

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

Director, Purdue University Institute for a Sustainable Future

2022-present

Professor, Dept. of Earth, Atmos. and Planetary Sci., Purdue University

2016-present

Affiliate Research Professor, EOS, University of New Hampshire

2016-2021

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

- Founder of the Institute for a Sustainable Future
- College of Science Research Award (2022)
- 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)
- 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)
- Formerly Associate Director, Executive Committee Member, and Co-founder Purdue Climate Change Research Center
- Fellow of Purdue's Cyber Center (2006)

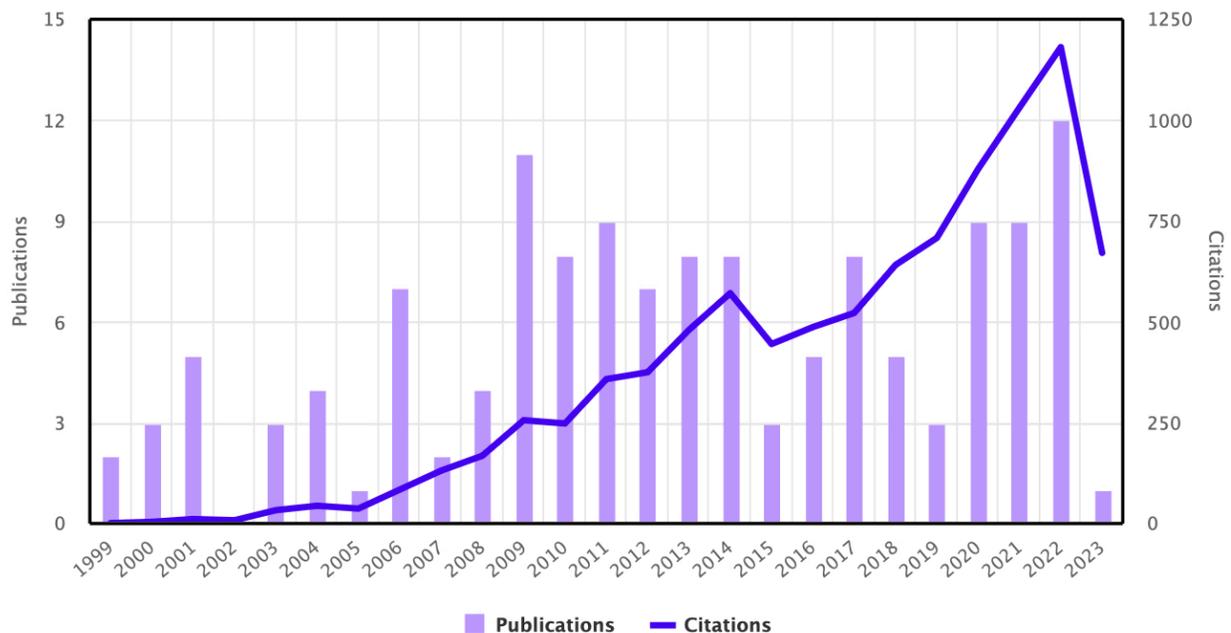
IV. PEER-REVIEWED PUBLICATIONS (* a past or current student advisee contribution)

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 50. Total citations is 9374. Normalized h-index= 2.27

ISI Citation Graphic

Times Cited and Publications Over Time



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

2023

- 134) Kong, Q., and M. Huber, 2023: Regimes of soil moisture-wet bulb temperature coupling with relevance to moist heat stress. *J. Climate*, <https://doi.org/10.1175/JCLI-D-23-0132.1>, in press.
- 133) Baldos, U. L. C., Chepeliev, M., Cultice, B., Huber, M., Meng, S., Ruane, A. C., ... & van der Mensbrugge, D. (2023). Global-to-local-to-global interactions and climate change. *Environmental Research Letters*, 18(5), 053002.

2022

- 132) Liu, X., Huber, M., Foster, G. L., Dessler, A., & Zhang, Y. G. (2022). Persistent high latitude amplification of the Pacific Ocean over the past 10 million years. *Nature Communications*, 13(1), 7310.
- 131) Vervoort, J.M., Milkoreit, M., van Beek, L., Mangnus, A.C., Farrell, D., McGreevy, S.R., Ota, K., Rupprecht, C.D., Reed, J.B. and Huber, M., 2022. Not just playing: The politics of designing games for impact on anticipatory climate governance. *Geoforum*, 137, pp.213-221.

- 130) Hoem, F. S., Sauermilch, I., Aleksinski, A. K., Huber, M., Peterse, F., Sangiorgi, F., & Bijl, P. K. (2022). Strength and variability of the Oligocene Southern Ocean surface temperature gradient. *Communications Earth & Environment*, 3(1), 322.
- 128) Saeed, W., Haqiqi, I., Kong, Q., Huber, M., Buzan, J. R., Chonabayashi, S., Motohashi, K., & Hertel, T. W. (2022) The Poverty Impacts of Labor Heat Stress in West Africa under a Warming Climate. *Earth's Future*, e2022EF002777.
- 127) Wang, Y., Lu, H., Yi, S., Huber, M., Yang, F., Gu, Y., ... & Lu, F. (2022). Tropical forcing orbital-scale precipitation variations revealed by a maar lake record in South China. *Climate Dynamics*, 58(9), 2269-2280.
- 126) Williams, C. J., Lunt, D. J., Salzmann, U., Reichgelt, T., Inglis, G. N., Greenwood, D. R., ... & Otto-Bliesner, B. L. (2022). African hydroclimate during the early Eocene from the DeepMIP simulations. *Paleoceanography and Paleoclimatology*, e2022PA004419.
- 125) Jyothi, L., Joseph, S., Huber, M., & Joseph, L. A. (2022). Distinct Oceanic Responses at Rapidly Intensified and Weakened Regimes of Tropical Cyclone Ockhi (2017). *Journal of Geophysical Research: Oceans*, 127(6), e2021JC018212.
- 124) Parkes, B., Buzan, J. R., & Huber, M. (2022). Heat stress in Africa under high intensity climate change. *International journal of biometeorology*, 66(8), 1531-1545.
- 123) Gaskell, D. E., Huber, M., O'Brien, C. L., Inglis, G. N., Acosta, R. P., Poulsen, C. J., & Hull, P. M. (2022). The latitudinal temperature gradient and its climate dependence as inferred from foraminiferal $\delta^{18}O$ over the past 95 million years. *Proceedings of the National Academy of Sciences*, 119(11), e2111332119. <https://doi.org/10.1073/pnas.2111332119>.
- 122) Zhang, Y., de Boer, A. M., Lunt, D. J., Hutchinson, D. K., Ross, P., van de Flierdt, T., ... & Huber, M. (2022). Early Eocene ocean meridional overturning circulation: the roles of atmospheric forcing and strait geometry. *Paleoceanography and Paleoclimatology*, e2021PA004329.
- 121) Kong, Q., & Huber, M. (2022). Explicit calculations of wet-bulb globe temperature compared with approximations and why it matters for labor productivity. *Earth's Future*, 10, e2021EF002334. <https://doi.org/10.1029/2021EF002334>
- 120) Teshome, H., Tesfaye, K., Dechassa, N., Tana, T., & Huber, M. (2022). Analysis of Past and Projected Trends of Rainfall and Temperature Parameters in Eastern and Western Hararghe Zones, Ethiopia. *Atmosphere*, 13(1), 67.

2021

- 119) Filippelli, G., Beal, L., Rajaram, H., AghaKouchak, A., Balikhin, M. A., Destouni, G., ... & Zhang, M. (2021). Geoscientists, Who Have Documented the Rapid and Accelerating Climate Crisis for Decades, Are Now Pleading for Immediate Collective Action. *Geophysical Research Letters*, 48(21), e2021GL096644.
- 118) Wang, Y., Lu, H., Yi, S., Huber, M., Yang, F., Gu, Y., ... & Lu, F. (2021). Tropical forcing orbital-scale precipitation variations revealed by a maar lake record in South China. *Climate Dynamics*.
- 117) Teshome, H., Tesfaye, K., Dechassa, N., Tana, T., & Huber, M. (2021). Smallholder farmers' perceptions of climate change and adaptation practices for maize production in eastern Ethiopia. *Sustainability*, 13(17), 9622.
- 116) Daher, H., Arbic, B. K., Williams, J. G., Ansong, J. K., Boggs, D. H., Müller, M., ... & Huber, M. (2021). Long-term Earth-Moon evolution with high-level orbit and ocean tide models. *Journal of Geophysical Research: Planets*, e2021JE006875.

- 115) Burls, N. J., Bradshaw, C. D., De Boer, A. M., Herold, N., **Huber, M.**, Pound, M., et al. (2021). Simulating Miocene warmth: Insights from an opportunistic Multi-Model ensemble (MioMIP1). *Paleoceanography and Paleoclimatology*, 36, e2020PA004054. <https://doi.org/10.1029/2020PA004054>.
- 114) de Lima, C. Z., Buzan, J. R., Moore, F. C., Baldos, U. L. C., **Huber, M.**, & Hertel, T. W. (2021). Heat stress on agricultural workers exacerbates crop impacts of climate change. *Environmental Research Letters*, 16, 044020.
- 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) Steinthorsdottir, 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., Steinthorsdottir, 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., Laurentano, 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-Lisarrri, 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., Donnadiou, 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-15-0785.1.2016, 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.

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¹ Purdue Undergraduate Researcher working with Huber, also DURl scholar

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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
- AAAS 2016-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 including National and International Service/Leadership:

- Currently Co-lead (with Dan Lunt, Bristol) of the DeepMIP project (deepmip.org), a paleoclimate model-data in comparison umbrella project focused on pre-Quaternary time intervals: running international meetings& workshops for 2017-2019, publishing joint papers, enhancing participation of early career researchers in paleoclimate model and data integration.
- Currently co-lead Miocene Paleoclimate-MIP project which is an extension of the DeepMIP concept. Two meetings were organized in Stockholm. Associated AGU sessions and

special issue of *Paleoceanography and Paleoclimatology* (25 papers published/in press) were derived from this.

- 2008-present. Climate & Biotic Events of the Paleogene conferences Scientific Steering Committee.
- 2016-2018. Scientific Steering Committee member of NSF Research Coordination Network on paleo-CO₂ proxies led by Bärbel Hönlisch.
- Editorial Board, *Geology*: 2017-2019.
- Editorial Board (Topical Editor) *Earth System Dynamics*: 2010 to 2019. *ESD* is an 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 attend 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 ~2 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, Paleo³, Journal of Physical Oceanography, J.G.R. Oceans.

- I review ~6 proposals per year for NSF, and various EU, UK research agencies.

Overview of Other Synergistic activities

- I sit on several fellow nomination committees.
- 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

- Founding Director, Purdue Institute for a Sustainable Future (280 affiliates), Jan. 2022-present
- EAPS computing committee chair (2016-present)
- EAPS graduate committee member (2018-present)
- EAPS atmospheric sciences search chair (2020,2021), hired Lei Wang and Yuan Wang
- 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.

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 atmospheric sciences 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 10 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 or Purdue's ISF.

- EAPS 117: Introduction to Atmospheric Science: Fall 2021-23.
- EAPS 420: Climate Modeling: Spring 2021
- 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 ugrads.
- EAPS 420: Global Climate Modeling: Fall, 2008. ~5 grads, 10 ugrads.
- 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)

Qin Qin Kong (Phd Student continuing)
Adam Aleksinski (Phd Student continuing)
Carly Frank (Phd Student continuing)

Jon Buzan (Ph. D 2018 Purdue , began at Purdue 2010 received MS 2013, now post-doc at University of Bern)

Paul Acosta (Ph. D. 2018 Purdue, began 2012 received MS 2013, post-doc with Chris Poulsen at University of Michigan, now post-doc with Natalie Burls at GMU)

Ashley Dicks (MS student, Purdue, received MS in 2019, now JEDI software engineer NCAR)

Aaron Goldner (PhD. 2013, then 2013-2014 AGU Congressional Science Fellow working with Senator Sheldon Whitehouse, 2014-2015 AAAS Science and Technology Fellow, U.S. Department of Energy, 2015-2021 Advisor on Energy Policy to Senator Sheldon Whitehouse, 2021-present, Professional Staff United States Senate Committee on Appropriations)

Ruben van Hooionk (Ph.D. 2009--awarded NRC NOAA postdoctoral fellowship, now NOAA research scientist)

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. Subsequently awarded aPhD in geoinformatics at George Mason University.

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

Postdoctoral Advisees:

Xiaoqing Liu (currently Post-doc at Purdue)
N. Herold (now research scientist UNSW and in govt service);
M. Komurcu (now research scientist at MIT).
Srinath Krishnan (now research scientist at University of Oslo)

Graduate Student Advising Committee

Yang Zhang (PhD Purdue, EAPS, Phd Awarded)
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

Grace Kowalski(2022-present, will be PhD student at Johns Hopkins in 2023)
Jordan Macisaac(2021-present, will be MS student in UK in 2023)
Gozde Iloglu(2020-2022, will be PhD student in Hamburg in 2024)
Alex Richardson(2022)
Suyash Uppal (2021-2022)
Amanda Sheffield (2005)—received PhD at CSU and is now Regional Drought Information Coordinator at NOAA National Integrated Drought Information System (NIDIS)
Jesse Nusbaumer (2006-2008)—Phd from CU Boulder, NSF graduate research fellowship recipient, then at NASA GISS, now at NCAR.
Joe Pavich (2006-2007)
Jeff Neuffer (2010)
Juan Crespo (2010-2012), PhD at University of Michigan, now at JPL.
Zachary Zobel (2011-2012) Phd University of Illinois; Now at Woods Hole Research Center.
James Parish III (2011-2012) TV meteorologist

VII. GRANTS AND AWARDS

Current

NSF 2217530-OCE NSFGE0-NERC Collaborative Research: Solving the conundrum of the Miocene South Asian Monsoon

Dates 09/01/2022-08/31/2025

Amount \$327,974.00 (Huber PI, all funds to Purdue)

NASA FINESST Investigating physical mechanisms relating soil moisture to moist heat stress

Dates 09/01/2022-05/31/2025

Amount \$150,000 (Huber PI, funds support Qin Qin Kong Phd Student)

NSF 2230092-OAC Collaborative Research: CyberTraining: Implementation: Medium: Cyber Training for Open Science in Climate, Water and Environmental Sustainability

Dates: 01/01/2023-12/31/2025

Amount \$847,844 (Huber is Senior Personnel, all funds to Purdue, Huber part is \$75k)

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

Dates: 05/01/2019-04/30/2024

Amount \$296,757 (Huber PI, all funds to Purdue)

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

Dates: 7/20/2018 - 8/31/2023

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 - 4/30/2023

Amount \$488,341 (Huber PI, all funds to Purdue)

Past

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 (Huber PI, all funds to Purdue)

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., The State of the Climate Crisis & Breaking Down Barriers to Act Now – Executive Track: The Climate Crisis and the Events Industry, a Chance to Lead, Professional Convention Management Association Annual Meeting, Columbus Ohio, January 2023.
2. Huber, M., The dynamics and impacts of moist heat stress, University of Southern California Dept Earth Sciences, November, 2022.
3. Huber, M., The dynamics and impacts of moist heat stress, Institute for Mathematical and Statistical Innovation (University of Chicago, virtual), October, 2022,
4. Huber, M., Through a Model, Darkly: Insights into the dynamics of warm climates, past and future, KIRAN C PATEL CENTRE FOR SUSTAINABLE DEVELOPMENT SUSTAINABILITY SEMINAR SERIES, Gandhinagar (virtual). https://www.youtube.com/watch?app=desktop&v=_txqGmz5sa0
5. Huber, M., Hydroclimate and Habitability: Monsoons, NASEM: IDENTIFYING NEW COMMUNITY-DRIVEN SCIENCE THEMES FOR NSF'S SUPPORT OF PALEO PERSPECTIVES ON CLIMATE CHANGE (P2C2): A WORKSHOP. JUNE 23 2021.
6. Huber, M. and Paul Acosta, Mountains Mostly Moved the Rain Around. The Chapman Conference on Evolution of the Monsoon, Biosphere and Mountain Building in Cenozoic Asia, Washington DC, Jan. 2020.
7. Huber, M., Paleoceanography 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 Paleoceanography, invited Session Speaker, Sydney Australia, Sept 2019.
8. Huber, M. Clouds and Crocodiles: Considering Past Warm Climates When Improving Cloud Parameterizations, Gordon Research Conference on Clouds and Radiation, Maine, July 2019.
9. Huber, M. The Miocene : Warmth, Transient or Fixed? Stockholm University, Miocene Paleoclimate Meeting, June 2019.
10. Huber, M., Plenary Lecture. The Miocene is the Future: What past climates tell us about the future, now. AGCC, Adelaide, Australia, Oct. 2018.
11. Huber, M., The Miocene is the Future, Sydney University Departmental Seminar, Sydney, Australia, Oct. 2018.
12. Huber, M., The Miocene is the Future, ANU Departmental Seminar, Canberra Australia, Oct. 2018.
13. 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.
14. Huber, M., The Miocene is the Future, Stockholm University, Miocene Paleoclimate meeting, June 2018.

15. 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.
16. 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.
17. Huber, M., The dynamics of moist heat stress and their implications for future predictions, ISEN Climate Change Symposium, Northwestern University, Nov, 2017.
18. Huber, M., The dynamics of moist heat stress and their implications for future predictions, PIK Impacts World 2017, Potsdam Germany, Oct, 2017.
19. Huber, M., No one here gets out alive: Ruminations on a hot tropics. Royal Society Meeting, Kavli Center, Chichester, UK, Sept, 2017.
20. Huber, M., Die in a Fire. “Hothouse climates of the past – lessons for the future” Meeting, Bristol University, May, 2017.
21. Huber, M., Killing Time: The Next Hyperthermal, University of Chicago, May 2017;
22. Huber, M., pCO₂ climate model conundrums, Lamont-Doherty Proxy RCN workshop, NY, March 2017.
23. Huber, M., The Eocene-Oligocene Transition from an early Eocene perspective, Stockholm, SE, Feb 2017.
24. Huber, M., The Eocene-Oligocene Transition from an early Eocene perspective, Stockholm, SE, Feb 2017.
25. Huber, M., Deep Time Atmospheric Processes, DeepTime CESM Meeting, Santa Cruz, CA, Dec. 2016.
26. Huber, M., Killing Time, Rotary Club Meeting, West Lafayette, IN, Oct 2016.
27. Huber, M., Killing Time, UMass Amherst, Feb, 2016.
28. Huber, M., Climate Dynamics of Hot Earths, Rutgers University, NJ, Feb 2016.
29. Huber, M., DeepMIP, National Center for Atmospheric Research, CO, Jan. 2016.
30. 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.
31. Huber, M., The Next HyperThermal, Princeton AOS program/Geophysical Fluid Dynamics Lab, Forestal Campus, Princeton, NJ, Aug 2015.
32. 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.
33. Huber, M., Steambath World, Social Cost of Carbon Conference, Stockholm, SE, May, 2015.
34. Huber, M., Climate interactions across scales, East Africa Eco Summit, Djibouti, April, 2015.

35. Huber, M., Climate Dynamics Lessons from the Greenhouse Climates of the Eocene and Miocene, Winter School on Monsoons, Aix-En-Provence, January 2015.
36. Huber, M., Unexpected results are usually wrong, but often interesting, AGU Fall Meeting, San Francisco, Dec., 2014.
37. Huber, M., On the Use and Abuse of Climate Sensitivity in a Paleoclimate Context, pre-Quaternary CO₂ meeting, Santa Cruz, Dec. 2014.
38. Huber, M., Sigma Xi Lecture: Future of the Past, U.S. Army Natick Mass, USARIEM, June, 2014.
39. 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.
40. Huber, M., You win some, you lose some: How well do models simulation past greenhouse climates? MIT, EAPS Dept, May 7, 2014.
41. Huber, M., On the Use and Abuse of Climate Sensitivity as a Concept in Paleoclimate, Yale, Yale Climate and Energy Institute, Apr. 28, 2014.
42. Huber, M., Ocean mixing and past warm climates, AGU, Ocean Sciences, Feb, 26, 2014.
43. Huber, M., Future of the Past, University of Wisconsin Madison, [Workshop on High-Resolution Proxies of Paleoclimate, June 2013](#).
44. Huber, M., Earth is a Planet, Too! Paleoclimate is Planetary Atmospheric Dynamics You Can Do at Home. Northwestern University, Physics Department. May 31, 2013
45. Huber, M., Climate Dynamics Lessons from the Greenhouse Climates of the Eocene and Miocene, Princeton University, Geosciences Department, April 9, 2013.
46. 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
47. Huber, M., Greenhouse Futures: The role of Geology in Validating Greenhouse Climate Predictions, Wellington New Zealand, GNS Science, February 20, 2013.
48. Huber, M., Recent progress in modelling Eocene and Miocene greenhouse climates and implications for the future. UW-Madison, Geology Department. Feb 1, 2013.
49. Huber, M., Recent progress in modelling Eocene greenhouse climates and implications for the future, University of Concepcion, Chile, November, 2012.
50. Huber, M., Recent progress in modelling Eocene greenhouse climates and implications for the future, University of Santiago, Chile, November, 2012.
51. Huber, M., Recent progress in modelling Eocene greenhouse climates, Geological Society of America Short Course, Charlotte, NC, October 2012.
52. Huber, M., Recent progress in modelling Eocene greenhouse climates and implications for the future, Australia National University, Australia, October, 2012.
53. Huber, M., Recent progress in modelling Eocene greenhouse climates and implications for the future, Melbourne University, Australia, October, 2012.

54. Huber, M., Recent progress in modelling Eocene greenhouse climates and implications for the future, University of Sydney, Australia, October, 2012.
55. 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.
56. Huber, M., Variations on a theme: Mixing and heat transport through time, Meteorological Institute of Stockholm University, Stockholm, Sweden, June 20, 2012.
57. Huber, M., Eocene Paleoclimate: Incredible or Uncredible? Model data syntheses raise questions. European Geophysical Union, April 27, 2012.
58. Huber, M., Update on Eocene climate modeling, NCAR Paleoclimate Working Group Meeting, NCAR, Boulder CO, February 16, 2012.
59. Huber, M., CO₂ Déjà Vu, Purdue Science Laureates, November 10, 2011.
60. 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.
61. Huber, M., BAU spells trouble for China, China-US 2011 Joint Symposium, Purdue University, September 26, 2011.
62. 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.
63. Huber, M., Climate changes on longer time scales and their implications for sustainability and life, Queensland University, Australia, August 14, 2011.
64. Huber, M., Eocene climates as a window into our future, University of Pennsylvania, May 5, 2011.
65. Huber, M., Progress report on the Eocene "low gradient" and "equable" climate problems, Harvard, April 26, 2011.
66. Huber, M., Thermostats, amplifiers, and rectifiers: What past warm climates can teach us about dynamics, MIT Atmospheric Science Seminar, April 25, 2011.
67. 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.
68. 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.
69. 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).
70. 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.

71. Huber, M., Effects of Paleogeography on Climate and Hydroclimatology in Eocene-Oligocene Time, *Asian Climate and Tectonics Meeting, Utrecht, The Netherlands, April 27, 2010.*
72. Huber, M., Progress in understanding the dynamics of past warm climates, *Woods Hole Oceanographic Institute, March 11 2010.*
73. Huber, M., What Eocene climate tells us about the future, *Geology Department, Syracuse University, February 2010.*
74. Huber, M., A sensitive Earth: implications of Eocene climate for future greenhouse projections, *Clean Coal Technology Research Center, Purdue University, December, 2009.*
75. Huber, M., A sensitive Earth: implications of Eocene climate for future greenhouse projections, *University of Illinois Geology Department, Champaign-Urbana, October 21, 2009.*
76. Huber, M., The role of Hurricanes in Past and Future Climate, Symposium 'Dynamic Earth'. *University of Utrecht, September 22, 2009.*
77. Huber, M., A Sensitive Earth: Implications of Eocene Climate for Future Greenhouse Projections. The 'Umbgrove Lecture', *University of Utrecht, September 21, 2009.*
78. Huber, M., Connecting the tropics and the poles with heat transport and teleconnections. *First Antarctic Climate Evolution Symposium, Granada, Spain, September 8, 2009.*
79. Huber, M., What natural global warming in the past tells us about the future. *Ministry for the Environment, Wellington, New Zealand, July 22, 2009.*
80. Huber, M., Heating up a Warm World, *Climatic and Biotic Events of the Paleogene, Wellington, New Zealand, January 2009.*
81. 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.*
82. Huber, M., Hurricanes, Heat Death, and Thermostats, *Lamont-Doherty Observatory, September, 2008.*
83. Huber, M., Paleoclimate modelling of the PETM and the impact of gas venting, *University of Oslo, PGP, August, 2008.*
84. 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.*
85. Huber, M., Equable climates and the low gradient problem: Progress in understanding Eocene climate, *Oslo, International Geophysical Congress, August, 2008.*
86. Huber, M., Montefeltro Lecture, *University of Urbino, July, 2008.*
87. Huber, M., Heat death, hyperthermals, hurricanes and the Eocene, *Meteorological Institute of Stockholm, June, 2008.*
88. Huber, M., The low gradient problem, *Harvard University, April, 2008.*

89. Huber, M., Hurricanes, Heat Death, Hyperthermals: Increased vertical mixing as a possible solution to the equable climate problem, *Texas A&M, February, 2008*.
90. 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*.
91. Huber, M., The role of tropical cyclones in the climate system, *SUNY Stony Brook, NY, November, 2007*.
92. 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*.
93. Huber, M., Tropical Cyclone Induced Ocean Mixing and Climate, *Geology and Geophysics Department--Departmental Seminar, Yale University, Oct 3, 2007*.
94. Huber, M., PETM climate dynamics and data-model comparison, *NCAR PETM Data-model integration Workshop, Santa Fe, New Mexico, May 31, 2007*.
95. Huber, M., New insights into equable climates, *2nd Darwin Azolla Project meeting, Utrecht University, The Netherlands, May 7, 2007*.
96. Huber, M., Amplifiers, Thermostats, Capacitors, New Insights into Building and Demolishing 'Greenhouse' Climates, *Earth, Atmospheric and Planetary Sciences--Departmental Seminar, MIT, February 28, 2007*.
97. Huber, M., How greenhouse climates work, *University of Maryland, November, 2006*.
98. 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*.
99. 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*.
100. Huber, M., Back to the Future: Paleoclimate Insights into Climate of the Next Million Years, *University of Utrecht, The Netherlands, August 2006*.
101. Huber, M., Drying the American West in the Miocene, *University of Bremen, Germany, June 2006*.
102. Huber, M., and R. van Hooidek, 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*.
103. 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*.
104. Huber, M., Enthalpy and paleoelevation. *NSF workshop on paleoelevation. Lehigh University, Summer 2005*.
105. Huber, M., and H. Brinkhuis, Likely and unlikely ocean feedbacks on global climate during the Eocene-Oligocene transition. *Goldschmidt Geochemistry Conference, Spring 2005*.

106. 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.*
107. Huber, M., In the Wake of Katrina—What do we really know about hurricanes? *Purdue Discovery Lecture Series, Fall 2005.*
108. Huber, M., Global Environmental Change Simulation: Cyberinfrastructure Challenges and Opportunities. *Supercomputing-05. Seattle, Fall 2005.*
109. 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.
110. 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.*
111. 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.*
112. Huber, M., Sleeping Dogs of the Cenozoic, *Dept. of Geology, IUPUI, Oct., 2004.*
113. 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.*
114. Huber, M., Construction of 'Deep' Paleoclimate CCSM Simulations, *National Center for Atmospheric Research CCSM Meeting, Santa Fe, New Mexico, June 2004.*
115. 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.*
116. Huber, M., Ocean-Atmosphere Interactions in the "Greenhouse" Climate of the Eocene and a comparison with other paleoclimates, *Duke University, March, 2004.*
117. 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.*
118. Huber, M., Eocene El Niño, *National Center for Atmospheric Research CCSM Meeting, Breckenridge, Colorado, USA, June 2003.*
119. 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.*
120. Huber, M., Building an equable climate: Putting the pieces together, *Geological Society of America Meeting, Denver, Colorado, USA, Oct. 2002.*
121. Huber, M., Pulling the sleeping dragon's tail, *Institute of Geological and Nuclear Sciences, Wellington, New Zealand, July 2002.*
122. Huber, M., Spin up of an Eocene CCSM simulation, *National Center for Atmospheric Research CCSM Meeting, Breckenridge, Colorado, USA, June 2002.*

123. Huber, M., Eocene ocean-atmosphere interactions, *University of East Anglia, Norwich, UK, April 2002.*
124. Huber, M., Eocene ocean-atmosphere interactions, *University of Utrecht Biology Dept. March 2002.*
125. 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.*
126. 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.*
127. 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.*
128. Huber, M., and L. C. Sloan, CCM3 and greenhouse climates of the early Eocene, *Climate System Model Workshop, Breckenridge CO, June 1999.*
129. 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. Too many to count since 2016...
2. 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.
3. McCabe, E., Jonathan Buzan, Srinath Krishnan, Muge Komurcu, 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. M. Komurcu, Using High Resolution Climate Modeling to Improve Sustainability in New England, National NSF EPSCoR Meeting, November 2015, Portsmouth, NH.

10. 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.
11. Frieling, J., H. Gebhardt, O. Adekeye, S. Akande, G. J., Reichert, 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.
12. 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.
13. 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.
14. 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.
15. Komurcu, M., R. P. Acosta, and M. Huber, Simulating Regional Climate Change in New Hampshire, AGU Fall Meeting, San Francisco, Dec., 2014.
16. 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.
17. 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.
18. Green, M.; Huber, M.; TIDAL DISSIPATION IN THE EARLY EOCENE AND IMPLICATIONS FOR OCEAN MIXING, AGU Ocean Sciences, Feb., 2014.
19. 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.
20. Buzan, J. R.; Herold, N. K.; Huber, M.; A GLOBAL PALEOBATHYMETRY DATASET OF THE EARLY EOCENE. AGU Ocean Sciences, Feb., 2014.
21. Jonathan R Buzan, Nicholas K Herold, Matthew Huber. A global dataset of Early Eocene paleotopography, AGU San Francisco Dec. 2013.
22. 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.
23. Jonathan R Buzan, Matthew Huber, and Keith Oleson. Heat Stress Biases in Community Land Model within CESM, NCAR Boulder, 2013.
24. Goldner, A. P., M. Huber, N. K. Herold, and R. J. van Hooijdonk, 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.

25. 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.
26. 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.
27. 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.
28. Buzan, J. R. , M. Huber, Extreme Heat Stress trends in ERA Interim 1979-2011. *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2012
29. 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
30. 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.
31. 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.
32. 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.
33. David R. Greenwood; Matthew Huber, Eocene precipitation: a global monsoon?, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2011.
34. 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.
35. 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.
36. 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.

37. 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.
38. 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.
39. 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.
40. Caballero, R., and M. Huber, A spontaneous transition to superrotation in warm climates, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2010.
41. 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.
42. 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.
43. 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.
44. 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.
45. 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.
46. 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.
47. 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.
48. Abbot et al., A High-Latitude Convective Cloud Feedback and Equable Climates, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2009.
49. Greenwood et al., Eocene Precipitation: How Wet and Where? A Model-Proxy Comparison, *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2009.
50. 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.

51. 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*.
52. 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*.
53. 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*.
54. 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*.
55. 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*.
56. 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*.
57. 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*.
58. 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*.
59. von der Heydt, A.; Galeotti, S.; Huber, M. ; Bice, D.; Dijkstra, H.A.; Jilbert, T.; Lanci, L.; Reichart, G.-J., Evidence for ENSO variability in the late Miocene, *European Geophysical Union Meeting, Vienna, Apr. 2008*.
60. 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*.
61. 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*.
62. 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*.
63. Pagani, M., Z. Liu, and M. Huber, The role of pCO₂ during the Eocene-Oligocene climate transition, *Goldschmidt Geochemistry Conference, Spring 2008*.
64. 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.*

65. 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.*
66. 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.*
67. 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.*
68. 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.*
69. 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*
70. 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*
71. Van Hooijdonk*, 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.*
72. 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.*
73. 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.*
74. Sluijs, A., Schouten, S., Brinkhuis, H., Sinninghe Damsté, J.S., Dickens, G.R., Huber, M., Reichert, 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.*
75. Huber, M., Report on Paleoclimate Working Group Proposed Activities, *NCAR CCSM Paleoclimate Working Group Meeting, University of Wisconsin, Madison, Wisc., Feb. 2006.*
76. 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.*

77. Van Hoodonk*, R., and M. Huber, The role of tropical cyclones in maintaining Paleogene climate. *American Geophysical Union Annual Meeting, San Francisco, CA, Dec. 2005.*
78. 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.*
79. 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.*
80. 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.*
81. 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.*
82. 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.*
83. 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.*
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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 been actively active engaged with press on current topics in heat stress including:

- Nationally and internationally with many outlets in 2022
 - Including the New York Times:
 - (<https://www.nytimes.com/2022/06/13/climate/extreme-heat-wave-health.html>),
 - (<https://www.nytimes.com/2022/07/14/opinion/environment/heat-waves-india-pakistan-climate-change.html>),
 - and (<https://www.nytimes.com/interactive/2022/10/26/magazine/climate-change-warming-world.html>),
 - Bulletin of the Atomic Scientists (<https://thebulletin.org/2022/07/extreme-heat-animals-livestock-wildlife/>),
 - Reuters (<https://www.reuters.com/business/healthcare-pharmaceuticals/why-some-heatwaves-prove-deadlier-than-others-2022-08-02/>)
 - and Fortune (<https://fortune.com/2022/06/17/heat-waves-around-world-extreme-deadly-climate-change/>),
 - Time (<https://time.com/6207087/improve-heat-tolerance/>)
- And before that,
 - locally in Indiana WFYI/WBAA (<https://www.wfyi.org/news/articles/purdue-expert-says-heat-stress-is-single-biggest-impact-of-climate-change>), IndyStar (<https://www.indystar.com/story/news/environment/2021/07/30/indiana-weather-extreme-heat-put-more-hoosiers-health-risk/8074218002/>)
 - Internationally in the Guardian (<https://www.theguardian.com/us-news/2021/jul/12/health-warnings-as-death-valley-scorches-in-544c-heat>)
 - And I Coauthored (with Bob Kopp and Jon Buzan) a New York 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
 - In the Atlantic: <https://www.theatlantic.com/health/archive/2012/03/will-the-human-body-be-able-to-adapt-to-rising-temperatures/252223/> and New Scientist (<https://www.newscientist.com/article/dn28392-global-warming-could-make-hajj-impossible-later-this-century/>)

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 and science communication impacts:

My work featured prominently in the climate fiction book, by Kim Stanley Robinson "Ministry for the Future". (chapter 1).

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, 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>