN 978-3-631-58256-5, 2009

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## MAGAZINE ARTICLES AND BLOGS

- |            |                                                                                                  |
|------------|--------------------------------------------------------------------------------------------------|
| 2017       | web.de: <i>Wohnraumangel in Großstädten: Wird die Entwicklung noch zunehmen?</i>                 |
| 2013       | Cicero: <i>Energiewende - Die Große Chance in der Eurokrise</i>                                  |
| 2013       | Kultura Liberalna: <i>Cities: Pragmatic Action to Deal with Climate Change</i>                   |
| since 2009 | Environmental Research Web: Blogs, <a href="#">a selection of them is listed on this website</a> |
| 2011       | Europe & Me: <i>On the European debt crisis</i>                                                  |
| 2009       | Chinadialogue: <i>Fixing Beijing's transport nightmare</i>                                       |
| 2008       | Tagesblick: <i>Zeit Voranzuschreiten</i>                                                         |
| 2007       | TIP Berlin: <i>Autofrei ist sexy</i>                                                             |

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## INVITED TALKS

- 2017 Summer School Energy and the Environment, Presentation Title: *Making Urban Transport Solutions Effective for Global Climate Mitigation*
- 2017 Leading the way to a new European bioeconomy strategy, European Forest Institute and German Ministry for Agriculture - Berlin, Presentation Title: *The Urban Contribution to a Nascent Bioeconomy*
- 2017 **Piers Sellers Price Lecture** - Leeds, Presentation Title: *Urban climate change solutions at global scale*
- 2017 FONA Agendakonferenz: Wege zur Mobilitätswende. Forschung und Innovation für eine nachhaltige urbane Mobilität - Berlin, Presentation Title: *Mobility and Climate Change Mitigation - A Global Perspective*
- 2016 Class on Climate Change Governance, University of Wisconsin - Madison, Presentation Title: *Demand vs Supply Side: Design and Rational of IPCC Reports*
- 2016 Weston Round Table, University of Wisconsin - Madison, Presentation Title: *Urbanization and Global Environmental Change*
- 2016 University of Wisconsin Law School, University of Wisconsin - Madison, Presentation Title: *The rationality of climate change legislation in EU law*
- 2016 Summer School Energy and the Environment, Presentation Title: *Global Challenges and Trends for Urban Transportation*
- 2014 Chair for Traffic Engineering (Kai Nagel), Technical University Berlin, Presentation Title: *Sustainable urban form: global observations and analytical modeling*
- 2014 Forschungsstelle Nachhaltige Umweltentwicklung (Hermann Held), Hamburg, Presentation Title: *Ambiguity and optimal learning in climate mitigation scenarios*
- 2014 Climate Change and Transport, Karlsruhe, Key Note: *Divergent Views on Low-Carbon Transportation*
- 2014 Yale School of Forestry & and Environmental Studies, Presentation Title: *Industrial Sustainability at the Nexus between Land Use and Energy*
- 2014 Climate Foundation Donor Deep Dive, Lisbon, Presentation Title: *Urban transport as a hotspot for climate mitigation*
- 2014 ITB (Internationale Tourismus-Börse), Berlin, Presentation Title: *Mitigation GHG emissions in tourism and aviation*
- 2014 European Climate Foundation, Berlin, Presentation Title: *Key insights on mitigating climate change in the transport sector*
- 2013 Deutscher Geographentag, Passau, Presentation Title: *ASIF: Updating Decomposition Options of Low-Carbon Futures in Land Transport*
- 2013 Summer School of the German National Merit Foundation, Leysin, Key note: *Man City Earth*
- 2013 Princeton Institute for International and Regional Studies, Presentation Title: *An ecological rationality approach towards climate change mitigation*
- 2013 University of Louisville, Kentucky, Presentation Title: *Narratives of Low-Carbon Futures in Land Transport*

- 2012 Potsdam Institute on Climate Impact Research, Presentation Title: *Cities, transport costs and resulting GHG emissions*
- 2012 Princeton Institute for International and Regional Studies, Presentation Title: *Hitting the roof of analytical framework - Epistemological Uncertainty in Bioenergy Assessments*
- 2012 World Bank, Transport - Turning the Right Corner, Presentation Title: *Narratives of low-carbon futures in land transport*
- 2012 VDA (German Association of the Automotive Industry), Presentation Title: *Climate policies in transport revisited*
- 2012 Harvard Project for Asian and International Relations, Briefing of the European Delegation, Presentation Title: *Mobility and Sustainability: An Asian-European Comparison*
- 2012 Global Sustainability Summer School, Potsdam Institute for Advanced Sustainability Studies and Potsdam Institute on Climate Impacts, Presentation Title: *Fishbanks: Seeking to manage the global commons*
- 2012 Potsdam Institute for Advanced Sustainability Studies, What population decline means for public service provision in rural regions, Presentation Title: *A Climate Economic Perspective: Rural Mobility and GHG Emissions*
- 2012 National Research Council, Needs and Research Requirements for Land-Change Modeling, Chapel Hill, Presentation Title: *Bioenergy and Land Use*
- 2012 Leopoldina - German National Academy of Sciences, Briefing Meeting on Bioenergy, Presentation Title: *Comparing Assessments on Bioenergy*
- 2012 Bundesumweltministerium, Presentation Title: *Policies for Decarbonizing the Transport Sector*
- 2012 Yale School of Forestry & and Environmental Studies, Presentation Title: *Evaluating bioenergy futures*
- 2012 GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit), Presentation Title: *Low-carbon transport scenarios for European cities*
- 2011 North American Regional Science Council, 58th Annual North American Meeting, Miami, Presentation Title: *Fuel prices, urban form and optimal public transit*
- 2011 Carlo Schmid Programm, Annual Alumni Meeting, Presentation Title: *Governing the Global and Local Commons*
- 2011 attac Oldenburg, Presentation Title: *The Economics of Car-Free Cities*
- 2011 Summer School of the German National Merit Foundation, Salem, Key note: *Bioenergy and Sustainability: The Limits of Disciplinary Research*
- 2010 Deutsche Bahn, Presentation Title: *Integrating the Transport Sector into the EU Emission Trading Scheme*
- 2010 California State Capitol, Sacramento, Presentation Title: *CITIES: Car Industry, Road Transport and an International Emission trading Scheme - policy options*
- 2010 innoz, Presentation Title: *Evaluating the Climate Mitigation Benefits of a German Road Charging Policy*
- 2010 Umweltbundesamt, Presentation Title: *A Review: Options for Decarbonizing the Transport Sector*

- 2009 COP15, Copenhagen, on *Bridging the gap Pathways for transport in the post 2012 process*
- 2009 Potsdam Institute of Climate Impact Research, Presentation title: *Synergies in Urban Transport Policies*
- 2009 Energy and Resources Group, Berkeley, Presentation title: *Co-Benefits of Transport Demand Management Measures: A Beijing Case Study*
- 2008 Max Planck Institute for Biological Cybernetics, Bethge-Lab, Tübingen, Presentation title: *Predictive Coding Principles*
- 2006 Freie Universität Berlin, Theoretical Neuroscience, Grün-Lab, Presentation title: *Optimality and Sufficiency in the Decoding of Auditory Signals*
- 2006 Cold Spring Harbor Laboratory, Zador-Lab, Presentation title: *Sufficient Encoding in the Auditory System: Lessons from Grasshopper Mating Songs*
- 2005 Hebrew University, Interdisciplinary Center for Neural Computation, Presentation title: *The Past-Future Information Bottleneck*

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## CONFERENCE AND WORKSHOP CONTRIBUTIONS

(presented by F. Creutzig if not indicated otherwise)

- 2016 Symposium ‘Cities as Complex systems’, Hannover Presentation Title: *Urban typologies to bridge the gap between idiosyncratic cities and global environmental change*
- 2014 Second International UGEC (Urbanization and Global Environmental Change) conference, Presentation Title: *Urban Heat Risks, Health and Equity*
- 2014 Second International UGEC (Urbanization and Global Environmental Change) conference, Presentation Title: *Urban Form and the Environment*
- 2014 Second International UGEC (Urbanization and Global Environmental Change) conference, Presentation Title: *A Global Typology of Urban Energy Use and Implications for Climate Change Mitigations*
- 2013 Linking Local Consumption to Global Impacts, SESYNC (National Socio-Environmental Synthesis Center), Annapolis, Presentation Title: *Insights from Urban Economics for Linking Local Consumption to Global Impacts*
- 2013 Climate change and its implications on ecosystem services and society. Italian Society for Climate Sciences - SISC. Lecce, Italy. Presentation Title: *Albedo Modifications as Global Mitigation and Local Adaptation Strategy in European Cities: A Geographically Explicit Investigation*, presented by Tiziana Susca
- 2013 Reconceiving Forest Governance: The Example of the German Forest, Mercator Research Institute on Global Commons and Climate Change, Presentation Title: *Forest and Modernity - an Anthropological View*
- 2013 Princeton Institute for International and Regional Studies, Commentator of *Climate Change Response Policies: Dealing with Risk and Uncertainty* by Howard Kunreuther and Elke Weber
- 2013 Princeton Institute for International and Regional Studies, Commentator of *Climate Change Uncertainty in Development Projects* by Stephane Hallegatte
- 2013 Impact World, Potsdam, Presentation Title: *Typology of Uncertainty in the Communication of Climate Change*

- 2013 Micro-Energy Systems, Technical University Berlin, Presentation Title: *Bioenergy and Livelihoods*
- 2013 The Radical Emission Reduction Conference, Tyndall Center, Poster Title: *The Behavioral Economics of Mobility*, presented by Linus Mattauch
- 2012 Applied Urban Modelling, CRASSH, University of Cambridge, Presentation Title: *Low-Carbon Transport Scenarios for European Cities*
- 2012 Better Air Quality, Hong Kong, Poster title: *A Congestion Charge for Beijing?*, presented by Maximilian Thess
- 2012 Planet under Pressure, London, Presentation Title: *Reconciling top-down and bottom-up modeling on future bioenergy deployment, and implications for a risk-based paradigm shift in climate change policy*
- 2012 Planet under Pressure, London, Presentation Title: *Low-carbon transport scenarios for European cities*
- 2011 SUME (Sustainable Urban Metabolism for Europe), Vienna, Presentation Title: *Sustainable Transport Scenarios for Europe*
- 2011 Working Group Transport of the DGfG (German Geographical Society), Presentation Title: *Evaluating E-Mobility as a Climate Mitigation Strategy for Europe*
- 2011 Strategies for Sustainable Mobilities, mobil.TUM, Technical University Munich, Presentation Title: *Operationalizing Sustainable Transport for Scenario Analysis*
- 2010 The Futures of the City: Towards Sustainable Urban Environment and Mobility, COST (European Cooperation in Science and Technology) Presentation Title: *Co-Benefits and Path Dependence in Sustainable Urban Transport*
- 2010 Transport Research Board, Washington, D.C., Poster title: *Hot Deal or Hot Air - Life-cycle Analysis of Pneumatic Cars*
- 2009 International Council for Science, Paris, Presentation Title: *Key Tenets of Sustainable Land Use Economics*
- 2009 Opening the Gates: A Critical Appraisal of China's Urban Development Practices, UC Berkeley, Presentation Title: *Motorization in Beijing*
- 2008 3rd Regional EST Forum, Singapore, Presentation Title: *External costs and congestion charging: a Beijing case study*
- 2007 7th Meeting of the German Neuroscience Society, 2007, Poster Title: *Time-Warp Invariant Pattern Recognition: How do Grasshoppers Solve the Problem?*
- 2006 NIPS 2006, Vancouver, Presentation Title: *Projecting the Past into the Future: the State Space of Dynamical Systems as an Information Bottleneck*
- 2006 **Featured talk**, CNS, Edinburgh, Presentation Title: *Time-Warp Invariant Stimulus Decoding in an Insect Auditory System?*
- 2006 Berlin Neuroscience Forum, Poster Title: *From Burst Encoding to Time-Warp Invariance*
- 2005 6th Meeting of the German Neuroscience Society, Göttingen 2005, Poster Title: *Burst Encoding in the Metathoracic Ganglion of Grasshoppers*