

Johannes Mülmenstädt

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<https://home.uni-leipzig.de/jmuellen>

EDUCATION

Ph.D. in Physics, University of California, Berkeley (2007)
M.A. in Physics, University of California, Berkeley (2005)
B.S. in Physics, Massachusetts Institute of Technology (2002)

ACADEMIC APPOINTMENTS

2019– Earth Scientist, Atmospheric Sciences & Global Change, Pacific Northwest
National Laboratory, Richland, WA
2012–2019 Scientist, Institute of Meteorology, Universität Leipzig, Leipzig, Germany
2011–2012 Postdoctoral Scholar, Climate, Atmospheric Science and Physical Oceanography
Department, Scripps Institution of Oceanography, La Jolla, CA
2008–2010 Postdoctoral Scholar, Department of Physics, University of California, San Diego,
La Jolla, CA

RESEARCH INTERESTS

Global climate change; cloud feedbacks; anthropogenic aerosol forcing; aerosol–cloud–
precipitation interactions; hydrological cycle; improvement of climate models using observational
constraints

PUBLICATIONS

Publication Statistics

Publications 344
Times cited 20,420
h-index 71

(Web of Science Core Collection, April 2022)

Refereed Journal Articles

Ma, P.-L., B. E. Harrop, V. E. Larson, R. Neale, A. Gettelman, H. Morrison, H. Wang,
K. Zhang, S. A. Klein, M. D. Zelinka, Y. Zhang, Y. Qian, J.-H. Yoon, C. R. Jones, M. Huang,
S.-L. Tai, B. Singh, P. A. Bogenschutz, X. Zheng, W. Lin, J. Quaas, H. Chepfer, M. A. Brunke,

X. Zeng, **J. Mülmenstädt**, S. Hagos, Z. Zhang, H. Song, X. Liu, H. Wan, J. Wang, Q. Tang, P. M. Caldwell, J. Fan, L. K. Berg, J. D. Fast, M. A. Taylor, J.-C. Golaz, S. Xie, P. J. Rasch, and L. R. Leung, in press: Better calibration of cloud parameterizations and subgrid effects increases the fidelity of E3SM Atmosphere Model version 1. *Geosci. Model Devel.*, <https://doi.org/10.5194/gmd-2021-298>.

Christensen, M. W., A. Gettelman, J. Cermak, G. Dagan, M. Diamond, A. Douglas, G. Feingold, F. Glassmeier, T. Goren, D. P. Grosvenor, E. Gryspeerdt, R. Kahn, Z. Li, P.-L. Ma, F. Malavelle, I. L. McCoy, D. T. McCoy, G. McFarquhar, **J. Mülmenstädt**, S. Pal, A. Possner, A. Povey, J. Quaas, D. Rosenfeld, A. Schmidt, R. Schrödner, A. Sorooshian, P. Stier, V. Toll, D. Watson-Parris, R. Wood, M. Yang, and T. Yuan, 2022: Opportunistic experiments to constrain aerosol effective radiative forcing. *Atmos. Chem. Phys.*, **22**, 641–674, <https://doi.org/10.5194/acp-22-641-2022>.

McCoy, D. T., P. Field, M. E. Frazer, M. D. Zelinka, G. S. Elsaesser, **J. Mülmenstädt**, I. Tan, T. A. Myers, and Z. J. Lebo, 2022: Extratropical shortwave cloud feedbacks in the context of the global circulation and hydrological cycle. *Geophys. Res. Lett.*, <https://doi.org/10.1029/2021GL097154>.

Myhre, G., B. Samset, P. M. Forster, Ø. Hodnebrog, M. Sandstad, C. W. Mohr, J. Sillmann, C. W. Stjern, T. Andrews, O. Boucher, G. Faluvegi, T. Iversen, J.-F. Lamarque, M. Kasoar, A. Kirkevåg, R. Kramer, L. Liu, **J. Mülmenstädt**, D. Olivie, J. Quaas, T. B. Richardson, D. Shawki, D. Shindell, C. Smith, P. Stier, T. Tang, T. Takemura, A. Voulgarakis, and D. Watson-Parris, 2022: Scientific data from Precipitation Driver Response Model Intercomparison Project (PDRMIP). *Sci. Data*, **9**, 123, <https://doi.org/10.1038/s41597-022-01194-9>.

Salzmann, M., S. Ferrachat, C. Tully, S. Münch, D. Watson-Parris, D. Neubauer, C. Siegenthaler-Le Drian, S. Rast, B. Heinold, T. Crueger, R. Brokopf, **J. Mülmenstädt**, J. Quaas, H. Wan, K. Zhang, U. Lohmann, P. Stier, and I. Tegen, 2022: The global atmosphere-aerosol model ICON-A-HAM2.3 - Initial model evaluation and effects of radiation balance tuning on aerosol optical thickness. *J. Adv. Model. Earth Syst.*, <https://doi.org/10.1029/2021MS002699>.

Dipu S., J. Quaas, M. Quaas, W. Rickels, **J. Mülmenstädt**, and O. Boucher, 2021: Substantial climate response outside the target area in an idealized experiment of regional radiation management. *Climate*, **4**, 66, <https://doi.org/10.3390/cli9040066>.

Mülmenstädt, J., M. Salzmann, J. E. Kay, M. D. Zelinka, P.-L. Ma, C. Nam, *J. Kretzschmar, S. Hörnig, and J. Quaas, 2021: An underestimated negative cloud feedback from cloud lifetime changes. *Nat. Clim. Chang.*, **11**, 508–513, <https://doi.org/10.1038/s41558-021-01038-1>.

Mülmenstädt, J., and L. J. Wilcox, 2021: The fall and rise of the global climate model. *J. Adv. Model. Earth Syst.*, **9**, e2021MS002781, <https://doi.org/10.1029/2021MS002781>.

Bellouin, N., W. H. Davies, K. P. Shine, J. Quaas, **J. Mülmenstädt**, P. M. Forster, C. Smith,

*Student I have mentored

L. Lee, L. Regayre, G. Brasseur, N. Sudarchikova, I. Bouarar, O. Boucher, and G. Myhre, 2020: Radiative forcing of climate change from the Copernicus reanalysis of atmospheric composition. *Earth Syst. Sci. Data*, **12**, 1649–1677, <https://doi.org/10.5194/essd-12-1649-2020>.

Bellouin, N., J. Quaas, E. Gryspeerdt, S. Kinne, P. Stier, D. Watson-Parris, O. Boucher, K. S. Carslaw, M. Christensen, A.-L. Daniau, J.-L. Dufresne, G. Feingold, S. Fiedler, P. Forster, A. Gettelman, J. M. Haywood, U. Lohmann, F. Malavelle, T. Mauritsen, D. T. McCoy, G. Myhre, **J. Mülmenstädt**, D. Neubauer, A. Possner, M. Rügenstein, Y. Sato, M. Schulz, S. E. Schwartz, O. Sourdeval, T. Storelvmo, V. Toll, D. Winker, and B. Stevens, 2020: Bounding global aerosol radiative forcing of climate change. *Rev. Geophys.*, **58**, e2019RG000660, <https://doi.org/10.1029/2019RG000660>.

*Block, K., *F. A. Schneider, **J. Mülmenstädt**, M. Salzmann, and J. Quaas, 2020: Climate models disagree on the sign of total radiative feedback in the Arctic. *Tellus A*, **72**, 1–14, <https://doi.org/10.1080/16000870.2019.1696139>.

Gryspeerdt, E., **J. Mülmenstädt**, A. Gettelman, F. F. Malavelle, H. Morrison, D. Neubauer, D. G. Partridge, P. Stier, T. Takemura, H. Wang, M. Wang, and K. Zhang, 2020: Surprising similarities in model and observational aerosol radiative forcing estimates. *Atmos. Chem. Phys.*, **20**, 613–623, <https://doi.org/10.5194/acp-20-613-2020>.

Hodnebrog, Ø., G. Myhre, R. J. Kramer, K. P. Shine, T. Andrews, G. Faluvegi, M. Kasoar, A. Kirkevåg, J.-F. Lamarque, **J. Mülmenstädt**, D. Olivíe, B. H. Samset, D. Shindell, C. J. Smith, T. Takemura, and A. Voulgarakis, 2020: The effect of rapid adjustments to halocarbons and N₂O on radiative forcing. *npj Clim. Atmos. Sci.*, **3**, 43, <https://doi.org/10.1038/s41612-020-00150-x>.

Mülmenstädt, J., C. Nam, M. Salzmann, *J. Kretzschmar, T. S. L’Ecuyer, U. Lohmann, P.-L. Ma, G. Myhre, D. Neubauer, P. Stier, K. Suzuki, M. Wang, and J. Quaas, 2020: Reducing the aerosol forcing uncertainty using observational constraints on warm rain processes. *Science Adv.*, **6**, eaaz6433, <https://doi.org/10.1126/sciadv.aaz6433>.

Quaas, J., A. Arola, B. Cairns, M. Christensen, H. Deneke, A. M. L. Ekman, G. Feingold, A. Fridlind, E. Gryspeerdt, O. Hasekamp, Z. Li, A. Lipponen, P.-L. Ma, **J. Mülmenstädt**, A. Nenes, J. E. Penner, D. Rosenfeld, R. Schrödner, K. Sinclair, O. Sourdeval, P. Stier, M. Tesche, B. van Dierenhoven, and M. Wendisch, 2020: Constraining the Twomey effect from satellite observations: Issues and perspectives. *Atmos. Chem. Phys.*, **20**, 15079–15099, <https://doi.org/10.5194/acp-20-15079-2020>.

Unglaub, C., *K. Block, **J. Mülmenstädt**, O. Sourdeval, and J. Quaas, 2020: A new classification of satellite-derived liquid water cloud regimes at cloud scale. *Atmos. Chem. Phys.*, **20**, 2407–2418, <https://doi.org/10.5194/acp-20-2407-2020>.

Wood, T., A. C. Maycock, P. M. Forster, T. B. Richardson, T. Andrews, O. Boucher, G. Myhre, B. H. Samset, A. Kirkevåg, J.-F. Lamarque, **J. Mülmenstädt**, D. Olivíe, T. Takemura, and D. Watson-Parris, 2020: The Southern Hemisphere midlatitude circulation response to rapid adjustments and sea surface temperature driven feedbacks. *J. Clim.*, **33**, 9673–9690, <https://doi.org/10.1175/JCLI-D-19-1015.1>.

Böhm, C., O. Sourdeval, **J. Mülmenstädt**, J. Quaas, and S. Crewell, 2019: Cloud base height retrieval from multi-angle satellite data. *Atmos. Meas. Tech.*, **12**, 1841–1860, <https://doi.org/10.5194/amt-12-1841-2019>.

Gryspeerd, E., T. Goren, O. Sourdeval, J. Quaas, **J. Mülmenstädt**, Dipu S., C. Unglaub, A. Gettelman, and M. Christensen, 2019: Constraining the aerosol influence on cloud liquid water path. *Atmos. Chem. Phys.*, **19**, 5331–5347, <https://doi.org/10.5194/acp-19-5331-2019>.

*Kretzschmar, J., M. Salzmann, **J. Mülmenstädt**, and J. Quaas, 2019: Arctic clouds in ECHAM6 and their sensitivity to cloud microphysics and surface fluxes. *Atmos. Chem. Phys.*, **19**, 10571–10589, <https://doi.org/10.5194/acp-19-10571-2019>.

Mülmenstädt, J., E. Gryspeerd, M. Salzmann, P.-L. Ma, S. Dipu, and J. Quaas, 2019: Separating radiative forcing by aerosol-cloud interactions and fast cloud adjustments in the ECHAM-HAMMOZ aerosol-climate model using the method of partial radiative perturbations. *Atmos. Chem. Phys.*, **19**, 15415–15429, <https://doi.org/10.5194/acp-19-15415-2019>.

Richardson, T. B., P. M. Forster, C. J. Smith, A. C. Maycock, T. Wood, T. Andrews, O. Boucher, G. Faluvegi, D. Fläschner, Ø. Hodnebrog, M. Kasoar, A. Kirkevåg, J.-F. Lamarque, **J. Mülmenstädt**, G. Myhre, D. Olivié, R. W. Portmann, B. H. Samset, D. Shawki, D. Shindell, P. Stier, T. Takemura, A. Voulgarakis, and D. Watson-Parris, 2019: Efficacy of climate forcings in PDRMIP models. *J. Geophys. Res.*, **124**, 12824–12844, <https://doi.org/10.1029/2019JD030581>.

Mülmenstädt, J., and G. Feingold, 2018: The radiative forcing of aerosol-cloud interactions in liquid clouds: Wrestling and embracing uncertainty. *Curr. Clim. Change Rep.*, **4**, 23–40, <https://doi.org/10.1007/s40641-018-0089-y>.

Mülmenstädt, J., O. Sourdeval, D. S. Henderson, T. S. L'Ecuyer, C. Unglaub, L. Jungandreas, C. Böhm, L. M. Russell, and J. Quaas, 2018: Using CALIOP to estimate cloud-field base height and its uncertainty: The Cloud Base Altitude Spatial Extrapolator (CBASE) algorithm and dataset. *Earth Syst. Sci. Data*, **10**, 2279–2293, <https://doi.org/10.5194/essd-10-2279-2018>.

Smith, C. J., R. J. Kramer, G. Myhre, P. M. Forster, B. J. Soden, T. Andrews, O. Boucher, G. Faluvegi, D. Fläschner, Ø. Hodnebrog, M. Kasoar, V. Kharin, A. Kirkevåg, J.-F. Lamarque, **J. Mülmenstädt**, D. Olivié, T. Richardson, B. H. Samset, D. Shindell, P. Stier, T. Takemura, A. Voulgarakis, and D. Watson-Parris, 2018: Understanding rapid adjustments to diverse forcing agents. *Geophys. Res. Lett.*, **45**, 12023–12031, <https://doi.org/10.1029/2018GL079826>.

*Heyn, I., *K. Block, **J. Mülmenstädt**, E. Gryspeerd, P. Kühne, M. Salzmann, and J. Quaas, 2017: Assessment of simulated aerosol effective radiative forcings in the terrestrial spectrum. *Geophys. Res. Lett.*, **44**, 1001–1007, <https://doi.org/10.1002/2016GL071975>.

*Heyn, I., J. Quaas, M. Salzmann, and **J. Mülmenstädt**, 2017: Effects of diabatic and adiabatic processes on relative humidity in a GCM, and relationship between mid-tropospheric vertical wind and cloud-forming and cloud-dissipating processes. *Tellus A*, **69**, 1272753, <https://doi.org/10.1080/16000870.2016.1272753>.

Jing, X., K. Suzuki, H. Guo, D. Goto, T. Ogura, T. Koshiro, and **J. Mülmenstädt**, 2017: A multimodel study on warm precipitation biases in global models compared to satellite observations. *J. Geophys. Res.*, **122**, 11806–11824, <https://doi.org/10.1002/2017JD027310>.

*Kretzschmar, J., M. Salzmann, **J. Mülmenstädt**, O. Boucher, and J. Quaas, 2017: Comment on “Rethinking the lower bound on aerosol radiative forcing”. *J. Clim.*, **30**, 6579–6584, <https://doi.org/10.1175/JCLI-D-16-0668.1>.

Myhre, G., W. Aas, R. Cherian, W. Collins, G. Faluvegi, M. Flanner, P. Forster, Ø. Hodnebrog, Z. Klimont, M. T. Lund, **J. Mülmenstädt**, C. L. Myhre, D. Olivié, M. Prather, J. Quaas, B. H. Samset, J. L. Schnell, M. Schulz, D. Shindell, R. B. Skeie, T. Takemura, and S. Tsyro, 2017: Multi-model simulations of aerosol and ozone radiative forcing due to anthropogenic emission changes during the period 1990–2015. *Atmos. Chem. Phys.*, **17**, 2709–2720, <https://doi.org/10.5194/acp-17-2709-2017>.

Sourdeval, O., L. C.-Labonnote, A. J. Baran, **J. Mülmenstädt**, and G. Brogniez, 2016: A methodology for simultaneous retrieval of ice and liquid water cloud properties. Part 2: Near-global retrievals and evaluation against A-Train products. *Q. J. R. Meteorol. Soc.*, **142**, 3063–3081, <https://doi.org/10.1002/qj.2889>.

*Aswathy, V. N., O. Boucher, M. Quaas, U. Niemeier, H. Muri, **J. Mülmenstädt**, and J. Quaas, 2015: Climate extremes in multi-model simulations of stratospheric aerosol and marine cloud brightening climate engineering. *Atmos. Chem. Phys.*, **15**, 9593–9610, <https://doi.org/10.5194/acp-15-9593-2015>.

Mülmenstädt, J., O. Sourdeval, J. Delanoë, and J. Quaas, 2015: Frequency of occurrence of rain from liquid-, mixed-, and ice-phase clouds derived from A-Train satellite retrievals. *Geophys. Res. Lett.*, **42**, 6502–6509, <https://doi.org/10.1002/2015GL064604>.

Rosch, J., T. Heus, H. M. Brueck, M. Salzmann, **J. Mülmenstädt**, L. Schlemmer, and J. Quaas, 2015: Analysis of diagnostic climate model cloud parametrizations using large-eddy simulations. *Q. J. R. Meteorol. Soc.*, **141**, 2199–2205, <https://doi.org/10.1002/qj.2515>.

Russell, L. M., A. Sorooshian, J. H. Seinfeld, B. A. Albrecht, A. Nenes, L. Ahlm, Y.-C. Chen, M. Coggon, J. S. Craven, R. C. Flagan, A. A. Frossard, H. Jonsson, E. Jung, J. J. Lin, A. R. Metcalf, R. Modini, **J. Mülmenstädt**, G. C. Roberts, T. Shingler, S. Song, Z. Wang, and A. Wonaschütz, 2013: Eastern Pacific Emitted Aerosol Cloud Experiment. *Bull. Amer. Meteorol. Soc.*, **94**, 709–729, <https://doi.org/10.1175/BAMS-D-12-00015.1>.

Wonaschütz, A., M. Coggon, A. Sorooshian, R. Modini, A. A. Frossard, L. Ahlm, **J. Mülmenstädt**, G. C. Roberts, L. M. Russell, S. Dey, F. J. Brechtel, and J. H. Seinfeld, 2013: Hygroscopic properties of smoke-generated organic aerosol particles emitted in the marine atmosphere. *Atmos. Chem. Phys.*, **13**, 9819–9835, <https://doi.org/10.5194/acp-13-9819-2013>.

Mülmenstädt, J., D. Lubin, L. M. Russell, and A. M. Vogelmann, 2012: Cloud properties over the North Slope of Alaska: Identifying the prevailing meteorological regimes. *J. Clim.*, **25**, 8238–8258, <https://doi.org/10.1175/JCLI-D-11-00636.1>.

Shingler, T., S. Dey, A. Sorooshian, F. J. Brechtel, Z. Wang, A. Metcalf, M. Coggon, **J. Mülmenstädt**, L. M. Russell, H. H. Jonsson, and J. H. Seinfeld, 2012: Characterisation and airborne deployment of a new counterflow virtual impactor inlet. *Atmos. Meas. Tech.*, **5**, 1259–1269, <https://doi.org/10.5194/amt-5-1259-2012>.

Selected articles in particle physics:

CMS collaboration [as J. Muelmenstaedt], 2012: Search for heavy, top-like quark pair production in the dilepton final state in pp collisions at $\sqrt{s} = 7$ TeV. *Phys. Lett. B*, **716**, 103–121, <https://doi.org/10.1016/j.physletb.2012.07.059>.

CMS collaboration [as J. Muelmenstaedt], 2012: Search for anomalous production of multilepton events in pp collisions at $\sqrt{s} = 7$ TeV. *J. High Energy Phys.*, **169**, 0–33, [https://doi.org/10.1007/JHEP06\(2012\)169](https://doi.org/10.1007/JHEP06(2012)169).

CDF collaboration, 2011: Measurement of the B_s lifetime in fully and partially reconstructed $B_s \rightarrow D_s^-(\phi\pi^-)X$ decays in $\bar{p} - p$ collisions at $\sqrt{s} = 1.96$ TeV. *Phys. Rev. Lett.*, **107**, 272001, <https://doi.org/10.1103/PhysRevLett.107.272001>.

CMS collaboration [as J. Muelmenstaedt], 2011: First measurement of the cross section for top-quark pair production in proton–proton collisions at $\sqrt{s} = 7$ TeV. *Phys. Lett. B*, **695**, 424–443, <https://doi.org/10.1016/j.physletb.2010.11.058>.

CDF collaboration, 2009: First observation of $\bar{B}_s^0 \rightarrow D_s^\pm K^\mp$ and measurement of the ratio of branching fractions $\mathcal{B}(\bar{B}_s^0 \rightarrow D_s^\pm K^\mp)/\mathcal{B}(\bar{B}_s^0 \rightarrow D_s^\pm \pi^-)$. *Phys. Rev. Lett.*, **103**, 191802, <https://doi.org/10.1103/PhysRevLett.103.191802>.

CDF collaboration, 2006: Observation of $B_s^0 - \bar{B}_s^0$ oscillations. *Phys. Rev. Lett.*, **97**, 242003, <https://doi.org/10.1103/PhysRevLett.97.242003>.

CDF collaboration, 2006: Measurement of the $B_s^0 - \bar{B}_s^0$ oscillation frequency. *Phys. Rev. Lett.*, **97**, 062003, <https://doi.org/10.1103/PhysRevLett.97.062003>.

PHOBOS collaboration, 2003: The PHOBOS detector at RHIC. *Nucl. Instrum. Methods Phys. Res. A*, **499**, 603–623, [https://doi.org/10.1016/S0168-9002\(02\)01959-9](https://doi.org/10.1016/S0168-9002(02)01959-9).

PHOBOS collaboration, 2000: Charged particle multiplicity near mid-rapidity in central Au + Au collisions at $\sqrt{s_{NN}} = 56$ GeV and 130 GeV. *Phys. Rev. Lett.*, **85**, 3100–3104, <https://doi.org/10.1103/PhysRevLett.85.3100>.

Datasets

Mülmenstädt, J., O. Sourdeval, D. S. Henderson, T. S. L’Ecuyer, C. Unglaub, L. Jungandreas, C. Böhm, L. M. Russell, and J. Quaas, 2018: CBASE cloud base height estimate, version 1.0. DKRZ World Data Center for Climate, <https://doi.org/10.1594/WDCC/CBASE>.

Jing, X., K. Suzuki, H. Guo, D. Goto, T. Ogura, T. Koshiro, and **J. Mülmenstädt**, 2017: Multi-model evaluation of warm rain process, version 1. Zenodo,

<https://doi.org/10.5281/zenodo.890474>.

Sanchez, K. J., L. M. Russell, A. A. Frossard, R. L. Modini, L. Ahlm, **J. Muelmenstaedt**, J. Haffidi, G. C. Roberts, J. H. Seinfeld, and A. Sorooshian, 2017: Marine background and plume aerosol measurements off the coast of California in July–August 2011 during E-PEACE (Eastern Pacific Emitted Aerosol Cloud Experiment). UC San Diego Library Digital Collections, <https://doi.org/10.6075/J0D798MC>.

INVITED TALKS

Mülmenstädt, J., 2021 (December 16): An underestimated negative cloud feedback from cloud lifetime changes. American Geophysical Union Fall Meeting, virtual.

Mülmenstädt, J., 2021 (October 15): The fall and rise of the global model. Department of Atmospheric Sciences, University of Washington, virtual.

Mülmenstädt, J., 2020 (September 17): Do extratropical cloud feedbacks matter for climate? 2020 Virtual CFMIP Meeting on Clouds, Precipitation, Circulation and Climate Sensitivity, virtual.

Mülmenstädt, J., 2020 (April 9): Can observations constrain parameterized processes? U.S. Climate Modeling Summit Workshop, virtual.

Mülmenstädt, J., 2019 (December 9): Digging ourselves out of the equifinality hole: How process understanding can reduce aerosol–warm-cloud interaction uncertainty. American Geophysical Union Fall Meeting, San Francisco, CA.

Mülmenstädt, J., 2018 (November 14): Cloudy with a certainty of drizzle: Teaching GCMs to be less like Seattle. Department of Atmospheric Sciences, University of Washington, Seattle, WA.

Mülmenstädt, J., 2018 (October 11): Parameterizing cloud processes in GCMs – mission possible? NASA Jet Propulsion Laboratory, Pasadena, CA.

Mülmenstädt, J., 2017 (September 29): Using satellite observations to constrain parameterized cloud processes. Atmosphere and Ocean Research Institute, The University of Tokyo, Japan.

TEACHING EXPERIENCE

Instruction

2015–2019	Global Climate Dynamics, M.Sc. course (five instances) Universität Leipzig, in English
2013/14	Theoretical Meteorology 2, B.Sc. course Universität Leipzig, in German

Academic Advising

2017–2018	One research-based B.Sc. thesis
2016–2017	One research-based B.Sc. thesis
2015–2016	One research-based M.Sc. thesis; one research-based B.Sc. thesis
2014–2015	Three research-based M.Sc. theses; two research-based B.Sc. theses
2013–2014	Two research-based B.Sc. theses
2012–2013	Two research-based B.Sc. theses

PROFESSIONAL SERVICE

Grant Application Review

National Aeronautics and Space Administration
UK Natural Environment Research Council
US Department of Energy

Manuscript Review

AGU Advances
Atmospheric Chemistry and Physics
Climate Dynamics
Geophysical Research Letters
Geoscientific Model Development
Journal of Advances in Modeling Earth Systems
Journal of Geophysical Research – Atmospheres
Journal of the Atmospheric Sciences
Nature
Nature Climate Change
Nature Geoscience
Quarterly Journal of the Royal Meteorological Society
Science

Conference Panel Organization

Mülmenstädt, J., K. Suzuki, and M. Wang, 2020 (December 1–17): Process-oriented analysis of cloud and precipitation physics. *Fall Meeting*, virtual, American Geophysical Union (AGU). [Primary session convener and chair]

Mülmenstädt, J., M. R. Kumjian, K. Suzuki, and M. Wang, 2019 (December 9–13): Process-oriented analysis of cloud and precipitation physics. *Fall Meeting*, San Francisco, CA, American Geophysical Union (AGU). [Primary session convener and chair]

Wang, M., **J. Mülmenstädt**, K. Suzuki, and J. E. Kay, 2018 (December 10–14): Process-oriented analysis of cloud and precipitation physics. *Fall Meeting*, Washington, DC, American Geophysical Union (AGU). [Session convener]

Haywood, J., M. Kanakidou, **J. Mülmenstädt**, and M. Wild, 2015 (June 22–July 2):
Observations of anthropogenic aerosol–cloud interactions. *26th General Assembly*, Prague, Czech Republic, International Union of Geodesy and Geophysics (IUGG). [Symposium co-convener and chair]

LANGUAGES

English, fluent

German, native speaker