

CURRICULUM VITAE

Matthew Huber Professor

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I. EDUCATION

University of California Santa Cruz, Earth Sciences	Ph.D. 1997-2001
University of California Los Angeles, Atmospheric Sciences	M.S. 1994-1997
University of Chicago, Geophysics, Honors in the Major	B.A. 1990-1994

II. PROFESSIONAL EXPERIENCE

Professor, Dept. of Earth, Atmos. and Planetary Sci., Purdue University	2016-present
Affiliate Research Professor, EOS, University of New Hampshire	2016-present
Professor, University of New Hampshire	2013-2015
Professor, EAS, Purdue University	2011-2013
Director, Purdue Climate Change Research Center	2012-2013
Associate Professor, EAPS, Purdue University	2007-2011
Assistant Professor, EAPS, Purdue University	2003-2007
Assistant Research Professor, Niels Bohr Inst., University of Copenhagen	2001-2002

III. AWARDS, HONORS, AND DISTINCTIONS

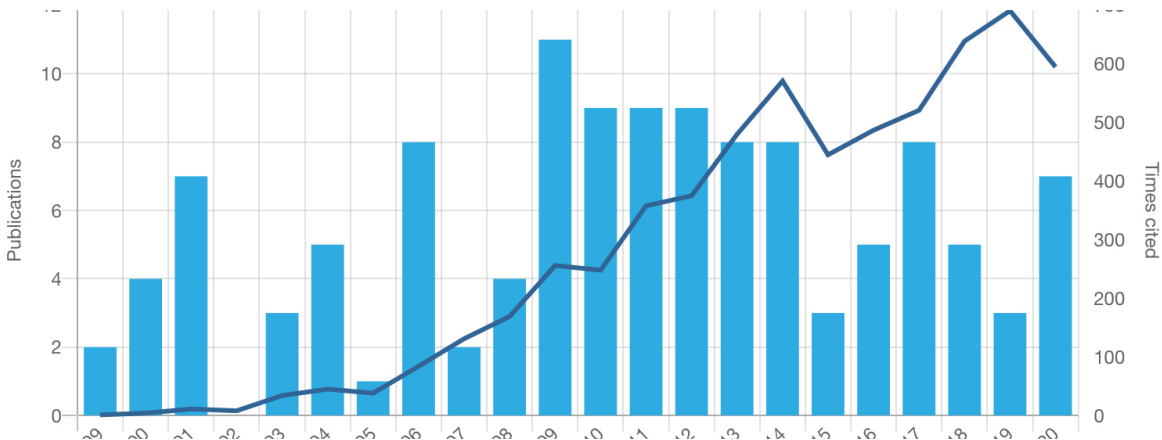
- Editor in Chief of *Paleoceanography and Paleoclimatology* (AGU)
- AGU Ascent Award (2018)
- Purdue University Faculty Scholar (2012-2016)
- American Geophysical Union Editor's Citation for Excellence in Reviewing, 2012. (<http://onlinelibrary.wiley.com/doi/10.1002/2013EO390004/epdf>)
- Research on tropical cyclones and global warming highlighted as one of the top 100 scientific stories of 2007 (#37) by Discover Magazine (January 2008).
- Research on Cretaceous-Tertiary impact highlighted as one of the 100 top scientific discoveries of 2004 by Discover Magazine (Jan. 2005).
- Winner, IBM Scholars Program for Linux Award (\$40,000, Dec. 2004)
- Currently Topical Editor of EGU Journal, "*Earth System Dynamics*"
- Currently on Editorial Board of *Geology*
- For. Associate Editor of AGU Journal, "Geochemistry, Geophysics and Geosystems"
- Fmr. Co-Chair of the NCAR CCSM Paleoclimate Working Group (2004-2006)
- Fmr. Director of Purdue's Atmospheric Measurement and Prediction Consortium, Purdue's initiative to distribute NWS Doppler radar data nationally (2005-2013)
- Fmr. Associate Editor of *Paleoceanography* 2003-2005
- Formerly Associate Director, Executive Committee Member, and Co-founder Purdue Climate Change Research Center
- Fellow of Purdue's Cyber Center (2006)

IV. PEER-REVIEWED PUBLICATIONS (* a past or current student advisee contribution)

Discussion of publications.

I have published in a variety of journals and in several peer-review book chapters, a classification and further description of them follows. Nearly all of my journal publications are in journals considered at or near the top of their respective subfields. My current “h-index” as measured by ISI Webofscience is 40, and my average citation per ISI tracked paper is 56.8. Total citations is 6191. Normalized h-index= 2.1

ISI Citation Graphic



in prep

Submitted or in review

Liu, X., **Huber, M.**, Foster, G. L., Leckie, R. M., Y. G. Zhang, Persistent polar amplification over the past 10 million years, *Nature*, submitted.

Burls et al., Simulating Miocene warmth: insights from an opportunistic Multi-Model ensemble (MioMIP1), *Paleoceanography and Paleoclimatology*, submitted.

Accepted, in press, or published (numbers indicate # of fully peer-reviewed pubs)

de Lima, C.Z., Buzan, J. R., Moore, F. C., Lantz, U., Baldosa, C., Huber, M., and T. W. Hertel, Consequences of heat stress on agricultural workers dominates crop impacts of climate change, *Environmental Research Letters*, accepted.

2021

113) Asoka, A., Wardlow, B., Tsegaye, T., Huber, M., & Mishra, V. (2021). A satellite-based assessment of the relative contribution of hydroclimatic variables on vegetation growth in global agricultural and nonagricultural regions. *Journal of Geophysical Research: Atmospheres*, 126, e2020JD033228. <https://doi.org/10.1029/2020JD033228>.

2020

112) Steinhorsdottir, M., H. K. Coxall, A. M. de Boer, M. Huber, N. Barbolini, C. D. Bradshaw, N. J. Burls, S. J. Feakins, E. Gasson, J. Henderiks, A. Holbourn, S. Kiel, M. J. Kohn, G. Knorr, W. M. Kürschner, C. H. Lear, D. Liebrand, D. J. Lunt, T. Mörs, P. N. Pearson,

M. J. Pound , H. Stoll , C. A. E. Strömberg, The Miocene: The future of the past, *Paleoceanography and Paleoclimatology*, <https://doi.org/10.1029/2020PA004037>.

- 111) Hutchinson, D. K., Coxall, H. K., Lunt, D. J., Steinhorsdottir, M., de Boer, A. M., Baatsen, M., von der Heydt, A., Huber, M., Kennedy-Asser, A. T., Kunzmann, L., Ladant, J.-B., Lear, C. H., Moraweck, K., Pearson, P. N., Piga, E., Pound, M. J., Salzmann, U., Scher, H. D., Sijp, W. P., Śliwińska, K. K., Wilson, P. A., and Zhang, Z.: The Eocene–Oligocene transition: a review of marine and terrestrial proxy data, models and model–data comparisons, *Clim. Past*, 17, 269–315, <https://doi.org/10.5194/cp-17-269-2021>, 2021.
- 110) Kim, S. L., Zeichner, S. S., Colman, A. S., Scher, H. D., Kriwet, J., Mörs, T., & Huber, M. (2020). Probing the ecology and climate of the Eocene Southern Ocean with sand tiger sharks *Striatolamia macrota*. *Paleoceanography and Paleoclimatology*, 35, e2020PA003997. <https://doi.org/10.1029/2020PA003997>.
- 109) Lunt, D. J., Bragg, F., Chan, W.-L., Hutchinson, D. K., Ladant, J.-B., Morozova, P., Niezgodzki, I., Steinig, S., Zhang, Z., Zhu, J., Abe-Ouchi, A., Anagnostou, E., de Boer, A. M., Coxall, H. K., Donnadieu, Y., Foster, G., Inglis, G. N., Knorr, G., Langebroek, P. M., Lear, C. H., Lohmann, G., Poulsen, C. J., Sepulchre, P., Tierney, J. E., Valdes, P. J., Volodin, E. M., Dunkley Jones, T., Hollis, C. J., Huber, M., and Otto-Bliesner, B. L.: DeepMIP: model intercomparison of early Eocene climatic optimum (EECO) large-scale climate features and comparison with proxy data, *Clim. Past*, 17, 203–227, <https://doi.org/10.5194/cp-17-203-2021>, 2021.
- 108) Baatsen, M., von der Heydt, A. S., Huber, M., Kliphuis, M. A., Bijl, P. K., Sluijs, A., and Dijkstra, H. A.: The middle to late Eocene greenhouse climate modelled using the CESM 1.0.5, *Clim. Past*, 16, 2573–2597, <https://doi.org/10.5194/cp-16-2573-2020>, 2020.
- 107) Inglis, G. N., Bragg, F., Burls, N. J., Cramwinckel, M. J., Evans, D., Foster, G. L., Huber, M., Lunt, D. J., Siler, N., Steinig, S., Tierney, J. E., Wilkinson, R., Anagnostou, E., de Boer, A. M., Dunkley Jones, T., Edgar, K. M., Hollis, C. J., Hutchinson, D. K., and Pancost, R. D.: Global mean surface temperature and climate sensitivity of the early Eocene Climatic Optimum (EECO), Paleocene–Eocene Thermal Maximum (PETM), and latest Paleocene, *Clim. Past*, 16, 1953–1968, <https://doi.org/10.5194/cp-16-1953-2020>, 2020.
- 106) Mishra, V., Ambika, A. K., Asoka, A., Aadhar, S., Buzan, J., Kumar, R., & Huber, M. (2020). Moist heat stress extremes in India enhanced by irrigation. *Nat. Geosci.* <https://doi.org/10.1038/s41561-020-00650-8>
- 105) O'Brien, C. L., Huber, M., Thomas, E., Pagani, M., Super, J. R., Elder, L. E., & Hull, P. M. (2020). The enigma of Oligocene climate and global surface temperature evolution. *Proceedings of the National Academy of Sciences*, 202003914. <https://doi.org/10.1073/pnas.2003914117>
- 104) Super, J. R., Thomas, E., Pagani, M., Huber, M., O'Brien, C. L., & Hull, P. M. (2020). Miocene Evolution of North Atlantic Sea Surface Temperature. *Paleoceanography and Paleoclimatology*, 35(5), e2019PA003748.
- 103) Buzan*, J. R., & Huber, M. (2020). Moist Heat Stress on a Hotter Earth. *AREPS*, 48(1), 623-655.
- 102) Acosta*, R. P., and **M. Huber**, Competing topographic interaction for the summer Indo-Asian monsoon, *Geophysical Research Letters*, doi: 10.1029/2019GL085112, 2020.

- 101) Lanci, L., Galeotti, S., Grimani, C. and **M. Huber**. 2020. Evidence against a long-term control on Earth climate by Galactic Cosmic Ray Flux. *Global and Planetary Change*, <https://doi.org/10.1016/j.gloplacha.2019.103095>.

2019

- 100) Shreevastava*, A., Bhalachandran, S., McGrath, G.S., **Huber M.**, P. S. Rao, 2019. Paradoxical impact of sprawling intra-Urban Heat Islets: Reducing mean surface temperatures while enhancing local extremes. *Sci Rep.* 9, 19681 (2019) doi:10.1038/s41598-019-56091-w.
- 99) Khider, D., Emile-Geay, J., McKay, N. P., Gil, Y., Garijo, D., Ratnakar, V., Alonso-Garcia, M., Bertrand, S., Bothe, O., Brewer, P., Bunn, A., Chevalier, M., Comas-Bru, L., Csank, A., Dassié, E., DeLong, K., Felis, T., Francus, P., Frappier, A., Gray, W., Goring, S., Jonkers, L., Kahle, M., Kaufman, D., Kehrwald, N. M., Martrat, B., McGregor, H., Richey, J., Schmittner, A., Scroxton, N., Sutherland, E., Thirumalai, K., Allen, K., Arnaud, F., Axford, Y., Barrows, T. T., Bazin, L., Pilaar Birch, S. E., Bradley, E., Bregy, J., Capron, E., Cartapanis, O., Chiang, H. W., Cobb, K., Debret, M., Dommain, R., Du, J., Dyez, K., Emerick, S., Erb, M. P., Falster, G., Finsinger, W., Fortier, D., Gauthier, N., George, S., Grimm, E., Hertzberg, J., Hibbert, F., Hillman, A., Hobbs, W., **Huber, M.**, Hughes, A. L. C., Jaccard, S., Ruan, J., Kienast, M., Konecky, B., Le Roux, G., Lyubchich, V., Novello, V. F., Olaka, L., Partin, J. W., Pearce, C., Phipps, S. J., Pignol, C., Piotrowska, N., Poli, M. S., Prokopenko, A., Schwanck, F., Stepanek, C., Swann, G. E. A., Telford, R., Thomas, E., Thomas, Z., Truebe, S., von Gunten, L., Waite, A., Weitzel, N., Wilhelm, B., Williams, J., Williams, J. J., Winstrup, M., Zhao, N. and Zhou, Y. PaCTS 1.0: A Crowdsourced Reporting Standard for Paleoclimate Data, *Paleoceanography and Paleoclimatology*, <https://doi.org/10.1029/2019PA003632>.
- 98) Hollis, C. J., Dunkley Jones, T., Anagnostou, E., Bijl, P. K., Cramwinckel, M. J., Cui, Y., Dickens, G. R., Edgar, K. M., Eley, Y., Evans, D., Foster, G. L., Frieling, J., Inglis, G. N., Kennedy, E. M., Kozdon, R., Lauretano, V., Lear, C. H., Littler, K., Lourens, L., Meckler, A. N., Naafs, B. D. A., Pälike, H., Pancost, R. D., Pearson, P. N., Röhl, U., Royer, D. L., Salzmann, U., Schubert, B. A., Seebeck, H., Sluijs, A., Speijer, R. P., Stassen, P., Tierney, J., Tripathi, A., Wade, B., Westerhold, T., Witkowski, C., Zachos, J. C., Zhang, Y. G., **Huber, M.**, and Lunt, D. J.: The DeepMIP contribution to PMIP4: methodologies for selection, compilation and analysis of latest Paleocene and early Eocene climate proxy data, incorporating version 0.1 of the DeepMIP database, *Geosci. Model Dev.*, 12, 3149–3206, <https://doi.org/10.5194/gmd-12-3149-2019>, 2019.

2018

- 97) Komurcu, M., Emanuel, K. A., **Huber, M.**, & Acosta*, R. P. 2018. High-resolution climate projections for the northeastern United States using dynamical down-scaling at convection-permitting scales. *Earth and Space Science*, 5. <https://doi.org/10.1029/2018EA000426>.
- 96) Zhou, H., Helliker, B. R., **Huber, M.**, Dicks*, A., & Akçay, E. (2018). C4 photosynthesis and climate through the lens of optimality. *Proceedings of the National Academy of Sciences*, 115(47), 12057-12062, doi: 10.1073/pnas.1718988115.
- 95) Cramwinckel, M.J., **Huber, M.**, Kocken, I.J., Agnini, C., Bijl, P.K., Bohaty, S.M., Frieling, J., Goldner, A., Hilgen, F.J., Kip, E.L. and Peterse, F., 2018. Synchronous tropical and polar temperature evolution in the Eocene. *Nature*, 559, <https://doi.org/10.1038/s41586-018-0272-2>.
- 94) Super, J.R., Thomas, E., Pagani, M., **Huber, M.**, O'Brien, C. and Hull, P.M., 2018. North Atlantic temperature and pCO₂ coupling in the early-middle Miocene. *Geology*, 46, <https://doi.org/10.1130/G40228.1>.

- 93) Coxall, H. K., C. Huck, **M. Huber**, C. H. Lear, A. Legarda-Lisarri, M. O'Regan, K. Sliwinski, T. van De Flierdt, A. De Boer, J. C. Zachos, and J. Backman, 2018. Export of nutrient rich Northern Component Water preceded early Oligocene Antarctic glaciation, *Nature Geo.*, 11, <https://doi.org/10.1038/s41561-018-0069-9>.

2017

- 92) Samal, N. R., W. Wollheim, S. Zuidema, R. Stewart, Z. Zhou, M. M. Mineau, M. Borsuk, K. H. Gardner, S. Glidden, T. Huang, D. Lutz, G. Mavrommati, A. M. Thorn, C. P. Wake, and **M. Huber**. 2017. A coupled terrestrial and aquatic biogeophysical model of the Upper Merrimack River watershed, New Hampshire, to inform ecosystem services evaluation and management under climate and land-cover change. *Ecology and Society* 22(4):18. <https://doi.org/10.5751/ES-09662-220418>
- 91) Kumar, R., Mishra, V., Buzan*, J., Kumar, R., Shindell, D. and **M. Huber**, 2017. Dominant control of agriculture and irrigation on urban heat island in India. *Scientific Reports*, 7(1), p.14054. DOI:10.1038/s41598-017-14213-2 .
- 90) Shaffer, G., Fernández Villanueva, E., Rondanelli, R., Pedersen, J. O. P., Olsen, S. M., and **M. Huber**: Implementation of methane cycling for deep-time global warming simulations with the DCESS Earth system model (version 1.2), *Geosci. Model Dev.*, 10, 4081-4103, <https://doi.org/10.5194/gmd-10-4081-2017>, 2017.
- 89) Acosta*, R. P., and **M. Huber**, The neglected Indo-Gangetic Plains low-level jet and its importance for moisture transport and precipitation during the peak summer monsoon, *Geophys. Res. Lett.*, 44, 8601–8610, doi:10.1002/2017GL074440, 2017.
- 88) Frieling, J., H. Gebhardt, **M. Huber**, O. A. Adekeye, S. O. Akande, G. J. Reichart, J. Middelburg, S. Schouten, M, and A. Sluijs. Extreme warmth and plankton regime shift in the tropics during the Palaeocene-Eocene Thermal Maximum, *Sci. Adv.* 3, e1600891, DOI: 10.1126/sciadv.1600891, 2017.
- 87) Lunt, D. J., **Huber, M.**, Anagnostou, E., Baatsen, M. L. J., Caballero, R., DeConto, R., Dijkstra, H. A., Donnadieu, Y., Evans, D., Feng, R., Foster, G. L., Gasson, E., von der Heydt, A. S., Hollis, C. J., Inglis, G. N., Jones, S. M., Kiehl, J., Kirtland Turner, S., Korty, R. L., Kozdon, R., Krishnan, S., Ladant, J.-B., Langebroek, P., Lear, C. H., LeGrande, A. N., Littler, K., Markwick, P., Otto-Bliesner, B., Pearson, P., Poulsen, C. J., Salzmann, U., Shields, C., Snell, K., Stärz, M., Super, J., Tabor, C., Tierney, J. E., Tourte, G. J. L., Tripathi, A., Upchurch, G. R., Wade, B. S., Wing, S. L., Winguth, A. M. E., Wright, N. M., Zachos, J. C., and Zeebe, R. E.: The DeepMIP contribution to PMIP4: experimental design for model simulations of the EECO, PETM, and pre-PETM (version 1.0), *Geosci. Model Dev.*, 10, 889-901, doi:10.5194/gmd-10-889-2017, 2017.
- 86) Green, J. A. M., **Huber, M.**, Waltham, D., Buzan*, J., & M. Wells, Explicitly modelled deep-time tidal dissipation and its implication for Lunar history. *Earth and Planetary Science Letters*, 461, 46-53, 2017.
- 85) Korty, R., K. Emanuel, **M. Huber**, and R. Zamora. Tropical cyclones downscaled from simulations with very high carbon dioxide levels. *J. Clim.*, doi:10.1175/JCLI-D-16-0256.1, 2017.

2016

- 84) von der Heydt, A. S., H. A. Dijkstra, R. S. W. van de Wal, R. Caballero, M. Crucifix, G. L. Foster, **M. Huber**, and 23 others. Lessons on climate sensitivity from past climate changes, *Curr. Clim. Change. Rep.* 2, 148–158, DOI 10.1007/s40641-016-0049-3, 2016.

- 83) Zamora, R., R. Korty, and **M. Huber**, Thermal stratification in simulations of warm climates: A climatology using saturation potential vorticity, *J. Clim.*, 29, 5083-5102, doi:10.1175/JCLI-D-15-0785.12016, 2016.
- 82) Wheeler, L. B., Galewsky, J., Herold, N., and **M. Huber**. Late Cenozoic surface uplift of the southern Sierra Nevada (California, USA): A paleoclimate perspective on lee-side stable isotope paleoaltimetry, *Geology*, doi:10.1130/G37718.1, 2016.
- 81) Shaffer, G., **Huber, M.**, Rondanelli, R., and J. O. P. Pedersen, Deep time evidence for climate sensitivity increase with warming. *Geophys. Res. Lett.* doi: 10.1002/2016GL069243, 2016.
- 80) Carmichael, M. J., Lunt, D. J., **Huber, M.**, Heinemann, M., Kiehl, J., LeGrande, A., Loptson, C. A., Roberts, C. D., Sagoo, N., Shields, C., Valdes, P. J., Winguth, A., Winguth, C., and Pancost, R. D.: A model–model and data–model comparison for the early Eocene hydrological cycle, *Clim. Past*, 12, 455-481, doi:10.5194/cp-12-455-2016, 2016.

2015

- 79) Carlton, J. S., Perry-Hill, R., **Huber, M.** and L. S. Prokopy, The climate change consensus extends beyond climate scientists, *Environ. Res. Lett.* doi:10.1088/1748-9326/10/9/094025, 2015.
- 78) Buzan*, J. R., Oleson, K., and **M. Huber**. Implementation and comparison of a suite of heat stress metrics within the Community Land Model version 4.5, *Geosci. Model Dev.*, 8, 151-170, doi:10.5194/gmd-8-151-2015, 2015.

2014

- 77) Krishnan*, S., Pagani, M., **Huber, M.**, and A. Sluijs. High latitude hydrological changes during the Eocene Thermal Maximum 2. *Earth and Planetary Science Letters*, 404, 167–177. doi:10.1016/j.epsl.2014.07.029, 2014.
- 76) Goldner*, A., Herold, N., and **M. Huber**. Antarctic glaciation caused ocean circulation changes at the Eocene-Oligocene transition. *Nature*, 511, 574-577, doi:10.1038/nature13597, 2014.
- 75) Herold, N., Buzan, J., Seton, M., Goldner*, A., Green, J. A. M., Müller, R. D., Markwick, P., and **M. Huber**, A suite of early Eocene (~ 55 Ma) climate model boundary conditions, *Geosci. Model Dev.*, 7, 2077-2090, doi:10.5194/gmd-7-2077-2014, 2014.
- 74) Thomas, D. J., R. Korty, **M. Huber**, J. A. Schubert, and B. Haines, Nd isotopic structure of the Pacific Ocean 70–30 Ma and numerical evidence for vigorous ocean circulation and ocean heat transport in a greenhouse world, *Paleoceanography*, 29, 454–469, doi:10.1002/2013PA002535, 2014.
- 73) Hollis, C. J., Tayler, M. J., Andrew, B., Taylor, K. W., Lurcock, P., Bijl, P. K., Kulhanek, D. K., Crouch, E. M., Nelson, C. S., Pancost, R. D., **Huber, M.**, Wilson G. S., Ventura, G. T., Crampton, J. S., Schoeler, P., and A. Phillips, Organic-rich sedimentation in the South Pacific Ocean associated with Late Paleocene climatic cooling. *Earth-Science Reviews*, 134, 81-97, 2014.
- 72) Gasson, E., Lunt, D. J., DeConto, R., Goldner, A., Heinemann, M., **Huber, M.**, LeGrande, A. N., Pollard, D., Sagoo, N., Siddall, M., Winguth, A., and Valdes, P. J., Uncertainties in the modelled CO₂ threshold for Antarctic glaciation, *Clim. Past*, 10, 451-466, doi:10.5194/cp-10-451-2014, 2014.
- 71) Goldner*, A., N. Herold, and **M. Huber**, The challenge of simulating the warmth of the mid-Miocene climatic optimum in CESM1, *Clim. Past*, 10, doi:10.5194/cp-10-523-2014, 523–536, 2014.

- 70) Carlton, J. S., J. R. Angel, S. Fei, **M. Huber**, T. M. Koontz, B. J. MacGowan, N. D. Mullendore, N. Babin, and L. S. Prokopy, State Service foresters' attitudes toward using climate and weather information when advising forest landowners, *J. For.*, 112, 9–14, <http://dx.doi.org/10.5849/jof.13-054>, 2014.

2013

- 69) Taylor, K. W. R., **M. Huber**, C. J. Hollis, M. T. Hernandez-Sanchez, and R. D. Pancost, Re-evaluating modern and Palaeogene GDGT distributions: Implications for SST reconstructions, *Glob. Planet. Change*, 108, 158–174, 2013.
- 68) Caballero, R. and **M. Huber**, State-dependent climate sensitivity in past warm climates and its implications for future climate projections, *Proc. Nat. Acad. Sci.* doi: 10.1073/pnas.1303365110, 2013.
- 67) Green, J. A. M., and **M. Huber**, Tidal dissipation in the early Eocene and implications for ocean mixing, *Geophys. Res. Lett.*, 40, 2707–2713, doi:10.1002/grl.50510, 2013.
- 66) Sriviver*, R. L., **Huber, M.**, and Chafik, L.: Excitation of equatorial Kelvin and Yanai waves by tropical cyclones in an ocean general circulation model, *Earth Syst. Dynam.*, 4, 1-10, doi:10.5194/esd-4-1-2013, 2013.
- 65) Goldner*, A., **Huber, M.**, and Caballero, R.: Does Antarctic glaciation cool the world?, *Clim. Past*, 9, 173-189, doi:10.5194/cp-9-173-2013, 2013.

2012

- 64) PALAEOSENS Project Members, Making sense of palaeoclimate sensitivity, *Nature*, 491, doi:10.1038/nature11574, 683-691, 2012.
- 63) Lunt, D. J., Dunkley Jones, T., Heinemann, **M., Huber**, M., LeGrande, A., Winguth, A., Loptson, C., Marotzke, J., Roberts, C. D., Tindall, J., Valdes, P., and Winguth, C.: A model–data comparison for a multi-model ensemble of early Eocene atmosphere–ocean simulations: EoMIP, *Clim. Past*, 8, 1717-1736, doi:10.5194/cp-8-1717-2012, 2012.
- 62) Hollis, C.J., K. W.R. Taylor, L. Handley, R. D. Pancost, **M. Huber**, and 8 others, Early Paleogene temperature history of the Southwest Pacific Ocean: reconciling proxies and models, *Earth Plan. Sci. Lett.*, 349-350, doi:10.1016/j.epsl.2012.06.024, 53-66, 2012.
- 63) Hague, A. M., D. J. Thomas, **M. Huber**, R. Korty, S. C. Woodard, and L. Blake Jones, Convection of North Pacific Deep Water during the early Cenozoic, *Geology*, 40, doi:10.1130/G32886.1, 527-530, 2012.
- 61) van Hooidek*, R., and M. Huber, Effects of modes of variability on model derived coral reef bleaching predictions, *Coral Reefs*, 31, 10.1007/s00338-011-0825-4, 121-131, 2012.
- 60) Herold, N., Huber, M., Müller, R.D. and M. Seton, Modelling the Miocene climatic optimum: Ocean circulation, *Paleoceanography*, 27, PA1209, doi:10.1029/2010PA002041, 2012.
- 59) **Huber, M.**, and A. Goldner*, Eocene monsoons. *Journal of Asian Earth Sciences*, 44, 3-23, 2012.

2011

- 57) Herold, N.K., D. Müller, and **M. Huber**, Modeling the Miocene Climatic Optimum. Part I: Land and Atmosphere, *Journal of Climate*, 24, DOI: 10.1175/2011JCLI4035.1, 6353-6372, 2011.

- 56) Pagani, M. , **M. Huber**, Z. Liu, S. M. Bohaty, J. Hendericks, W. Sijp, S. Krishnan, R. DeConto, The Role of Carbon Dioxide during the Onset of Antarctic Glaciation, *Science*, 334, DOI: 10.1126/science.1203909, 1261-1264, 2011.
- 55) Sijp, W. P., M. H. England, and **M. Huber**, Effect of the deepening of the Tasman Gateway on the global ocean, *Paleoceanography*, 26, PA4207, doi:10.1029/2011PA002143, 2011.
- 54) Ivany, L. C., T. Brey, **M. Huber**, D. P. Buick, and B. R. Schöne, El Niño in the Eocene greenhouse recorded by fossil bivalves and wood from Antarctica, *Geophys. Res. Lett.*, 38, L16709, doi:10.1029/ 2011GL048635, 2011.
- 53) Goldner*, A., **Huber, M.**, Diffenbaugh, N., and Caballero, R.: Implications of the permanent El Niño teleconnection "blueprint" for past global and North American hydroclimatology, *Clim. Past*, 7, 723-743, doi:10.5194/cp-7-723-2011, 2011.
- 52) **Huber, M.** and R. Caballero, The Eocene Equable Climate Problem Revisited. *Clim. Past*, 7, 603–633, doi:10.5194/cp-7-603-2011, 2011.
- 51) Mishra*, V., K. A. Cherkauer, L. C. Bowling, and **M. Huber**, Lake Ice phenology of small lakes: Impacts of climate variability in the Great Lakes region, *Glob. Planet. Change*, doi:10.1016/j.gloplacha.2011.01.004, 2011.
- 50) Bijl, P. K., J. Pross, J. Warnaar, C. E. Stickley, **M. Huber**, R. Guerstein, A. J. P. Houben, A. Sluijs, H. Visscher, and H. Brinkhuis, Environmental forcings of Paleogene Southern Ocean dinoflagellate biogeography, *Paleoceanography*, 26, PA1202, doi:10.1029/2009PA001905, 2011.
- 49) Herold, N. K., **Huber, M.**, Greenwood, D. R.; Müller, R. D. and M. Seton, Early to middle Miocene monsoon climate in Australia, *Geology*, 39, 3-6, doi: 10.1130/G31208.1, 2011.

2010

- 48) Speelman, E. N., Sewall, J. O., Noone, D., **Huber, M.**, von der Heydt, A., Damsté, J. S., Reichart, G. J., Modeling the influence of a reduced equator-to-pole sea surface temperature gradient on the distribution of water isotopes in the Eocene. *Earth and Planetary Science Letters*, 298, 57-65, 2010.
- 47) Caballero, R., and **M. Huber**, Spontaneous transition to superrotation in warm climates simulated by CAM3: Consequences of a Super-MJO, *Geophys. Res. Lett.* , 37, L11701, doi:10.1029/2010GL043468.
- 46) Sherwood, S., and **M. Huber**, An adaptability limit to climate change due to heat stress. *Proc. Nat. Acad. Sci.*, www.pnas.org/cgi/doi/10.1073/pnas.0913352107, 2010.
- 45) Schwartz, F. W., E. A. Sudicky, R. G. McLaren, Y. J. Park, **M. Huber**, and M. Apter, Ambiguous hydraulic heads and ¹⁴C activities in transient regional flow. *Ground Water*, 48, doi:10.1111/j.1745-6584.2009.00655.x, 366-379, 2010.
- 44) Galeotti, S., A. von der Heydt, **M. Huber**, D. Bice, H. Dijkstra, T. Jilbert, L. Lanci, and G.J. Reichart, Evidence for active ENSO variability in the late Miocene greenhouse climate. *Geology*, 38, doi: 10.1130/G30629.1, 419–422 , 2010.
- 43) Sriviver*, R. L., and **M. Huber**, Modeled sensitivity of upper thermocline properties to tropical cyclone winds and possible feedbacks on the Hadley circulation, *Geophys. Res. Lett.*, 37, L08704, doi:10.1029/2010GL042836, 2010.

2009

- 42) Ali, J. and **M. Huber**, Mammalian biodiversity on Madagascar controlled by ocean currents. *Nature*, 463, doi:10.1038/nature08706, 653-656, 2010.

- 41) Williams, I., R. T. Pierrehumbert, and **M. Huber**, Global warming, convective threshold and false thermostats, *Geophys. Res. Lett.*, 36, L21805, doi:10.1029/2009GL039849, 2009.
- 40) Warnaar, J., Bijl, P.K., **Huber, M.**, Sloan, L., Brinkhuis, H., Röhl, U., Sriver, R., Visscher, H. Orbitally forced climate changes in the Tasman sector during the Middle Eocene. *Palaeogeogr., Palaeoclimat., Palaeoecol.*, 280, 361-370, 2009.
- 39) van Hooidonk*, R., and **M. Huber**, Quantifying the quality of coral bleaching predictions, *Coral Reefs*, 28, 579-587, doi:10.1007/s00338-009-0502-z, 2009.
- 38) Eldrett, J. S., D. R. Greenwood, I. Harding, and **M. Huber**, Increased seasonality in the latest Eocene to earliest Oligocene in northern high latitudes, *Nature*, 459, doi:10.1038/nature08069, 969-973, 2009.
- 37) van Hooidonk*, R., and **M. Huber**, Equivocal evidence for a thermostat and unusually low levels of coral bleaching in the Western Pacific Warm Pool, *Geophys. Res. Lett.*, 36, L06705, doi:10.1029/2008GL036288, 2009.
- 36) Liu, Z., M. Pagani, D. Zinniker, R. DeConto, **M. Huber**, H. Brinkhuis, S. Shah, M. Leckie, and A. Pearson, Global cooling during the Eocene-Oligocene climate transition, *Science*, 323, 1187-1190, doi: 10.1126/science.1166368, 2009.
- 35) You, Y., **M. Huber**, D. Müller, C.J. Poulsen, and J. Ribbe, Simulation of the Middle Miocene climate optimum, *Geophys. Res. Lett.*, L04702, doi:10.1029/2008GL036571, 2009.
- 34) Abbot, D. S., **M. Huber**, G. Bousquet, C. C. Walker, High-CO₂ Cloud Radiative Forcing Feedback over both Land and Ocean, *Geophys. Res. Lett.*, L05702, doi:10.1029/2008GL036703, 2009.
- 33) Hollis, C., J., L. Handley, E. M. Crouch, H. E. G. Morgans, J. A. Baker, J. Creech, K. S. Collins, S. J. Gibbs, **M. Huber**, S. Schouten, J. C. Zachos, and R. D. Pancost, Tropical sea temperatures in the high-latitude South Pacific during the Eocene, *Geology*, 37, 99–102; doi: 10.1130/G25200A.1, 2009.
- 32) Rao, G.S., Engel, B., Ebert, D., Fossum; B., **Huber, M.**, Jafvert, C., Kumar, S., Merwade, V., Niyogi, D., Oliver, L., Prabhakar, S., Rochon, G., Song, C., Zhao, L., A vision of cyberinfrastructure for end-to-end environmental explorations (C4E4), *J. Hydrologic Engr.* 14, 53-64, 2009.
- 2008
- 31) **Huber, M.** and J. Trapp, A Review of NEXRAD Level II: Data, Distribution, and Applications, *Journal of Terrestrial Observation*, 1, 5-15, 2008
- 30) Herold, N. K., M. Seton, R. D. Müller, J. Y. You, and **M. Huber**, Middle Miocene tectonic boundary conditions for use in climate models, *Geochem. Geophys. Geosyst.*, 9, Q10009, doi:10.1029/2008GC002046, 2008.
- 29) Sriver*, R. L., **M. Huber**, and J. Nusbaumer¹, Investigating tropical cyclone-climate feedbacks using the TRMM Microwave Imager and the Quick Scatterometer, *Geochem. Geophys. Geosyst.*, 9, Q09V11, doi:10.1029/2007GC001842, 2008.
- 28) **Huber, M.**, A hotter Greenhouse? *Science*, 321, 353-354, doi: 10.1126/science.1161170, 2008. (this was a peer-reviewed, unsolicited paper)
- 27) Lyle, M., J. Barron, T. J. Bralower, **M. Huber**, A. Olivarez-Lyle, A. C. Ravelo, D. K. Rea, and P. A. Wilson, The Pacific Ocean and the Cenozoic evolution of climate, *Reviews of Geophysics*, doi:10.1029/2005RG000190, 2008.

¹ Purdue Undergraduate Researcher working with Huber, also DURl scholar

2007

- 26) Sriver*, R. L., and **M. Huber**, Observational evidence for an ocean heat pump induced by tropical cyclones, *Nature*, 447, 577-580, doi:10.1038/nature05785, 2007.
- 25) Sriver*, R., and **M. Huber**, Reply to Maue and Hart's Comment. *Geophys. Res. Lett.*, 34, L11704, doi:10.1029/2007GL029413, 2007.

2006

- 24) Thomas, E., H. Brinkhuis, **M. Huber**, and U. Röhl, An ocean view of the Early Cenozoic Greenhouse World, *Oceanography*, v. 19, 2006.
- 23) Sriver*, R., and **M. Huber**, Low frequency variability in globally integrated tropical cyclone power dissipation, *Geophys. Res. Lett.*, 33, doi:10.1029/2006GL026167, L11705, 2006.
- 22) Brinkhuis, H., S. Schouten, M. E. Collinson, A. Sluijs, J. S. Sinninghe-Damste, G. R. Dickens, **M. Huber**, and 15 others, Episodic fresh surface waters in the early Eocene Arctic Ocean, *Nature*, 441, doi:10.1038/nature04692, 606-609, 2006.
- 21) Sluijs, A., S. Schouten, M. Pagani, N. Pedentchouk, H. Brinkhuis, J. Sinninghe Damsté, G. R. Dickens, **M. Huber**, and 7 others, Subtropical Arctic Ocean conditions during the Palaeocene Eocene thermal maximum, *Nature*, 441, doi:10.1038/nature/04668, 610-613, 2006.
- 20) Pagani, M., N. Pedentchouk, **M. Huber**, and 7 others, Arctic hydrology during global warming at the Paleocene/Eocene thermal maximum, *Nature*, 442, doi:10.1038/nature05043, 671-675, 2006.
- 19) **Huber, M.**, and D. Nof, The ocean circulation in the Southern Hemisphere and its climatic impacts in the Eocene, *Paleogeogr., Palaeoclim., Palaeocol.*, 231, 9-28, 2006.
- 18) Sun, Y., E. Ess, D. Sapirstein, and **M. Huber**, Visualizing Oceanic and Atmospheric Flows with Streamline Splatting, in *Visualization and Data Analysis, Proc. of SPIE and IS&T Electronic Imaging 2006*, R. F. Erbacher, J. C. Roberts, and M. T. Katy, ed., San Jose, CA, 12-23, 2006.

2005

2004

- 17) **Huber, M.**, H. Brinkhuis, C. E. Stickley, K. Doos, A. Sluijs, J. Warnaar, G. L. Williams, and S. A. Schellenberg, Eocene circulation of the Southern Ocean: Was Antarctica kept warm by subtropical waters? *Paleoceanography*, PA4026, doi:10.1029/2004PA001014, 2004.
- 16) Stickley, C. E., H. Brinkhuis, S. A. Schellenberg, A. Sluijs, U. Rohl, M. Fuller, M. Grauert, **M. Huber**, J. Warnaar, and G. L. Williams, Timing and nature of the deepening of the Tasmanian Gateway, *Paleoceanography*, PA4027, doi:10.1029/2004PA001022, 2004.
- 15) Sewall, J. O., **M. Huber**, and L. C. Sloan, A method for using a fully coupled climate system model to generate detailed surface boundary conditions for paleoclimate modeling investigations: an early Paleogene example. *Glob. Planet. Change*, 43, 173-182, 2004.
- 14) Galeotti, S., Brinkhuis, H. and **M. Huber**, Records of post Cretaceous-Tertiary boundary millennial-scale cooling from the western Tethys: A smoking gun for the impact-winter hypothesis, *Geology*, 32, 529-532, 2004.

2003

- 13) **Huber, M.**, and R. Caballero, Eocene El Niño: Evidence for robust tropical dynamics in the "hothouse". *Science*, 299, 877-881, 2003.
- 12) **Huber, M.**, L. C. Sloan, and C. Shellito, Early Paleogene oceans and climate: A fully coupled modelling approach using NCAR's CSM, in Wing, S. L., Gingerich, P.D., Schmitz, B., and Thomas, E., eds., Causes and consequences of globally warm climates in the Early Paleogene. *Geological Society of America Special Paper*, v. 369, p. 25-47, 2003.
- 11) Shellito, C., L. C. Sloan, and **M. Huber**, Climate model constraints on atmospheric CO₂ levels in the early-middle Palaeogene, *Palaeogeog., Palaeoclimatol., Palaeoecol.* 193, 113-123, 2003.
- 10) Garric, G., and **M. Huber**, Quasi-decadal variability in paleoclimate records: Sunspot cycles or intrinsic oscillations? *Paleoceanography*, 18, doi:10.1029/2002PA000869, 2003.
2002
2001
- 9) **Huber, M.**, J. C. McWilliams, and M. Ghil, A climatology of turbulent dispersion in the troposphere, *J. Atm. Sci.*, 58, 2377-2394, 2001.
- 8) **Huber, M.**, and L. C. Sloan, Heat transport, deep waters, and thermal gradients: Coupled simulation of an Eocene Greenhouse climate. *Geophys. Res. Lett.*, 28, 3481-3484, 2001.
- 7) Sloan, L. C., and **M. Huber**, Eocene ocean responses to precessional forcing, *Paleoceanography*, 16, 100-111, 2001.
- 6) Sloan, L. C., and **M. Huber**, North Atlantic climate variability in the early Paleogene: A climate modeling sensitivity study, *Geological Society of London Special Publication: Western North Atlantic Paleogene and Cretaceous Paleooceanography*, v. 183, p. 253-272, 2001.
- 5) Sloan, L. C., **M. Huber**, T. J. Crowley, J. Sewall, and S. Baum, Effect of sea surface temperature configuration on model simulations of "Equable" climate in the early Eocene, *Palaeogeog., Palaeoclimatol., Palaeoecol.*, 167, 321-335, 2001.
2000
- 4) **Huber, M.**, and L. C. Sloan, Climatic responses to tropical sea surface temperature changes on a "greenhouse" Earth. *Paleoceanography*, 15, 443-450, 2000.
- 3) Sewall, J. O., L. C. Sloan, **M. Huber**, and S. Wing, **2000**, Climate sensitivity to changes in land surface characteristics, *Glob. Planet. Change*, 26, 445-465, 2000.
1999
- 2) **Huber, M.**, and L. C. Sloan, Warm climate transitions: A general circulation modeling study of the Late Paleocene Thermal Maximum, *J. Geophys. Res.*, 104, 16633-16655, 1999.
- 1) Sloan, L. C., **M. Huber**, and A. Ewing, Polar stratospheric cloud forcing in a Greenhouse World: A climate modeling sensitivity study, in *Reconstructing Ocean History: A window into the Future*, eds. Abrantes and Mix, Plenum Publishers, p. 273-293, 1999.

NOT FULLY PEER-REVIEWED PUBLICATIONS (grey literature, public interest, encyclopedia)

- Pagani, M., **M. Huber**, B. Sageman, (2014) Greenhouse Climates, In Treatise on Geochemistry (Second Edition), edited by H.D. Holland and K.K. Turekian, Elsevier, Oxford, Pages 281-304, doi.org/10.1016/B978-0-08-095975-7.01314-0.

- Huber, M.**, A sensitivity to history, *Nature Geosciences*, January 2013.
- Huber, M.**, Progress in Paleoclimate Modeling, in *Reconstructing Earth's Deep-Time Climate—The State of the Art in 2012*, Paleontological Society Short Course, November, 2012. The Paleontological Society Papers, Volume 18, Linda Ivany and Brian Huber (eds.).
- Huber, M.**, Snakes tell torrid tale, *Nature*, 457, 669-671, 2009.
- Hollis, C., and **M. Huber**, Evolving Views on a Dynamic Greenhouse Earth, *Eos Trans. AGU*, 90(22), doi:10.1029/2009EO220005, 2009.
- Huber, M.** and E. Thomas, Paleooceanography: The Greenhouse World, Ed. J. H. Steele, K. Turekian, and S. Thorpe, in *Encyclopedia of Ocean Sciences 2e*, pp 4229-4239, 2009.
- Huber, M.**, Paleoocean Modeling, In *Encyclopedia of Paleoclimatology and Ancient Environments*. V. Gornitz, Ed., *Encyclopedia of Earth Sciences Series*. Springer, pp. 686-690, 2009.
- Huber, M.**, Straw Man 1: A preliminary view of the tropical Pacific from a global coupled climate model simulation of early Paleogene climate, in Lyle, M., P. A., Wilson, T. R. Janacek, et al., eds., *Proceedings of the Ocean Drilling Program, Initial Reports*, v. 199, chapter 3, 2002.
- Huber, M.**, Global climate change: A glance in the rearview mirror, *Geotimes*, 46, 14-20, 2002.

V. PROFESSIONAL ACTIVITIES

Professional Affiliations

- American Geophysical Union 1997-present
- Community Climate System Model (CCSM) Paleoclimate Working Group 1998-present
- American Meteorological Society 2007-present

Meetings and Conferences Organized, Conference Sessions Chaired

- Session co-chair/co-convener, *Linking Downscaled Climate Variables to Extreme Events, Land Surface Hydrology, Ecosystems, Ecosystem Services and Human Health*, AGU, San Francisco, Dec., 2015.
- Session co-chair/co-convener, *Tides and ocean mixing: past, present, future*, AGU Ocean Sciences, Honolulu, Feb., 2014.
- Session co-chair/co-convener, *Past Climates and Current Weather Events*, AGU, San Francisco, Dec., 2012.
- Session Co-Chair/Co-Convener, *Undiscovered Climates of Earth*. AGU, San Francisco, Dec., 2010.
- Conference Scientific Committee, *Climatic and Biotic Events of the Paleogene*, major international conference, held in Wellington, New Zealand, January 12-15, 2009.
- Conference Co-convener, *Palaeogeography: The spatial context for understanding evolution of the Earth System*, an international Joint Research Conference sponsored by the Geological Society of London and the Society of Sedimentary Geology (SEPM), held at St. Johns College, Cambridge University, August 11-13 2008.
- Session Co-Chair/Co-Convener, *Tropical Cyclone-Climate Interactions on All Time scales*. AGU, San Francisco, Dec., 2006.

- Session Co-Chair/Co-Convener, *Pole-Equator-Pole: Proxy and Modeling Perspectives on Cenozoic Climate Transitions*. AGU, San Francisco, Dec., 2005.
- Session Co-Chair/Co-Convener, *From Greenhouse to Icehouse: Paleogene Global Change, Phytoplankton Response, and Atmospheric Carbon Removal*. AGU, San Francisco, Dec., 2004.
- Co-Chair/Co-Convener, CCSM Paleoclimate Working Group meetings, June 2004 (Santa Fe, NM), June 2005 (Breckenridge, CO); February 2006 (Madison, WI).

Summer Schools

- Lecturer, Princeton/GFDL AOS program, three-day workshop for graduate student and post-doc training entitled “Challenges in applying present atmospheric models to study extreme climate scenarios”, Aug. 2015, Forestal Campus, Princeton, NJ.
- Co-founder, Lecturer and Steering Committee for the Urbino Paleoclimate Summer School, University of Urbino, Italy, July 2004,2006,2007,2008,2010,2012,2014,2015, 2016, 2017 (co-convener in 2005). >60 graduate students, post-docs and industry researchers attended from around the world each year. (<http://www.uniurb.it/ussp/>)
- Lecturer: EUROPROX International Graduate College Proxies in Earth History, April, 2005. EUROPROX is a co-operation between Dutch, French, English, American, and German research groups who join their expertise to approach the development, evaluation and application of marine palaeo-environmental proxies.
- Lecturer: Earth System Science Summer School, August 2002, Borno, Sweden.

Professional Service

- Editorial Board, *Geology*: 2017-2019.
- Editorial Board (Topical Editor) *Earth System Dynamics*: 2010 to present. *ESD* is a electronic journal of the EGU whose purpose is investigating the mechanisms and effects of interaction and change in the Earth System and thereby fill an important gap. The scope of the journal is focused on investigations of the interaction and coupling of the major components of the Earth system (atmosphere, biosphere, cryosphere, hydrosphere, oceans, pedosphere, lithosphere, inner Earth), the simulation of Earth system change (global change, climate prediction), Earth system management (carbon management, geoengineering, renewable energy), and specifically on Earth system interactions with the biosphere and the anthroposphere (ecosystems, land use, carbon cycle).
- Huber was external expert faculty candidate reviewer for the Bert Bolin Centre for Climate Research (University of Stockholm, Sweden). He was a non-voting member of the faculty appointment board he assisted in choosing among applicants appropriate candidates for open paleoclimate/paleoceanography faculty positions and will attended their ‘job talks’ and interviews in winter 2010. The experts have the status as non-voting members of the appointment board throughout the process.
- Associate Editor of *Geochemistry, Geophysics, Geosystems*: 2008-2018. *G-Cubed* is an electronic journal that publishes papers on the chemistry, physics, and biology of Earth and planetary processes, with a focus on interdisciplinary work. Papers should pertain to understanding the Earth as a system, including observational, experimental, and theoretical investigations of the solid Earth, hydrosphere, atmosphere, and biosphere at all spatial and temporal scales. *G-Cubed* is published jointly by AGU and the Geochemical Society. As of 2009, ISI Impact Factor of 2.6 and it is ranked 13th out of 75 in Geochemistry and Geophysics.
- Associate Editor of *Paleoceanography*: 2003 to 2005. *Paleoceanography* is one of the most prestigious journals in my field. In 2002, the Impact Factor was 3.871 and it was ranked #1

of 41 titles in Oceanography and #1 of 30 titles in Paleontology, and #2 of 122 titles in Geosciences and Interdisciplinary in the ISI Journal Citation Reports. 2004 numbers show an Impact Factor of 3.081, #3 in Oceanography, #1 in Paleontology, and #4 in Geosciences and Interdisciplinary.

- Co-Chair NCAR CCSM Paleoclimate Working Group (PaleoWG): 2004-2006. This involved some substantial activities including planning and organizing both the individual PaleoWG spring meetings and the part of the larger annual summer meetings. The PaleoWG meetings typically have an attendance of approximately 25 people. 2005-2006 was a big year for us as we worked hard to entrain a broader swath of the paleoclimate community in this effort. In addition to making the working group responsive to the needs of the community and to the CCSM project, as co-Chair, it was also my responsibility to oversee working group simulations carried out at NCAR and sometimes to run and analyze the simulations myself, and generally to keep the working group moving forward as part of a larger national and international initiatives to model climate change.
- I review ~5 papers per month. In the past 5 years I've reviewed papers for *Climate Dynamics*, *Geology*, *Journal of Geology*, *Paleoceanography*, *Earth and Planetary Science Letters*, *Tellus*, *Cretaceous Research*, *Geophysical Research Letters*, *Journal of Climate*, *Science*, *Nature*, *Nature Geoscience*, *Nature Climate Change*, *American Journal of Science*, *Earth Science Reviews*, *Proc. National Acad. Science*, *Journal of Geoscience Education*, *Paleo*³, *Journal of Physical Oceanography*, *J.G.R. Oceans*.
- I review ~6 proposals per year for NSF.

Overview of Other Synergistic activities

- I coauthored a NY Times OP-ED piece on heat stress related deaths in India in 2015.
- I worked with the National Geographic Society on an extensive visualization of what the Earth's climate and geography will look like in the event of extreme global warming.
- I was interviewed as part of a documentary on global warming, by Simon Lamb, entitled *The Last Trillion Tons*.
- I was also engaged with Wide-Eyed Entertainment, the creators of the BBC's "Walking with Dinosaurs" series, on a proposal to make a documentary of these extreme conditions.
- I was guest editor for a special issue of *Geochemistry*, *Geophysics*, *GeoSystems* on tropical cyclone and climate interactions on across time scales (2008).
- From 2004, I was in charge of one of the 3 national streams of Level II Doppler radar data from the National Weather Service, FAA, and DOD to downstream clients including private industry, universities and other partners. This operates in collaboration with Purdue's Information Technology organization. Approximately 100GB of data comes into the university and 200 GB leaves per day. See <http://roskilde.eas.purdue.edu/~level2> . The data is provided without charge as a free service to downstream university partners and is used in teaching and research in atmospheric science departments throughout the country.
- 2005-2008 I was on the NSF-sponsored Teragrid Medium and Large Allocation Panels. This panel meets ~four times per year to decide on the amount of computing time to be allocated to researchers based on a strict peer-review process.
- I was participant/presenter in two NSF-sponsored workshops the "Geosystems Workshop" at NSF (2004), and the "Paleoelevation" Workshop held at Lehigh University (2005). White papers emerged from these workshops that used by the community and NSF.
- I was a participant/presenter at a workshop in Bremen, Germany "Towards an integrated data modeling perspective on Miocene Climate Change" (2006), from which emerged a commitment to produce a consensus, open, and freely available set of paleogeographic

boundary conditions for Miocene paleoclimate modeling. These conditions were developed by Huber in collaboration with a group at the University of Sydney (You, Herold, Mueller) as described in the Herold et al, 2008.

- I reviewed paleoclimatic proxies for a general readership which is used in classes and cited widely online: Huber, M., 2002, Global climate change: A glance in the rearview mirror, *Geotimes*, v. 46, p. 14-20.
- I authored, "Paleoceanographic modeling", a general introduction to the subject for Springer's *Encyclopedia of Paleoclimatology & Ancient Environments*, 2009.
- To broadly disseminate the results of my research I have collaborated with Purdue's Information Technology staff to create an online, and Teragrid-enabled Data Portal to house climate model output and Doppler Radar Data. We anticipate growing this portal greatly. See <http://www.purdue.teragrid.org/portal>.
- I prepared model results (which became an Ocean Drilling Program Initial Report Chapter) specifically for the purpose of guiding and enabling the drilling strategies in the eastern equatorial Pacific during ODP Leg 199. This was the first time, to my knowledge that an ODP cruise has gone to sea with specially-prepared model results in hand.
- I presented talks at international conferences and to individual departments, as well as to the West Lafayette Indiana Kiwanis Club, Westminster Village (elder learning), a Dean's Council meeting on climate change, high school students on campus, alumni gatherings, and to Vice Presidents of Starbucks Coffee (at Seattle headquarters) and to senior management of ExxonMobil.
- In 2007, I appeared in "Super Comet--After the Impact" a movie which has been picked up by the Discovery Channel (USA and Europe). The movie is an "all ages" documentary of a fictionalized account of what would happen if a K-T type (dinosaur killer) bolide impacted the Earth today. A book, in German, was published to accompany the movie and my research was featured in it.
- In 2005, I presented at an "Advisory Council on Nuclear Waste" Meeting with regards to long term climate assessments for the Yucca Mountain Nuclear Repository. My testimony entered into the official Nuclear Regulatory Commission record, and it appears to be affecting aspects of the national policy on the future of the Yucca Mountain project.
- My papers sparked a lot of interest in the global community of learners, and I spent significant time giving interviews to the *Voice of America* and *KPFK* in Los Angeles, *Earth and Sky Radio Series*, *Geotimes*, the *Washington Post*, *BBC Online* (translated into 9 languages), *MSNBC*, *Space.com*, *Discover Magazine*, the *New York Times* (on three occasions), *USA Today*, *Science* (May, 2006), *Nature* (June, 2006/2007), *Bloomberg* and an *ABC* television News interview, as well as for the recent book, *Stormworld* by Chris Mooney.

Other Departmental and University Service While at Purdue

- Purdue University Grievance Committee 2012-2014
- I was one of three main authors of a white paper that led to the creation of the Purdue Climate Change Research Center (PCCRC) and the hiring associated with it.
- PCCRC Executive Committee, 2003-2013.
- PCCRC standing committee, 2003-2013.
- PCCRC search committees.
- EAPS search committees
- EAPS Department Computer Committee 2003-2005; Chair 2016-present.

- Purdue University IT Operational Oversight Recommendation Implementation Committee 2012-2013.
- College of Science Dean's Undergraduate Task Force (2005-2007). Goal of the task force was to reformulate the entire undergraduate curriculum that has not been renovated for over thirty years.
- College of Science Grade Appeal Committee (2009-2010). This is a fairly time consuming committee when there are students appealing although this does not happen often.
- EAPS Department Graduate Committee 2003-2004, 2009-present.
- EAPS Department Undergraduate Committee 2005-2006. We have substantially altered and made more flexible our undergraduate offerings while I have served.
- EAPS Department High Performance Computing Committee:2006-2013 (Chair).
- EAPS Department Alumni and Corporate relations committee 2007-2011.
- EAPS Department Library Committee 2007-2009.
- I helped to write the proposals for two new \$4,000,000 centers (funded by the Lilly Foundation), the Cyber Center and Center for the Environment. I was on the Executive Committee of the Center for the Environment and the Director Search Committee of the Cyber Center.
- From 2004-2013, I was been in charge of one of the 3 national streams of Level II Doppler radar data from the National Weather Service, FAA, and DOD to downstream clients including private industry, universities and other partners. This operates in collaboration with Purdue's Information Technology organization. Approximately 100GB of data comes into the university and 200 GB leaves per day .
- In 2006, I started a Consortium (Atmospheric Measurement and Prediction) to attract and disseminate gift funds for atmospheric science activities within the department and with an initial focus on issues relating Doppler radar data.

VI. TEACHING, LEARNING SERVICE, STUDENT ADVISING

Vision: Rapid advances in the vastly multi-disciplinary fields grouped under the heading of 'global environmental change' are challenging to communicate to a broader audience. As the body of knowledge in these respective disciplines has deepened, the ability of scientists and students to keep up in both has flagged, leading inevitably to over-narrowing of student education or the watering-down of overly broad curricula. This process of deepening, focusing, and diverging is natural in science. But for the continued health of the disciplines steps need to be taken to prevent balkanization and to teach the next generation of scientists and non-scientists to better grasp broader fields of knowledge.

Strategy: I have adopted a two-tiered strategy to work to bridge this gap. First, I have implemented graduate and undergraduate curriculum reforms and learning innovations at two universities designed to entrain the next generation of scientists into cross disciplinary climate/ environmental science. Second, these efforts have been disseminated through a broad teaching and engagement effort to communicate the state-of-the-art at levels appropriate for scientists and nonscientists.

UNH Teaching

My affiliations and teaching responsibilities at UNH cover the Earth Sciences Department (ESCI), the PhD programs in Natural Resources and Earth System Sciences (NRESS) and Oceanography, and various MSc programs, such as that offered by the Center for Coastal Ocean mapping. Thus my undergraduate and graduate teaching and mentoring covers a wide array of earth, environmental, and ocean sciences. My current teaching load is half that of a typical load and so far has consisted of ESCI 405 "Global Environmental Change", a course for non-science majors; ESCI 998 "Proposal Development" for graduate students which focused on improving writing and career planning; and finally "Earth in Film" ESCI 451 an introduction to the Earth Sciences and Natural Hazards that fulfills UNH undergraduate 'Discovery' requirements.

Purdue Teaching

The Earth, Atmospheric, and Planetary Sciences Department (EAPS) is a combined geology, paleontology, environmental science, education, and atmospheric sciences department. The majority of EAPS undergraduate students are interested in careers in synoptic meteorology, but it is our experience that exposure to other disciplines and career paths is beneficial to all our students and frequently leads to a broadening of interests and future career prospects. My goal has been to develop a program appropriate for studying climate and climate change.

Since arriving at Purdue in 2003, I developed 8 new courses at the graduate and undergraduate levels. All the courses represent contributions both to EAPS and Purdue's initiatives in climate change as represented by the Purdue Climate Change Research Center.

- EAPS 327: Climate Science and Society: Fall 2016, 2017. ~60 CoS majors, 2018-2019 Online version with ~200 students
- EAPS 106 Geosciences in the Cinema: Fall 2012. ~120 non-science majors.
- EAPS 221: Survey of the Atmosphere: Fall 2003. ~180 non-science majors.
- EAPS 320: Physics of Climate: Spring, 2004-2007, 2009, 2010. 15-25 undergrad majors.
- EAPS 403: Oceanography, Fall 2007, 5 grads and undergrads.
- EAPS 420: Global Climate Modeling: Fall, 2008. ~5 grads, 10 undergrads.
- EAPS 520: Theory of Climate: Fall 2004. ~8 grads.
- EAPS 591: Eocene-Oligocene Climate Change. Fall 2004. 4 grads.
- EAPS 591: Proposal Writing for Graduate Students: Fall 2003, 2004, 2009. ~15 grads.

- EAPS 591:Modeling in Climate Change Science and Policy: Spring 2006/2008, Fall 2009, Fall 2011. ~20-35 grad/ugrad students.
- EAPS 591:Soil Moisture and Climate Interactions:Spring 2007. 12 grad/ugrad students.

Selected Discussion of Courses

Physics of Climate (EAPS 320)

After consultation with the atmospheric sciences faculty and the then department head (and voted upon by the faculty) a new requirement for all atmospheric science majors, *Physics of Climate*, designed and taught by Huber, was added. This course uses the Peixoto and Oort (or similar) book, and emphasizes fundamental physical principles compared with observations, the pedagogical technique emphasizes teaming and authentic learning principles. The course is taught in a computer lab and students (usually about 20) engage in programming exercises using the NCAR Command Language (an IDL or Matlab-like interpreted language) nearly every class period. A major final project that emphasizes accomplishing a genuine research result makes up most of the course grade.

Theory of Climate (EAPS 520)

At the upper undergraduate/lower graduate level, I developed a second course, *Theory of Climate* (which was already on the books), with the same basic approach as the lower-level *Physics of Climate* course. The course presumes advanced mathematics and physics understanding and is less descriptive and more quantitative and covers more ground, but bears much in common with the previous course. More physical oceanography and basic baroclinic instability and turbulence theory is taught.

Proposal Writing in the Earth and Atmospheric Sciences (591F)

A third course I have developed is a course in *Proposal writing*, which I co-taught with Andy Freed (solid earth scientist) at the graduate level for two years (it is ongoing). This is a writing and peer-review intensive course with active student involvement. This course has consistently had one of the largest enrollments (~13) of graduate courses offered in EAPS in the past several years. To ensure proper attention is paid to technical writing improvement, an English Ph.D. student is hired as T.A. for the course. Students are led through the process of writing 1 page (AGU or AMS-style) abstracts to a full 15 page NSF-style proposal. Some students arrive in this course near the beginning of their graduate careers, in which case this is an excellent opportunity to develop a Ph.D. proposal. Some come in towards the end, in which case they learn valuable job skills. Some use this as an opportunity to receive exhaustive peer review of a chapter of their dissertation. At least one student received a full external fellowship based on her excellent hard work in the class (an EPA fellowship).

Models in Climate change Science and Public Policy (EAPS 591M and PoliSci 520A)

I engaged in significant preparation activities for a cross-disciplinary, cross-college course in Models in Climate Change Science and Public Policy (with Leigh Raymond), which was taught in Spring 2006 and is being taught again in 2008. The course gathers students working in natural and social sciences to study and analyze climate issues. A key requirement of the class is having students work in teams of ~3 on semester-long projects to generate climate policy recommendations, based on their own analysis of output from an integrated suite of scientific, economic, and political models of climate change impacts. By requiring students to work directly with these models, rather than simply hearing lectures about them, the course also embraces an “active learning” pedagogy that has been widely cited as more effective than standard lecturing techniques. This course is taught at the advanced undergraduate/graduate

level with students ranging from political science undergraduates to synoptic meteorology students and we insisted in having a strong authentic learning-based approach.

Soil Moisture and Climate Interactions (EAPS 591)

In spring 2007, I taught a graduate level course on hydroclimatology from the point of view of relating soil moisture to climate through its associated processes and feedbacks. Students are drawn from Civil Engineering, Agronomy, EAPS, Agricultural and Biological Engineer, and Environmental Studies, making this an exciting and multi-disciplinary course. The course is half lectures and half discussion of current papers in the field. The course will be completed by final group project that will involve analyzing climate and soil model output to studying the relationship between climate change and soil hydrology.

Graduate Students (Huber supervisor)

Jon Buzan (Ph. D 2018 Purdue , began at Purdue 2010 received MS 2013)

Paul Acosta (Ph. D. 2018 Purdue, began 2012 received MS 2013)

Ashley Dicks (MS student, Purdue, received MS in 2019)

Ryan Sriver (Ph.D. 2007--NOAA Global Climate Change Post-doctoral fellow with Michael Mann at Penn State, Research Faculty Penn State, now faculty at University of Illinois)

Ruben van Hoidonk (Ph.D. 2009--awarded NRC NOAA postdoctoral fellowship)

Aaron Goldner (PhD. 2013, 2013-2014 AGU Congressional Science Fellow working with Senator Sheldon Whitehouse, 2014-present AAAS Science and Technology Fellow, U.S. Department of Energy)

Aisha Reed (M.S. completed at Purdue). Received a Congressional Black Caucus Congressional Fellowship (1-year in a congressional office in Washington, D.C.). This is a highly prestigious and competitive one-year award that places her in Washington, D. C. working closely with a Congressman. She was working with Bennie Thompson from Mississippi's 2nd District, her home district. He was the ranking Democrat in Homeland Security and in this capacity she wrote a policy paper dealing with FEMA. Currently working on PhD in geoinformatics at George Mason University.

Graduate Student Advising Committee

Yang Zhang (PhD Purdue, EAPS, continuing)

Anamika Shreevastava (PhD Purdue, Civil Engr)

Advait Godbole (PhD Purdue, EAPS, dropped out)

Justin VanDeVeld (PhD Purdue, EAPS, 2012)

Sultan Ahmed (Purdue Phd Engineering, 2013)

Nick Herold (PhD University Sydney, 2010)

Vimal Mishra (Purdue Phd, 2010, Ag)

Ben MacCall (Ph.D. 2006 Purdue, EAPS)

Brooke Halvorson (MS 2006, Purdue, EAPS)

Ki-Hong Min (Ph.D. 2006, Purdue, EAPS)
Sarah Anderson-Bereznicki (M.S. 2006, Purdue, EAPS)
Jeroen Warnaar (Ph.D. 2006, University of Utrecht, The Netherlands)

Undergraduates

Purdue

Amanda Sheffield (2005)
Jesse Nusbaumer (2006-2008)—Phd from CU Boulder, NSF graduate research fellowship recipient, now at NASA GISS.
Joe Pavich (2006-2007)
Jeff Neuffer (2010)
Juan Crespo (2010-2012), PhD student University of Michigan.
Zachary Zobel (2011-2012) Phd University of Illinois; Now at Woods Hole Research Center.
James Parish III (2011-2012) TV meteorologist

UNH

Emma McCabe (2014-2016) now at Wolfram
Greg Sikora (2013-2014)

VII. GRANTS AND AWARDS

NSF 1842059-ANT Collaborative Research: Integrating Eocene Shark Paleoecology and Climate Modeling to reveal Southern Ocean Circulation and Antarctic Glaciation

Dates: 05/01/2019-04/30/2022

Amount \$296,757

NSF 1829764-OAC CyberTraining: CIU:Cross-disciplinary Training for Findable, Accessible, Interoperable, and Reusable (FAIR) science

Dates: 7/20/2018 - 8/31/2021

Amount \$498,148 (Huber Co-PI, all funds to Purdue)

NSF 1805808-CBET Innovations at the Nexus of Food, Energy, and Water Systems (INFEWS: U.S.-China): A multi-scale integrated modeling approach to managing the transition to sustainability

Dates: 5/1/2018 - 4/30/2022

Amount \$488,341

NSF 1602905- OCE Collaborative Research:P2C2:Reassessing Pliocene and Miocene warm climates and identifying the 'missing physics' to explain them

Dates: 08/01/2016 - 07/31/2020

Amount \$244,363

EPS 1101245 - EPSCoR Ecosystems & Society: Interactions Among Climate, Land Use, Ecosystem Services and Society (SubAward to Huber)

Dates: 09/1/2011 - 08/31/2016

Amount \$338,079.00 (subaward out of \$20M overall)

1049921-EAR Collaborative Research: Improved Cenozoic paleoelevation estimates for the Sierra Nevada, California: Linking geodynamics with atmospheric dynamics

Dates: 09/15/2011 - 08/31/2015

Amount \$210,187.00

0927946-ATM Collaborative Research: The Role of Deep-Ocean Circulation in Greenhouse Climates: Integrating Numerical Simulations with Proxy Data of Water Mass Composition

Dates: 08/15/2009 - 07/31/2012

Amount \$55,663.00

0902780-ATM Collaborative Research: Understanding the Role of a High-Latitude Convective Cloud Feedback in Equable and Future Climate Dynamics

Dates: 06/15/2009 - 05/31/2012

Amount \$188,021.00

0902882-OCE	Collaborative Research: Integrating proxies and Earth System Models to elucidate water cycle dynamics: Did global warming cause an enhanced hydrological cycle in the Eocene?
Dates:	8/1/09 – 7/31/12
Amount	\$472,346.00
NSF ATM	SGER: Testing the Tropical Cyclone-Induced Ocean Heat Pump Hypothesis in CCSM
Dates:	7/15/07-7/14/08
Amount	37,806
NSF ATM	Collaborative Research: Water Balance of Western North America: Dynamics of the Miocene Summer Monsoon (co-PI)
Dates:	2/15/05 – 1/31/08
Amount	\$230,060
NSF ATM	Sub-daily Scale Extreme Precipitation in Future Climate-change Scenarios: A Pilot Study (co-PI)
Dates:	2/1/06 – 1/31/08
Amount:	\$275,075
UCAR/NSF	Equipment to Enhance the Capacity to Process and Disseminate Value-added Weather Data at Purdue University (co-PI)
Dates:	7/11/05 – 6/15/06
Amount:	\$10,362
Purdue	Integrating Models of Climate Change for Cross-Disciplinary Learning, Teaching and Learning with Technology Program (co-PI)
Dates:	5/05-5/06
Amount:	\$8750
IBM	IBM Faculty Award (PI)
Dates:	12/22/04
Amount:	\$40,000
PRF	The effects of tropical cyclones on climate (PI)
Dates:	8/16/04—8/15/06
Amount:	\$29,627
NSF ATM	SGER: construction of 'deep' paleoclimate Community Climate System Model (CCSM) simulations (PI)
Dates:	7/04-1/06
Amount	\$31,374

VIII. INVITED TALKS

1. Huber, M., Paleooceanography reveals that Earth has no tropical thermostats but massive polar amplification of warming and sensitivity to forcing is difficult to explain. 13th International Conference on Paleooceanography, invited Session Speaker, Sydney Australia, Sept 2019.
2. Huber, M. Clouds and Crocodiles: Considering Past Warm Climates When Improving Cloud Parameterizations, Gordon Research Conference on Clouds and Radiation, Maine, July 2019.
3. Huber, M. The Miocene : Warmth, Transient or Fixed? Stockholm University, Miocene Paleoclimate Meeting, June 2019.
4. Huber, M., Plenary Lecture. The Miocene is the Future: What past climates tell us about the future, now. AGCC, Adelaide, Australia, Oct. 2018.
5. Huber, M., The Miocene is the Future, Sydney University Departmental Seminar, Sydney, Australia, Oct. 2018.
6. Huber, M., The Miocene is the Future, ANU Departmental Seminar, Canberra Australia, Oct. 2018.
7. Huber, M. Climate dynamics, past and future climate change and it's impacts. Haramaya University, a week of lectures in the Climate Smart Agriculture PhD program, Aug. 2018.
8. Huber, M., The Miocene is the Future, Stockholm University, Miocene Paleoclimate meeting, June 2018.
9. Huber, M. A model-data perspective on Eocene and Miocene past warm climates, MIT meeting on "Water and Climate Change: Connecting the Paleoclimate Record to Future Projections", June, 2018.
10. Huber, M. Heat stress and the boundaries of a habitable Earth, Leopoldina (German National Academy of Sciences), Workshop: Climate Sciences & Health: A Dialogue, Potsdam Germany, Dec., 2017.
11. Huber, M., The dynamics of moist heat stress and their implications for future predictions, ISEN Climate Change Symposium, Northwestern University, Nov, 2017.
12. Huber, M., The dynamics of moist heat stress and their implications for future predictions, PIK Impacts World 2017, Potsdam Germany, Oct, 2017.
13. Huber, M., No one here gets out alive: Ruminations on a hot tropics. Royal Society Meeting, Kavli Center, Chichely Hall, UK, Sept, 2017.
14. Huber, M., Die in a Fire. "Hothouse climates of the past – lessons for the future" Meeting, Bristol University, May, 2017.
15. Huber, M., Killing Time: The Next Hyperthermal, University of Chicago, May 2017;
16. Huber, M., pCO₂ climate model conundrums, Lamont-Doherty Proxy RCN workshop, NY, March 2017.
17. Huber, M., The Eocene-Oligocene Transition from an early Eocene perspective, Stockholm, SE, Feb 2017.

18. Huber, M., The Eocene-Oligocene Transition from an early Eocene perspective, Stockholm, SE, Feb 2017.
19. Huber, M., Deep Time Atmospheric Processes, DeepTime CESM Meeting, Santa Cruz, CA, Dec. 2016.
20. Huber, M., Killing Time, Rotary Club Meeting, West Lafayette, IN, Oct 2016.
21. Huber, M., Killing Time, UMass Amherst, Feb, 2016.
22. Huber, M., Climate Dynamics of Hot Earths, Rutgers University, NJ, Feb 2016.
23. Huber, M., DeepMIP, National Center for Atmospheric Research, CO, Jan. 2016.
24. Huber, M., Jonathan Buzan, Muge Komurcu, Srinath Krishnan and Emma McCabe, GC34B-03: Simulations of Future Heat stress in the Northeast in a Convection Resolving Model, AGU Fall Meeting, San Francisco, Dec., 2015.
25. Huber, M., The Next HyperThermal, Princeton AOS program/Geophysical Fluid Dynamics Lab, Forestal Campus, Princeton, NJ, Aug 2015.
26. Huber, M., Modelling of climate change: implications for food, water, and energy security, Purdue Center for Global Food Security's Borlaug Summer Institute, Purdue University, June, 2015.
27. Huber, M., Steambath World, Social Cost of Carbon Conference, Stockholm, SE, May, 2015.
28. Huber, M., Climate interactions across scales, East Africa Eco Summit, Djibouti, April, 2015.
29. Huber, M., Climate Dynamics Lessons from the Greenhouse Climates of the Eocene and Miocene, Winter School on Monsoons, Aix-En-Provence, January 2015.
30. Huber, M., Unexpected results are usually wrong, but often interesting, AGU Fall Meeting, San Francisco, Dec., 2014.
31. Huber, M., On the Use and Abuse of Climate Sensitivity in a Paleoclimate Context, pre-Quaternary CO₂ meeting, Santa Cruz, Dec. 2014.
32. Huber, M., Sigma Xi Lecture: Future of the Past, U.S. Army Natick Mass, USARIEM, June, 2014.
33. Huber, M., Modelling of climate change: implications for food, water, and energy security, Purdue Center for Global Food Security's Borlaug Summer Institute, Purdue University, June, 2014.
34. Huber, M., You win some, you lose some: How well do models simulate past greenhouse climates? MIT, EAPS Dept, May 7, 2014.
35. Huber, M., On the Use and Abuse of Climate Sensitivity as a Concept in Paleoclimate, Yale, Yale Climate and Energy Institute, Apr. 28, 2014.
36. Huber, M., Ocean mixing and past warm climates, AGU, Ocean Sciences, Feb, 26, 2014.
37. Huber, M., Future of the Past, University of Wisconsin Madison, [Workshop on High-Resolution Proxies of Paleoclimate, June 2013](#).

38. Huber, M., Earth is a Planet, Too! Paleoclimate is Planetary Atmospheric Dynamics You Can Do at Home. Northwestern University, Physics Department. May 31, 2013
39. Huber, M., Climate Dynamics Lessons from the Greenhouse Climates of the Eocene and Miocene, Princeton University, Geosciences Department, April 9, 2013.
40. Huber, M., Earth is a Planet, Too! Paleoclimate is Planetary Atmospheric Dynamics You Can Do at Home. University of Toronto, Physics Department. January 31, 2013
41. Huber, M., Greenhouse Futures: The role of Geology in Validating Greenhouse Climate Predictions, Wellington New Zealand, GNS Science, February 20, 2013.
42. Huber, M., Recent progress in modelling Eocene and Miocene greenhouse climates and implications for the future. UW-Madison, Geology Department. Feb 1, 2013.
43. Huber, M., Recent progress in modelling Eocene greenhouse climates and implications for the future, University of Concepcion, Chile, November, 2012.
44. Huber, M., Recent progress in modelling Eocene greenhouse climates and implications for the future, University of Santiago, Chile, November, 2012.
45. Huber, M., Recent progress in modelling Eocene greenhouse climates, Geological Society of America Short Course, Charlotte, NC, October 2012.
46. Huber, M., Recent progress in modelling Eocene greenhouse climates and implications for the future, Australia National University, Australia, October, 2012.
47. Huber, M., Recent progress in modelling Eocene greenhouse climates and implications for the future, Melbourne University, Australia, October, 2012.
48. Huber, M., Recent progress in modelling Eocene greenhouse climates and implications for the future, University of Sydney, Australia, October, 2012.
49. Huber, M., Modelling of Climate change: implications for food, water, and energy security, Purdue Center for Global Food Security's Borlaug Summer Institute, Purdue University, July 11, 2012.
50. Huber, M., Variations on a theme: Mixing and heat transport through time, Meteorological Institute of Stockholm University, Stockholm, Sweden, June 20, 2012.
51. Huber, M., Eocene Paleoclimate: Incredible or Uncredible? Model data syntheses raise questions. European Geophysical Union, April 27, 2012.
52. Huber, M., Update on Eocene climate modeling, NCAR Paleoclimate Working Group Meeting, NCAR, Boulder CO, February 16, 2012.
53. Huber, M., CO2 Déjà Vu, Purdue Science Laureates, November 10, 2011.
54. Huber, M., Eocene climate modeling, "Reconstructing and understanding CO2 variability in the past" conference at the The Kavli Royal Society International Centre, Chicheley Hall, UK, Oct 13, 2011.
55. Huber, M., BAU spells trouble for China, China-US 2011 Joint Symposium, Purdue University, September 26, 2011.
56. Huber, M., Progress on the Eocene Equable Climate Problem and What This Means for Future Climate Change, University of New South Wales, Australia, August 17, 2011.

57. Huber, M., Climate changes on longer time scales and their implications for sustainability and life, Queensland University, Australia, August 14, 2011.
58. Huber, M., Eocene climates as a window into our future, University of Pennsylvania, May 5, 2011.
59. Huber, M., Progress report on the Eocene "low gradient" and "equable" climate problems, Harvard, April 26, 2011.
60. Huber, M., Thermostats, amplifiers, and rectifiers: What past warm climates can teach us about dynamics, MIT Atmospheric Science Seminar, April 25, 2011.
61. Huber, M., Some constraints on sensitivity from Paleogene climate records, Invited keynote presentation at the Royal Netherlands National Academy of Arts and Sciences, at a special meeting on Estimating Climate Sensitivity from Paleoclimate Records, Amsterdam, the Netherlands, March 29, 2011.
62. Huber, M., Chasing thermostats, amplifiers, rectifiers, and capacitors through past warm climates--trying to find the important missing physics in climate models, Geological Sciences Department at Brown University, March 15: 2011.
63. Huber, M., Climate Linkages between the Equator and the Poles, Second Symposium on Antarctic Research: Climate Change, physical sciences and earth, Scientific University of the South, Peru, November 19th 2010 (via videoconference).
64. Huber, M., Why improving molecular and isotopic proxy paleoclimate records is the most important problem in science today: A climate modeling perspective. Gordon Research Conference: Organic Geochemistry, Holderness School in Holderness NH United States, August 5, 2010.
65. Huber, M., Effects of Paleogeography on Climate and Hydroclimatology in Eocene-Oligocene Time, *Asian Climate and Tectonics Meeting, Utrecht, The Netherlands, April 27, 2010.*
66. Huber, M., Progress in understanding the dynamics of past warm climates, *Woods Hole Oceanographic Institute, March 11 2010.*
67. Huber, M., What Eocene climate tells us about the future, *Geology Department, Syracuse University, February 2010.*
68. Huber, M., A sensitive Earth: implications of Eocene climate for future greenhouse projections, *Clean Coal Technology Research Center, Purdue University, December, 2009.*
69. Huber, M., A sensitive Earth: implications of Eocene climate for future greenhouse projections, *University of Illinois Geology Department, Champaign-Urbana, October 21, 2009.*
70. Huber, M., The role of Hurricanes in Past and Future Climate, Symposium 'Dynamic Earth'. *University of Utrecht, September 22, 2009.*
71. Huber, M., A Sensitive Earth: Implications of Eocene Climate for Future Greenhouse Projections. The 'Umbgrove Lecture', *University of Utrecht, September 21, 2009.*
72. Huber, M., Connecting the tropics and the poles with heat transport and teleconnections. *First Antarctic Climate Evolution Symposium, Granada, Spain, September 8, 2009.*

73. Huber, M., What natural global warming in the past tells us about the future. *Ministry for the Environment, Wellington, New Zealand, July 22, 2009.*
74. Huber, M., Heating up a Warm World, *Climatic and Biotic Events of the Paleogene, Wellington, New Zealand, January 2009.*
75. Huber, M., Hydrological Cycle Feedbacks in the Eocene UltraGreenhouse: Heat Death, Hyperthermals, and Heat Transport, *AGU Chapman Conference on Atmospheric Water Vapor and Its Role in Climate, October, 2008.*
76. Huber, M., Hurricanes, Heat Death, and Thermostats, *Lamont-Doherty Observatory, September, 2008.*
77. Huber, M., Paleoclimate modelling of the PETM and the impact of gas venting, *University of Oslo, PGP, August, 2008.*
78. Huber, M., The importance of paleogeography for paleoclimate modeling, *Palaeogeography: The spatial context for understanding evolution of the Earth System, an international Joint Research Conference sponsored by the Geological Society of London and the Society of Sedimentary Geology (SEPM), held at St. Johns College, Cambridge University, August, 2008.*
79. Huber, M., Equable climates and the low gradient problem: Progress in understanding Eocene climate, *Oslo, International Geophysical Congress, August, 2008.*
80. Huber, M., Montefeltro Lecture, *University of Urbino, July, 2008.*
81. Huber, M., Heat death, hyperthermals, hurricanes and the Eocene, *Meteorological Institute of Stockholm, June, 2008.*
82. Huber, M., The low gradient problem, *Harvard University, April, 2008.*
83. Huber, M., Hurricanes, Heat Death, Hyperthermals: Increased vertical mixing as a possible solution to the equable climate problem, *Texas A&M, February, 2008.*
84. Huber, M., Hurricanes, Heat Death, Hyperthermals: Cyclone-induced mixing as a possible solution to the equable climate problem, *Geophysics Department, University of Chicago, November, 2007.*
85. Huber, M., The role of tropical cyclones in the climate system, *SUNY Stony Brook, NY, November, 2007.*
86. Huber, M., Potential impacts of CO₂ and ocean circulation on the Eocene-Oligocene transition, Oct 1, *Geology and Geophysics Department--Topics in Global Climate Change series, Yale University, Oct 1, 2007.*
87. Huber, M., Tropical Cyclone Induced Ocean Mixing and Climate, *Geology and Geophysics Department--Departmental Seminar, Yale University, Oct 3, 2007.*
88. Huber, M., PETM climate dynamics and data-model comparison, *NCAR PETM Data-model integration Workshop, Santa Fe, New Mexico, May 31, 2007.*
89. Huber, M., New insights into equable climates, *2nd Darwin Azolla Project meeting, Utrecht University, The Netherlands, May 7, 2007.*
90. Huber, M., Amplifiers, Thermostats, Capacitors, New Insights into Building and Demolishing 'Greenhouse' Climates, *Earth, Atmospheric and Planetary Sciences--Departmental Seminar, MIT, February 28, 2007.*

91. Huber, M., How greenhouse climates work, *University of Maryland, November, 2006.*
92. Huber, M., The lack of a self-consistent explanation of the PETM and Paleocene-Eocene warmth: constraints imposed by climate sensitivity, *Canadian Institute for Advanced Research, Chicago, IL, September 2006.*
93. Huber, M., Tropical Cyclone-Induced Ocean Heat Transport: Is This The Missing Process That Explains Early Paleogene Climate? *Climate and Biota of the Early Paleogene, Bilbao Spain, June 2006.*
94. Huber, M. Back to the Future: Paleoclimate Insights into Climate of the Next Million Years, *University of Utrecht, The Netherlands, August 2006.*
95. Huber, M., Drying the American West in the Miocene, *University of Bremen, Germany, June 2006.*
96. Huber, M., and R. van Hooijdonk, Corals and Climate: Deep Time/Real Time, *NOAA Integrated Coral Observing Network/Coral Reef Early Warning System (ICON/CREWS) Meeting, La Parguera, Puerto Rico, USA, Apr. 2006.*
97. Huber, M., Tropical-extratropical ocean-atmosphere interactions and global warming—A glance in the rearview mirror and the view ahead, *Rice University, Texas, Feb., 2006.*
98. Huber, M., Enthalpy and paleoelevation. *NSF workshop on paleoelevation. Lehigh University, Summer 2005.*
99. Huber, M., and H. Brinkhuis, Likely and unlikely ocean feedbacks on global climate during the Eocene-Oligocene transition. *Goldschmidt Geochemistry Conference, Spring 2005.*
100. Huber, M., Evolution of climate in the Yucca Mountain area over the next million years. *Nuclear Regulatory Commission: Advisory Committee on Nuclear Waste, Las Vegas, Fall 2005.*
101. Huber, M., In the Wake of Katrina—What do we really know about hurricanes? *Purdue Discovery Lecture Series, Fall 2005.*
102. Huber, M., Global Environmental Change Simulation: Cyberinfrastructure Challenges and Opportunities. *Supercomputing-05. Seattle, Fall 2005.*
103. Huber, M., No time like the present...Testing climate change theories: Making better predictions. *New Economy New Rules, Indianapolis, August 2005.* This is weekly event, sponsored by a legal firm, which is broadcast statewide.
104. Huber, M., Pattern and Process in Earth's History: Climate deterioration during the Eocene-Oligocene Transition as a Case Study. *Europrox Meeting, April 2005. Bremen Germany.*
105. Huber, M., Eocene ocean circulation: Bringing models and data together, *Workshop in "Greenhouse Climate and Carbon Cycle Dynamics: Lessons from the Early Cenozoic", Bremen University, November 2004.*
106. Huber, M., Sleeping Dogs of the Cenozoic, *Dept. of Geology, IUPUI, Oct., 2004.*
107. Huber, M., Application of coupled climate models in the Cenozoic, Parts 1 and 2, *Workshop in "Climate modeling on geological time scales", Utrecht Centre of Geosciences, October, 2004.*

108. Huber, M., Construction of 'Deep' Paleoclimate CCSM Simulations, *National Center for Atmospheric Research CCSM Meeting, Santa Fe, New Mexico, June 2004.*
109. Huber, M., and R. Caballero, The sleeping dragon slumbered while El Niño was in the Greenhouse, *13 Conf. Interactions of the Sea and Atmosphere, American Meteorological Society, Portland, Aug, 2004.*
110. Huber, M., Ocean-Atmosphere Interactions in the "Greenhouse" Climate of the Eocene and a comparison with other paleoclimates, *Duke University, March, 2004.*
111. Huber, M., A preliminary view of the Eocene tropical Pacific Ocean from fully coupled climate model simulations, *Ocean Drilling Program Leg 199 Post-Cruise Meeting, Urbino Italy, Oct 2003.*
112. Huber, M., Eocene El Niño, *National Center for Atmospheric Research CCSM Meeting, Breckenridge, Colorado, USA, June 2003.*
113. Huber, M., Pulling on the Sleeping Dragon's Tail: The role of the ocean in past greenhouse climates, *Meteorological Institute of Stockholm, Stockholm University, Sweden, June 2003.*
114. Huber, M., Building an equable climate: Putting the pieces together, *Geological Society of America Meeting, Denver, Colorado, USA, Oct. 2002.*
115. Huber, M., Pulling the sleeping dragon's tail, *Institute of Geological and Nuclear Sciences, Wellington, New Zealand, July 2002.*
116. Huber, M., Spin up of an Eocene CCSM simulation, *National Center for Atmospheric Research CCSM Meeting, Breckenridge, Colorado, USA, June 2002.*
117. Huber, M., Eocene ocean-atmosphere interactions, *University of East Anglia, Norwich, UK, April 2002.*
118. Huber, M., Eocene ocean-atmosphere interactions, *University of Utrecht Biology Dept. March 2002.*
119. Huber, M., Fully coupled modelling of the Eocene: from the bottom of the ocean to the top of the atmosphere, *University of Chicago Geophysics Dept., June 2001.*
120. Huber, M., and L. C. Sloan, Results from the first CSM simulations of early Paleogene climate: What role do the oceans play in maintaining warm climates? *Climate System Model Workshop, Breckenridge CO, June 2001.*
121. Huber, M., and L. C. Sloan, Spinup of the NCAR Ocean Model: Effects of 'Degraded' boundary conditions, *Climate System Model Workshop, Breckenridge CO, June 2000.*
122. Huber, M., and L. C. Sloan, CCM3 and greenhouse climates of the early Eocene, *Climate System Model Workshop, Breckenridge CO, June 1999.*
123. Huber, M., and L. C. Sloan, Preliminary results from an Eocene CCM3 experiment, *Climate System Model Workshop, Breckenridge CO, June 1998.*

IX. CONTRIBUTED TALKS/Posters (Huber student presentations)*

1. M. Komurcu, M. Huber, "A New High Resolution Climate Dataset for Climate Change Impacts Assessments in New England" at the AGU Fall Meeting, San Francisco, CA on December 12, 2016.
2. McCabe, E., Jonathan Buzan, Srinath Krishnan, Muge Kormurcu, Paul Acosta, and Matthew Huber, Future Heat Stress Projections and their Effects on New England Livestock, NOAA's 41st Climate Diagnostics and Prediction Workshop will be held in Orono, Maine, on 3-6 October 2016.
3. M. Komurcu, M. Huber, "A New High-Resolution Climate Dataset to Analyze Extreme Events in New England", 41st NOAA Climate Diagnostics and Prediction Workshop, October 2016, Orono, ME.
4. Krishnan, S. and M. Huber, Changes in black-legged tick populations in New England with future climate change, American Geophysical Union meeting, San Francisco, Dec., 2015.
5. M. Komurcu, M Huber Dynamical Downscaling to Improve Adaptation Strategies and Increase Sustainability in New England Under A High Impact Climate Change Scenario, AGU Fall Meeting 2015, San Francisco, CA.
6. M. Huber, M. Komurcu, J. Buzan, Simulations of Future Heat Stress in the Northeast in a Convection Resolving Model, AGU Fall Meeting 2015, San Francisco, CA.
7. Krishnan, S. and M. Huber, Using "Degree days" and mechanistic tick models to simulate tick populations in New England, National Center for Atmospheric Research Summer Workshop on Climate and Health, July 2015.
8. M. Komurcu, Using High Resolution Climate Modeling to Improve Sustainability in New England, National NSF EPSCoR Meeting, November 2015, Portsmouth, NH.
9. M. Komurcu, J. Buzan, R. P. Acosta, S. Krishnan, M. Huber, High Resolution Climate Modeling for New England and Djibouti. Community Earth System Model (CESM) Workshop, July 2015, Breckenridge, CO.
10. Frieling, J., H. Gebhardt, O. Adekeye, S. Akande, G. J., Reichart, J. Middelburg, S. Schouten, M. Huber, and A. Sluijs, The Paleocene – Eocene Thermal Maximum: Temperature and Ecology in the Tropics, AGU Fall Meeting, San Francisco, Dec., 2014.
11. Krishnan, S., M. Huber, and M. Pagani, Evaluating Changes in Paleo-temperature Gradients using Hydrogen Isotopic Compositions of Leaf-wax Biomarkers, AGU Fall Meeting, San Francisco, Dec., 2014.
12. Goldner, A., N. Herold, M. Huber, and M. Komurcu, Exploring Sensitivity of Carbon Dioxide and Aerosol Forcing When Modelling the Mid-Miocene Climatic Optimum, AGU Fall Meeting, San Francisco, Dec., 2014.
13. Buzan, J., and M. Huber, The HumanIndexMod and New Calculations Demonstrating Heat Stress Effects All Aspects of Human Life Through Industry, Agriculture, and Daily Life, AGU Fall Meeting, San Francisco, Dec., 2014.
14. Komurcu, M., R. P. Acosta, and M. Huber, Simulating Regional Climate Change in New Hampshire, AGU Fall Meeting, San Francisco, Dec., 2014.

15. Acosta, R. P., and M. Huber, Are model-data differences in the Indo-Asian monsoon due to model or data biases?, AGU Fall Meeting, San Francisco, Dec., 2014.
16. Rondanelli, R., M. Huber, and G. Shaffer, Shortwave absorption by water vapor and clouds as a source of equability in warm climates, AGU Fall Meeting, San Francisco, Dec., 2014.
17. Green, M.; Huber, M.; TIDAL DISSIPATION IN THE EARLY EOCENE AND IMPLICATIONS FOR OCEAN MIXING, AGU Ocean Sciences, Feb., 2014.
18. Acosta, R. P.; Goldner, A.; Herold, N.; Huber, M.; DOES THE TIBETAN PLATEAU PLAY AN IMPORTANT ROLE ON THE UPWELLING SYSTEMS IN THE ARABIAN SEA AND BAY OF BENGAL? AGU Ocean Sciences, Feb., 2014.
19. Buzan, J. R.; Herold, N. K.; Huber, M.; A GLOBAL PALEOBATHYMETRY DATASET OF THE EARLY EOCENE. AGU Ocean Sciences, Feb., 2014.
20. Jonathan R Buzan, Nicholas K Herold, Matthew Huber. A global dataset of Early Eocene paleotopography, AGU San Francisco Dec. 2013.
21. Jonathan R Buzan, Matthew Huber, Aaron Goldner, Keith W Oleson. "Heat stress extremes within CESM land surface for paleo and future climates", NCAR CESM Workshop, Breckenridge, June, 2013.
22. Jonathan R Buzan, Matthew Huber, and Keith Oleson. Heat Stress Biases in Community Land Model within CESM, NCAR Boulder, 2013.
23. Goldner, A. P., M. Huber, N. K. Herold, and R. J. van Hooidek, The implications of successful modelling of the Mid-Miocene Climatic Optimum for future climate projections. *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2012.
24. Amaya, D., D. J. Thomas, F. Marcantonio, R. Korty, M. Huber, G. Winkler, C. A. Alvarez Zarikian, Reconstruction of South Pacific Dust Accumulation during the Early Paleogene Greenhouse. *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2012.
25. Thomas, D. J., R. Korty, M. Huber, and M. W. Lyle, The Late Paleogene Evolution of Southern Ocean Deep-water Formation - the Onset of Global Thermohaline Circulation. *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2012.
26. Huber, M., J. R. Buzan, and K. W. Oleson, Land surface heat stress extremes within CESM for paleo and future climates. *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2012.
27. Buzan, J. R. , M. Huber, Extreme Heat Stress trends in ERA Interim 1979-2011. *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2012
28. Krishnan, S., M. Pagani, M. Huber, Hydrological cycle during the early Eocene: What can we learn from leaf waxes? *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2012
29. James A. Bendle; Peter Bijl; Jaime L. Toney; Jorg Pross; Lineth Contreras; Stefan Schouten; Ursula Roehl; Lisa Tauxe; Matthew Huber; Henk Brinkhuis , A "tropical" Early Eocene marine environment on the Antarctic margin: TEX86 results from

IODP expedition 318, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2011.

30. Jaime L. Toney; James A. Bendle; Gordon Inglis; Peter Bijl; Jorg Pross; Lineth Contreras; Tina van de Flierdt; Claire E. Huck; Stewart Jamieson; Matthew Huber; Stefan Schouten; Ursula Roehl; Steven M. Bohaty; Henk Brinkhuis, Local response to warm Antarctic terrestrial temperatures in the Eocene: evidence from terrestrial biomarkers, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2011.
31. Aaron P. Goldner; Matthew Huber; Rodrigo Caballero, Does Antarctic Glaciation Cause an Intensification of the Indo-Asian Monsoon Near the Eocene-Oligocene Transition? , *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2011.
32. David R. Greenwood; Matthew Huber, Eocene precipitation: a global monsoon?, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2011.
33. Richard D. Pancost; Kyle W. Taylor; Luke Handley; Matthew Huber; Christopher J. Hollis, A Critical Evaluation of High TEX86-derived Sea Surface Temperatures from the Early Eocene, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2011.
34. Jonathan R. Buzan; Matthew Huber; Gabriel J. Bowen; Aaron P. Goldner; David C. Noone, Characterization of surface moisture changes between the PETM and Early Eocene in a Global Climate Model, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2011.
35. Srinath Krishnan; Matthew Huber; Mark Pagani, STATE OF THE HYDROLOGICAL CYCLE DURING THE EOCENE: MODEL-DATA COMPARISON, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2011.
36. Brian A. Haines; Robert Korty; Matthew Huber; Deborah J. Thomas, Simulations of the meridional overturning circulation during the Paleogene, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2011.
37. Ryan A. Zamora; Robert Korty; Matthew Huber; Deborah J. Thomas, Extratropical lapse rates during the Paleogene and other very hot climates, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2011.
38. Huber, M., If the Eocene was hot, what does this tell us about the future?, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2010.
39. Caballero, R., and M. Huber, A spontaneous transition to superrotation in warm climates, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2010.
40. Goldner, AP, M. Huber, and RL Sriver, Is the Future State of North American Hydroclimatology Controlled by Tropical Cyclones and the Evolution of El Niño? *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2010.
41. Buzan, JR, AP Goldner, and M. Huber, Is the Tibetan Plateau important for the Asian Monsoon? *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2010.
42. Sriver, RL, MP Goes, ME Mann, M. Huber, and K. Keller, Recent Advances in Understanding Tropical Cyclone-Climate Interactions Using Climate Models of Varying Complexity, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2010.

43. Hague, AM, DJ Thomas, JA Schubert, R Korty, and M. Huber, Reconstruction of Early Paleogene North Pacific Deep-Water Circulation using the Neodymium Isotopic Composition of Fossil Fish Debris, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2010.
44. Schubert, JA, DJ Thomas, AM Hague, R Korty, and M Huber, Paleogene reconstruction of southern Pacific water mass composition using Nd isotopes, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2010.
45. Hollis, CJ, KW Taylor, L Handley, RD Pancost, J Creech, J Baker, S Schouten, E Kennedy, EM Crouch, M Huber, and D Ackerley, Paleoclimate Data-Model Comparisons for Early Paleogene New Zealand, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2010.
46. Huber, M., Progress in understanding Eocene climate and implications for estimating climate sensitivity to greenhouse gas variation, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2009.
47. Abbot et al., A High-Latitude Convective Cloud Feedback and Equable Climates, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2009.
48. Greenwood et al., Eocene Precipitation: How Wet and Where? A Model-Proxy Comparison, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2009.
49. Speelman et al., Modeling the influence of a reduced equator-to-pole sea surface temperature gradient on the distribution of water isotopes in the Eocene, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2009.
50. Park et al., Transient 120,000-year response of the large regional flow system at Yucca Mountain, Nevada to complex cyclical variability in paleoclimate, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2009.
51. Sternberg et al., Arctic Eocene isotopic anomaly: unusual temperature/rainfall isotope relationship and a stormy world, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2009.
52. Ivany et al., ENSO-Scale Variability in the Eocene Greenhouse Recorded by Fossil Bivalves and Wood from Antarctica, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2009.
53. Huber, M., and R. L. Sriver, Investigating Tropical Cyclone-Induced Feedbacks Using an Ocean General Circulation Model, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2008.
54. Sriver*, R. L. and Huber, M., The effect of tropical cyclone winds on the upper ocean, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2008.
55. Bice, D. M., S. Galeotti, M. Huber, A. von der Heydt, H. Dijkstra, T. Jilbert, L. Lanci, G. Reichart, and L. Smith, Interannual climate variability recorded by late Miocene laminated gypsums: evidence for ENSO in the Mediterranean, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2008.
56. Huber, M., Nusbaumer*, J., and Sriver*, R. L., Importance of changes in extreme weather events for the maintenance of past warm climates, *AGU Chapman Conference on Atmospheric Water Vapor and Its Role in Climate*, Kailua-Kona, HI, October, 2008.

57. Sriver*, R. L. and Huber, M., Effect of tropical cyclone winds on the upper ocean, *NCAR/UCAR Junior Faculty Forum on Future Scientific Directions, Boulder, CO, July, 2008.*
58. von der Heydt, A.; Galeotti, S.; Huber, M. ; Bice, D.; Dijkstra, H.A.; Jilbert, T.; Lanci, L.; Reichert, G.-J., Evidence for ENSO variability in the late Miocene, *European Geophysical Union Meeting, Vienna, Apr. 2008.*
59. Bijl, P.K.; Warnaar, J.; Brinkhuis, H.; Pross, J. ; Sluijs, A.; Stickley, C.E.; Guerin, R.; Huber, M.; Visscher, H., Early Paleogene dinoflagellate biogeography of the Southern Ocean; implications for surface-water circulation, *European Geophysical Union Meeting, Vienna, Apr. 2008.*
60. Handley, L.; Hollis, C. ; Crouch, E. ; Schouten, S.; Huber, M.; Morgans, H.; Pearson, P. ; Baker, J.; Burgess, C.; Pancost, R., Dramatic high latitude sea surface temperature change during the Paleogene: New multi-proxy records from New Zealand, *European Geophysical Union Meeting, Vienna, Apr. 2008.*
61. Handley, L., C. Hollis, E. Crouch, S. Schouten, M. Huber, H. Morgan, P. Pearson, J. S. Sinninghe Damse, C. Burgess, and R. D. Pancost, Integrated biomarker records reveal complex and dramatic changes in high latitude climate during the Paleogene, *Goldschmidt Geochemistry Conference, Spring 2008.*
62. Pagani, M., Z. Liu, and M. Huber, The role of pCO₂ during the Eocene-Oligocene climate transition, *Goldschmidt Geochemistry Conference, Spring 2008.*
63. Sriver*, R. L., Huber, M., and Nusbaumer*, J., Applying TMI retrievals of sea surface temperature and surface winds to understanding tropical cyclone-induced climatic feedbacks, *The Third NASA/JAXA International TRMM Science Conference, Las Vegas, NV, February, 2008.*
64. Sriver*, R. L. and Huber, M., Climatic feedbacks between tropical cyclones, temperature and vertical ocean mixing, *American Geophysical Union Fall Meeting, San Francisco, CA, December, 2007.*
65. Basumallik, A., Zhao, L., Song, C. X., Lee, W., Sriver*, R. L., and Huber, M., Push-button Community Climate System Model on the TeraGrid, *International Conference for High Performance Computing, Networking, Storage and Analysis, Reno, NV, November, 2007.*
66. Basumallik, A., Zhao, L., Song, C. X., Sriver*, R. L., and Huber, M., A community climate system modeling portal for the Teragrid, *Teragrid Annual Conference, Madison, WI, June, 2007.*
67. Merwade, V., L. Zhao, C. X. Song, Y. M. Kim, R. Kalyanam, D. Ebert, B. Engel, R. Govindaraju, M. Huber, C. Jafvert, D. Niyogi, S. Prabhakar, and S. Kumar, Interweaving Data and Computation for End-to-End Environmental Exploration on the TeraGrid, *Teragrid Annual Conference, Madison, WI, June, 2007.*
68. Huber, M., and R. Sriver*, Tropical Cyclones as Climate Drivers: Lessons from the Past and Future Directions, *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 2006*
69. Sriver*, R. and M. Huber, Tropical Cyclone-Induced Ocean Mixing, Ocean Heat Transport, and the Potential for Climatic Feedbacks, *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 2006*

70. Van Hooidonk*, R. and M. Huber, The Impact of Tropical Cyclones on Coral Bleaching and Coral Disease, *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 2006.*
71. You, Y., D. Muller, M. Huber, B. Otto-Bliesner, C. Poulsen, M. Sdrolias and J. Ribbe, Sensitivity study of the role of vegetation in Miocene Climate change, *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 2006.*
72. You, Y., Müller, R.D., Huber, M. Otto-Bliesner, B., Poulsen, C., Sdrolias M. and Ribbe, J., 2006, Sensitivity study of the role of vegetation in Miocene climate change, *American Geophysical Union Western Pacific Geophysics Meeting, Beijing, China, July, 2006.*
73. Sluijs, A., Schouten, S., Brinkhuis, H., Sinninghe Damsté, J.S., Dickens, G.R., Huber, M., Reichart, G.J., Pagani, M., and L. J. Lourens, L.J., A subtropical North Pole during the late Paleocene - early Eocene, *European Geophysical Union Meeting, Vienna, Apr. 2006.*
74. Huber, M., Report on Paleoclimate Working Group Proposed Activities, *NCAR CCSM Paleoclimate Working Group Meeting, University of Wisconsin, Madison, Wisc., Feb. 2006.*
75. Sriver*, R., and M. Huber, Estimating Ocean Heat Transport Attributable to Tropical Cyclone Activity Using ERA-40 Data. *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 2005.*
76. Van Hooidonk*, R., and M. Huber, The role of tropical cyclones in maintaining Paleogene climate. *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 2005.*
77. Lyle, M., Huber, M., and A. Olivarez Lyle , Paleocene-Eocene Boundary: Methane hydrate reservoirs on a warm Earth, *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 2005.*
78. Brinkhuis, H., S. Schouten, M. E. Collinson, A. Sluijs, J. S. Sinninghe-Damste, G. R. Dickens, M. Huber, T. M. Cronin, J. P. Bujak, R. Stein, J. S. Eldrett, I. C. Harding, and F. Sangiorgi, A giant Arctic freshwater pond at the end of the Early Eocene; Implications for ocean heat transport and carbon cycling. *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 2005.*
79. Pagani, M., N. Pedentchouk, M. Huber, A. Sluijs, S. Schouten, H. Brinkhuis, J. S. Sinninghe Damste, and G. R. Dickens, The Arctic's hydrology during global warming at the Palaeocene-Eocene thermal maximum. *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 2005.*
80. Sluijs, A., S. Schouten, M. Pagani, H. Brinkhuis, J. Sinninghe Damste, G. R. Dickens, M. Huber, G. Reichart, R. Stein, L. J. Lourens, Extremely high Late Paleocene - Early Eocene sea surface temperatures on the North Pole. *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 2005.*
81. Warnaar, J., Brinkhuis, H., Stickley, C.E., Sluijs, A., and M. Huber, Timing, nature and consequences of the deepening of the Tasmanian Gateway. *European Geophysical Union Meeting, Vienna, Apr. 2005.*
82. Huber, M., and R. Caballero, Irrepressible El Niño: Perspectives on ENSO and climate change from the deep past, *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 2004.*

83. Sriver*, R., and M. Huber, Tropical cyclone-induced ocean mixing and ocean heat transport, *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 2004*.
84. Stickley, C. E., et al., Timing and nature of the deepening of the Tasmanian Gateway, *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 2004*.
85. Brinkhuis, H., M. Huber, A. Sluijs, J. Warnaar, J. P. Bujak, J. C. Zachos, From Greenhouse to Icehouse: Evidence for Late Early Eocene concomitant cooling of Southern Ocean surface waters and global deep waters from dinoflagellate endemism, *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 2004*.
86. Huber, M., Error estimates for the enthalpy method of estimating paleoelevations, *European Geophysical Union, Apr. 2004*.
87. Huber, M., Coupled general circulation model predicted modes of climate variability during the Eocene hothouse, *European Geophysical Union, Apr. 2004*.
88. Caballero, R., and M. Huber, Thermostats, radiator fins, ENSO, and the importance of ocean-atmosphere interactions in the Tropics, *European Geophysical Union, Apr. 2004*.
89. Huber, M., and H. Brinkhuis, Antarctic cryospheric development was driven by greenhouse gas changes, not by changes in 'thermal isolation' from ocean currents: A data and model perspective, *European Geophysical Union, Apr. 2004*.
90. Stickley, C. E., H. Brinkhuis, S. A. Schellenberg, A. Sluijs, U. Roehl, M. Fuller, M. Grauert, M. Huber, J. Warnaar, G. L. Williams, Timing and nature of the opening of the Tasmanian Gateway at the Eocene-Oligocene transition: ODP Site 1172, *European Geophysical Union, Apr. 2003*.
91. Brinkhuis, H., M. Huber, S. A. Schellenberg, C. Stickley, A. Sluijs, J. Warnaar, and G. L. Williams, Is the opening of the Tasmanian Gateway related to earliest Oligocene Antarctic cryospheric development, *European Geophysical Union, Apr. 2003*.
92. Huber, M., H. Brinkhuis, et al., Was Antarctica kept warm by subtropical waters in the Eocene? Part 2: Climate Model results, *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 2002*.
93. Kronborg, M., and M. Huber, Climate of the Early Paleogene Tropics: The "forecast" from a coupled climate model, *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 2002*.
94. Garric, G., and M. Huber, Internal Atmosphere-ocean variability as a cause of apparent quasi-decadal variability in paleoclimate records? *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 2002*.
95. Caballero, R. and M. Huber, A Two-Column Model of the Tropical Climate and ENSO, *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 2002*.
96. Doos, K., M. Huber, and R. Caballero, Did Latent Heat Transport Increase in the "Hothouse" Climate of the Eocene? *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 2002*.
97. Brinkhuis, H., M. Huber, et al., Was Antarctica kept warm by subtropical waters in the Eocene? Part 1: Evidence from biotic endemism, *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 2002*.

98. Huber, M., The oceans role in the initiation, maintenance, and termination of Paleogene warm climate, *Western Pacific Geophysics Meeting, Wellington, New Zealand, July 2002*.
99. Huber, M., Modelling the warm climates of the early Paleogene with NCAR's CSM: Consequences of ocean-atmosphere interaction for the cool tropics paradox, *European Geophysical Society Meeting, Nice, France, April, 2002*.
100. Huber, M. Model predicted ocean and atmospheric heat transports at ~ 50 mya: Implications the role of ocean heat transport changes in past climates, *American Geophysical Union Annual Meeting, Honolulu, CA, Feb. 2002*.
101. Shellito, C., L. C. Sloan, and M. Huber, Constraining pCO₂ levels in the early-middle Paleogene, *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 2001*.
102. Huber, M., and L. C. Sloan, Results from the first fully coupled general circulation model simulations of early Paleogene climate: What role do the oceans play in maintaining past warm climates? *Climate and Biota of the Early Paleogene, Wyoming, July 2001*.
103. Sloan, L.C., D. Greenwood, S. Wing, and M. Huber, Causes of Paleogene climate change, *Australian Geologic Convention, Sydney, Australia, July, 2000*.
104. Huber, M., and L. C. Sloan, Initial results of a fully coupled modelling investigation into the "Greenhouse" climate of the Eocene using NCAR's CSM. *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 1999*.
105. Huber, M., and L. C. Sloan, The challenges of modelling extreme warm climates: Old problems, new models, *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 1999*.
106. Sloan, L.C., M. Huber, R. Peters, and A. Ewing, Modeling the Paleogene, Part I: Paleogene terrestrial climate change predicted from climate modeling studies: *GFF*, v. 122, p. 146-147, 2000 (results presented in *Göteborg, Sweden, June 1999*).
107. Sloan, L. C., R. Peters, M. Huber, J. O. Sewall, and M. Snyder, Causes and consequences of early Cenozoic warmth, *Geological Society of America, Pardee Symposium, Oct., 1999*.
108. Peters, R., L. C. Sloan, and M. Huber, Sensitivity of early Cenozoic climate to high methane concentrations and polar stratospheric clouds: Implications for high latitude faunal migration, *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 1999*.
109. Sewall, J. O., L. C. Sloan, and M. Huber, Sensitivity of regional climates to land surface changes, *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 1999*.
110. Huber, M., and L. C. Sloan, Modeling the Paleogene, Part II: Paleogene wind-driven ocean circulation changes predicted from climate modeling studies: *GFF*, v. 122, p. 80-81, 2000 (results presented in *Göteborg, Sweden, June 1999*).
111. Huber, M., and L.C. Sloan, Upwelling, gyres, and the wind-driven ocean circulation during warm climate intervals, *American Geophysical Union Annual Meeting San Francisco, CA, Dec. 1998*.

112. Huber, M., and L. C. Sloan, A model climatology of the Paleocene/Eocene Boundary, *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 1997.*
113. Sloan, L. C., M. Huber, and C. Morrill, Climate of the Paleocene/Eocene Boundary: A climate modeling investigation, *American Geophysical Union Annual Meeting San Francisco, CA, Dec. 1997.*
114. Huber, M., and R.T. Pierrehumbert, The tropical water vapor distribution during CEPEX, *American Meteorological Society, Dallas, TX, Jan. 1995.*

X. ENGAGEMENT AND OUTREACH

Given the importance of climate change to everyone's future it an important duty to interact as much as possible with the public to convey the important scientific issues. Consequently I have developed a large portfolio of outreach, engagement and dissemination activities.

I have given lectures locally and internationally to lifelong learners and stakeholders:

- A keynote talk at the March 25, 2010 Conference on "Building Resilience: Post-Disaster Recovery in International Perspective", sponsored by Center for Global Partnership in collaboration with the Purdue Climate Change Research Center, Homeland Security Institute, the Discovery Park Office of Engagement, and the Department of Political Science.
- A lecture on climate change to the Ministry for the Environment, Wellington New Zealand, July 2009.

My research is covered in the following popular science books:

- Page 251. *Storm World: Hurricanes, Politics, and the Battle Over Global Warming* by Chris Mooney (award winning author and New York Times bestselling author of "The Republican War on Science".)
- Page 173- 187. *Armageddon: Der Einschlag*, by Ralf Blasius and Nadja Podbregar. A book based on the "Super Comet" movie described below.
- *Sea Sick: The Global Ocean in Crisis* by Alanna Mitchell. This winner of the 2010 Grantham Prize "Honoring exceptional environmental journalism" includes a chapter devoted to my research.

Coverage in Popular Science Magazines

I worked with the National Geographic Society on an extensive visualization of what the Earth's climate and geography will look like in the event of extreme global warming. Appeared in 2011.

I have appeared or will appear in the following three movies for popular science audiences:

"Super Comet: After the Impact" a 2-hour long full Discovery Channel movie conveying to non-scientists the effects of a dinosaur killer style cometary impact. This movie is in regular rotation on the Discovery Channel. From the Discovery Channel. "On October 24th, 2007 and on the Halloween Night of October 31st, 2007 the Discovery Channel (Europe) aired the two hour docudrama '*Super Comet: After the Impact*'. This documentary essentially transfers the events of the Cretaceous Extinction Level Event (E.L.E), that occurred sixty-five million years ago and lead to the demise of the dinosaurs, to the twenty first century. 'Super Comet' recreates the fatal disaster that wiped the dinosaurs off the face off the Earth, only it's not the dinosaurs that are living on planet Earth - it's us. This remarkable programme gives

viewers a chance to see the real effects a 'Super Comet' would have after impact on planet Earth if it were to happen in today's world. What would happen to the human race and the planet itself is told through the dramas of people's lives as well as fascinating interviews with top scientists. This is a dramatic, adrenaline fuelled programme not to be missed!"

I appeared in an interview as part of a documentary on global warming, by Simon Lamb, formerly entitled "*The Last Trillion Tons*", now called "Thin Ice". The movie is described as, "[Lamb] is producing a film which will feature scientists' perspectives of Earth's changing climate, how and why it is happening, and the options we have for responding. The \$1.8 million (£600,000) film is a collaboration between Victoria University of Wellington, with its history of Antarctic research, and Oxford University, with its world-leading centres for the Earth and Environmental Sciences and Atmospheric Physics. The film was produced and directed by both Simon Lamb and David Sington of award winning DOX Productions, who collaborated 10 years ago to produce the acclaimed 8-hour BBC television series *Earth Story*."

I worked with Wide-Eyed Entertainment, the creators of the BBC's "Walking with Dinosaurs" series, on a proposal to make a documentary of these extreme global conditions built in part around my Eocene work. This proposal has been successful, and the documentary is in the filming and post-production phase. Filming of my scenes occurred at the Indiana University campus in April 7, 2011. The provisional title of the movie is 'Super-Snake!'.

Some more selected media interactions:

- I coauthored a NY Times OP-ED piece on heat stress related deaths in India in 2015. http://www.nytimes.com/2015/06/07/opinion/sunday/the-deadly-combination-of-heat-and-humidity.html?_r=0

I was profiled by the New York Times for my unique philosophy toward teaching, learning and work. As part of this effort to entrain a Generation Y students into the Earth and Atmospheric Sciences, I did an interview which was published in the New York Time fashion and style section, on work environments. "You Won't Find Me in My Office, I'm Working", By [LISA BELKIN](#). Published: December 13, 2007: <http://www.nytimes.com/2007/12/13/fashion/13Work.html?sq=matthew%20huber&st=nyt&scp=2&pagewanted=all>

My unique life story and approach to life and science was profiled in a USA Today article by Rick Callahan, entitled, "Climate scientist sees clues to tomorrow in Earth's past". http://www.usatoday.com/tech/science/discoveries/2005-02-26-ancient-climate_x.htm

My work on hurricanes and global warming was also highlighted in the New York Times, "2 Studies Link Global Warming to Greater Power of Hurricanes." By [JOHN SCHWARTZ](#). Published: May 31, 2006.

<http://www.nytimes.com/2006/05/31/science/31climate.html?scp=3&sq=matthew+huber&st=nyt>

My work has also been featured in several select news outlets recently. Including in:

Financial Times by Clive Cookson

FT: http://www.ft.com/cms/s/0/9afd45fa-ded1-11de-adff-00144feab49a.dwp_uuid=2f2f2698-de6f-11de-89c2-00144feab49a.html

NPR: <http://www.npr.org/templates/story/story.php?storyId=100262412>

Telegraph: <http://www.telegraph.co.uk/science/science-news/4509284/Scientists-discover-fossilised-remains-of-worlds-longest-snake.html>

Discover: <http://blogs.discovermagazine.com/80beats/2009/02/04/super-sized-snake-ate-crocodiles-for-breakfast/>

BBC: <http://news.bbc.co.uk/2/hi/sci/tech/7868588.stm>

Bloomberg: <http://www.bloomberg.com/apps/news?pid=20601081&sid=aHtmXZq4noro&refer=australia>