CURRICULUM VITAE

Florian A. Schneider

September 10, 2022
Ph.D. Candidate
School of Sustainability
Julie Ann Wrigley Global Institute of Sustainability
Arizona State University

CONTACT INFORMATION

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EDUCATION

AUG 2018–MAY 2023

Ph.D., Sustainability, Arizona State University (ASU), Arizona, USA
Focus: Urban Heat Mitigation Strategies; Cool Pavements; Green Infrastructure; Equity and Sustainability; Science-Policy-Interface; Usable, policy-relevant Science

JUN 2019

Study Abroad as Ph.D. Student, CityUHK, Hong Kong, Hong Kong
Urban Sustainability in Hong Kong with focus on Housing, Water, Energy, Waste, and Air Quality

OCT 2013–DEC 2015

M.S., Meteorology, Leipzig University, Germany
Focus: Arctic Climate Change, Physical Climate Feedbacks, Theoretical Meteorology

AUG 2013–DEC 2013

Study Abroad as M.S. Student, University of Bergen, Norway
Focus: Physical Climatology, Theoretical Meteorology

OCT 2010–AUG 2013

B.S., Meteorology, Leipzig University, Germany
Focus: Anthropogenic Impact on Local Weather and Climate

PROFESSIONAL APPOINTMENTS

AUG 2018–AUG 2022

Arizona State University **Research Assistant**
SHaDE Lab, School of Arts, Media, and Engineering, Herberger Institute of Design and Arts, Arizona State University

AUG 2021–DEC 2021

Arizona State University **Graduate Teaching Associate**
SOS 111: Sustainable Cities (2021 Fall) Polytechnic Campus, School of Sustainability, Arizona State University

JAN 2017–JUL 2018

TROPOS/ESA **Programmer**
Working Group Satellite Remote Sensing, Department Remote Sensing of Atmospheric Processes, Leibniz Institute for Tropospheric Research
European Space Agency Affiliate – Project EarthCARE

JAN 2016–APR 2016

Leipzig University **Research Assistant**
Research Group Clouds and Global Climate, Leipzig Institute for Meteorology, Leipzig University

JUN 2012–DEC 2015

TROPOS **Research Assistant**
Working Group Ground Based Remote Sensing, Department Remote Sensing of Atmospheric Processes, Leibniz Institute for Tropospheric Research

RESEARCH INTERESTS AND EXPERIENCE

Climate Change, Sustainability

Urban Climate, Urban Heat, and Heat Mitigation Strategies

Arctic Climate, Climate Modeling, Radiation Transfer, and Feedbacks

(Un-)Intended Consequences, Uncertainty

Science & Policy Interface, Decision-Making, Facts and Values

Transdisciplinary Research, Usable Science

Science Communication

AWARDED SUPPORT & FELLOWSHIPS

Graduate Scholarship: School of Arts, Media, and Engineering, Arizona State University. Summer Graduate Service Assistantship ($6,600). PhD Candidate. Summer 2022. Accepted 2022.

Graduate College Completion Fellowship for Fall 2022 and Spring 2023.
GC Completion Fellowship award ($10,940 per semester) from the Graduate College. One credit of tuition per semester as Special Tuition Fellowship award ($1,470 per semester) from the Graduate College.
Award covering ASU health insurance cost per semester from the School of Sustainability. Accepted Spring 2022.

Graduate Scholarship: School of Arts, Media, and Engineering, Arizona State University. Graduate Research Assistantship ($10,250). PhD Candidate. Spring 2022. Accepted Spring 2022.

Graduate Stipend: School of Sustainability, Arizona State University. Graduate Teaching Associate ($9,750). PhD Candidate. Fall 2021. Accepted Fall 2021.

Graduate Scholarship: School of Arts, Media, and Engineering, Arizona State University. Summer Graduate Service Assistantship ($14,000). PhD Candidate. Summer 2021. Accepted 2021.

Central Arizona - Phoenix Long-Term Ecological Research Grad Grant, 2020 ($3,927.33, Co-PI), Project MaRTiny: Data analysis and validation of low-cost sensors measuring thermal conditions and space use. May 2020–August 2021.

Graduate Scholarship: School of Arts, Media, and Engineering, Arizona State University. Summer Graduate Research Assistantship ($12,000). PhD Student. Summer 2020. Accepted 2020.

Graduate Scholarship: School of Arts, Media, and Engineering, Arizona State University. Summer Graduate Research Assistantship ($8,010). PhD Student. Summer 2019. Accepted 2019.

Graduate Scholarship: School of Arts, Media, and Engineering, Arizona State University. Graduate Research Assistantship ($56,000). PhD Student. 2018–2021. Accepted 2018-2021.

Graduate Scholarship: Faculty of Science Dean's International Postgraduate Research Scholarship (AUD$82,059). PhD Candidate, School of Earth, Atmosphere, and Environment, Monash University, Australia. 2018–2021. Declined.

TEACHING

Guest Lecture on September 29, 2022. “Sustainable and Equitable Heat Mitigation”. AME 598: Topic: Sensable Heatscapes, Ariane Middel, Arizona State University, AZ, USA.

Guest Lecture on September 22, 2022. “Sustainable and Equitable Heat Mitigation”. IPI496: Advanced Inquiry, Farah Najar Arevalo, Arizona State University, AZ, USA.

Sustainability Research Seminar on February 23, 2022. “Comprehensive Heat Metric and Solar Reflectivity Assessment of Cool Pavement in the City of Phoenix”. School of Sustainability, College of Global Futures, Arizona State University, AZ, USA.

Guest Lecture on October 26, 2021. “SHaDE Lab and Heat mitigation”. SOS111: Sustainable Cities, Alycia de Mesa, Arizona State University, AZ, USA.

Graduate Teaching Associate Fall 2021. Recitation management/lead for two student groups (40 students) during Fall 2021. SOS 111: Sustainable Cities (2021 Fall) Polytechnic Campus, School of Sustainability, Arizona State University.

Guest Lecture on September 7, 2021. “Urban Heat and its Mitigation—Causes, Impacts, and Solutions”. Gilbert Historical Museum. Gilbert, AZ, USA.

Guest Lecture on April 1, 2019. “50 Grades of Shade”. AME 598 Topic: Sensable Heatscapes, Ariane Middel, Arizona State University.

PUBLICATIONS

Middel, A., Huff, M., Krayenhoff, E. S., **Schneider, F. A.**, and Udupa A. (2022). PanoMRT: Panoramic Infrared Thermography to Model Human Thermal Exposure and Comfort [Submitted]. Available at SSRN: https://dx.doi.org/10.2139/ssrn.4193542

Schneider, F.A., Cordova Ortiz, J., Vanos, J., Sailor, D., and Middel A. (2022). Evidence-based guidance on Reflective Pavement for Urban Heat Mitigation: A Case Study in Phoenix, Arizona [Submitted]. Available at Research Square: https://doi.org/10.21203/rs.3.rs-1965978/v1

Merchant, C., Meggers, F., Hou, M., Aviv, D., **Schneider, F. A.**, & Middel, A. (2022). Resolving Radiant: Combining Spatially Resolved Longwave and Shortwave Measurements to Improve the Understanding of Radiant Heat Flux Reflections and Heterogeneity. Frontiers in Sustainable Cities, 4, 82. https://doi.org/10.3389/FRSC.2022.869743

Kulkarni, K. K., **Schneider, F. A.**, Gowda, T., Jayasuriya, S., & Middel, A. (2022). MaRTiny—A Low-Cost Biometeorological Sensing Device with Embedded Computer Vision for Urban Climate Research. Frontiers in Environmental Science, 10, 550. https://doi.org/10.3389/FENVS.2022.866240

Kelly Turner, V., Rogers, M. L., Zhang, Y., Middel, A., **Schneider, F. A.**, Ocón, J. P., Seeley, M., & Dialesandro, J. (2022). More than surface temperature: mitigating thermal exposure in

hyper-local land system. Journal of Land Use Science, 1–21. https://doi.org/10.1080/1747423X.2021.2015003

Middel, A., AlKhaled, S., **Schneider, F. A.**, Hagen, B., & Coseo, P. (2021). 50 Grades of Shade. Bulletin of the American Meteorological Society, 1–35. https://doi.org/10.1175/bams-d-20-0193.1

Middel, A., Turner, V. K., **Schneider, F. A.**, Zhang, Y., & Stiller, M. (2020). Solar reflective pavements—A policy panacea to heat mitigation? Environmental Research Letters, 15(6), 64016. https://doi.org/10.1088/1748-9326/ab87d4

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

Wandinger, U., Hünerbein, A., Horn, S., **Schneider, F.**, Donovan, D., Van Zadelhoff, G. J., Daou, D., Docter, N., Fischer, J., Filipitsch, F., Zadelhoff, G.-J. van, Daou, D., Docter, N., Fischer, J., & Filipitsch, F. (2018). EarthCARE Aerosol and Cloud Layer and Column Products. EPJ Web of Conferences, 176, 02007. https://doi.org/10.1051/EPJCONF/201817602007

Baars, H., Kanitz, T., Engelmann, R., Althausen, D., Heese, B., Komppula, M., Preißler, J., Tesche, M., Ansmann, A., Wandinger, U., Lim, J. H., Young Ahn, J., Stachlewska, I. S., Amiridis, V., Marinou, E., Seifert, P., Hofer, J., Skupin, A., **Schneider, F.**, … Zamorano, F. (2016). An overview of the first decade of PollyNET: An emerging network of automated Raman-polarization lidars for continuous aerosol profiling. In Atmospheric Chemistry and Physics (Vol. 16, Issue 8, pp. 5111–5137). https://doi.org/10.5194/acp-16-5111-2016

CONFERENCE PRESENTATIONS AND POSTERS[1]

Florian A. Schneider, Project MaRTiny—A new low-cost, IoT sensor measuring thermal conditions and space use. Poster presented on November 17, 2021 at the Urban Climate Research Center Poster Event 2021.

Florian A. Schneider, Johny Cordova, Jennifer Vanos, Ariane Middel, David Sailor, David Hondula, Kamil Kaloush, and Jose Medina, COPE Phoenix – COol Pavement Evaluation Phoenix. Poster presented on Sep 21, 2021 at the International Congress of Biometeorology 2021.

Florian A. Schneider and Johny Cordova, COPE Phoenix – COol Pavement Evaluation Phoenix. Poster presented November 12, 2020 at the Arizona Pavements/Materials Conference for Enhancing Pavement Practices, 2020.

[1] Presenting author is underlined.

Florian A. Schneider and Johny Cordova, COPE Phoenix – COol Pavement Evaluation Phoenix. Poster presented October 15, 2020 at the Urban Climate Research Center Interactive Online Poster Event 2020.

Florian A. Schneider, Unintended Consequences and Trade-Offs of Urban Heat Mitigation Strategies: A Perspective Analysis. Environmental Design Research Association 51, Tempe, Arizona, April 3-6, 2020.

Ananth Udupa, **Florian A. Schneider**, Jennifer Vanos, Paul Coseo, David Hondula, Braden Kay, and Ariane Middel, Pedestrian Thermal Exposure in Urban Parks in Tempe, AZ. Environmental Design Research Association 51, Tempe, Arizona, April 3-6, 2020.

Lebeiko, L., P. J. Coseo, A. Middel, J. K. Vanos, D. M. Hondula, B. Kay, **F. A. Schneider**, S. Alkhaled, A. Udupa, J. Labato, L. Kurtz, A. Aldakheelallah, and J. Marturano, Adapting urban infrastructure for local and global climate change: Climate action planning for extreme heat in urban environments. Poster presented at the Twenty-second Annual CAP LTER All Scientists Meeting and Poster Symposium, January 17, 2020, Skysong, Scottsdale, AZ.

Florian A. Schneider, Unintended Consequences and Trade-Offs of Heat Mitigation Strategies. AMS 100th Annual Meeting, Boston, Massachusetts, January 12-16, 2020.

Ariane Middel, V. Kelly Turner, **Florian A. Schneider**, Yujia. Zhang, and Matthew Stiller, Thermal Performance of Cool Pavements in Los Angeles Residential Neighborhoods: A Pedestrian Perspective. AMS 100th Annual Meeting, Boston, Massachusetts, January 12-16, 2020.

V. Kelly Turner, Ariane Middel, **Florian A. Schneider**, Yujia Zhang, and Matthew Stiller, Transformative Climate Communities: Informing Adaptation Planning through Cool Urban Design Interventions in Southern California. AMS 100th Annual Meeting, Boston, Massachusetts, January 12-16, 2020.

Florian A. Schneider, Ariane Middel, Saud AlKhaled, Björn Hagen, Paul Coseo, 50 Grades of Shade – Assessment of engineered and natural shade in hot dry communities. EGU General Assembly 2019, Vienna, Austria, April 7–12, 2019.

Florian A. Schneider, Ariane Middel, Saud AlKhaled, Björn Hagen, Paul Coseo, 50 Grades of Shade –Assessment of Engineered and Natural Shade in Hot Dry Communities, Poster presented March 27, 2019 at the 2nd annual Urban Climate Research Center Poster Symposium, Tempe, Arizona, 2019.

Anja Hünerbein, **Florian Schneider**, Ulla Wandinger, Nicole Docter, René Preusker, Jürgen Fischer, Synergistic aerosol and cloud properties from EarthCARE's imager and atmospheric lidar, Poster presented June 12, 2018 at the 7th International EarthCARE Science workshop & 1st ESA EarthCARE Validation workshop, Bonn, Germany, 2018.

Anja Hünerbein, **Florian Schneider**, Ulla Wandinger, Nicole Docter, René Preusker, Jürgen Fischer, Synergistic aerosol and cloud properties from EarthCARE's imager and

atmospheric lidar, Poster presented April 09, 2018 at the EGU General Assembly 2018, Vienna, Austria, Austria, 2018.

Gerd-Jan van Zadelhoff, Dave Donovan, Ulla Wandinger, Anja Huenerbein, **Florian Schneider**, Nicole Docter, Rene Preusker, Michael Eisinger, The EarthCARE L2 lidar retrieval chain, Poster presented April 09, 2018 at the EGU General Assembly 2018, Vienna, Austria, Austria, 2018.

STUDENT SUPERVISION / MENTORING

Erin Epel, Barret Honors B.S. Student; Student worker supervision (04/2021–present)

Karthik Kulkarni, M.S. Student; Thesis and sensor development assistance (01/2021–08/2021)

Julia Marturano, Barret Honors B.S. Student; Thesis committee member (08/2020–05/2021)

Johny Cordova, Barret Honors B.S. Student; Student worker supervision (08/2020–05/2021)

SERVICE

Student-lead on the Sustainability Research Seminar (2022-2023):
Co-lead with Professor Tyler DesRoches and Professor Jennifer Vanos
College of Global Futures at Arizona State University

ASU Student Trustee (2022-2023):
Serve on the Arizona State University Trustee Board
Represent all 140,000+ students of ASU

Graduate and Professional Student Association (GPSA) President (2022-2023):
Serve on the Council of Presidents within ASASU and report back to GPSA
Ambassador of all of GPSA, representing all of ASU's graduate and professional students
Supervise operations of GPSA and GPSA activities by managing directors, executive members, and their initiatives, events, and programs.
Manage the GPSA budget with ASASU Business Office
Hear needs, concerns, issues, ideas, and grievances of graduate students
Connect students to resources on campus
Oversee communications with ASU administration
Produce advocacy agenda and strategic plan

Co-convening of two American Meteorological Society sessions at the 102nd annual meeting:
Sessions 5 and 6 – Heat in the City: Science and Solutions
Session 9A – The Value of Cooling Our Urban Environments

Graduate and Professional Student Association (GPSA) Director of Travel (2021–2022):
Manage travel grant program ($300,000+ annual budget), applications, and reviewers
Advertise Travel Grant opportunities to students
Provide feedback during office hours

Official graduate student representative for School of Sustainability (Fall 2021–Spring 2022)

Graduate and Professional Student Association (GPSA) Assembly Member (2019–2021):
Member of three (2019–2020) and two (2020–2021) committees
GPSA representative for the School of Sustainability (2019–2021)
Representative for the graduate and professional students At-Large (5/2021)

Student Leader in Community of Scholars class, Fall 2019

PROFESSIONAL MEMBERSHIPS / AFFILIATIONS

International Association for Urban Climate, since 2018

American Meteorological Society, since 2018

European Geoscience Union, since 2017

HONORS, SCHOLARSHIPS, & AWARDS

Student Government Scholarship from Educational Outreach and Student Services (EOSS) at Arizona State University ($5,000) from May 2022 to May 2023

GPSA President Scholarship ($11,250) from May 2022 to May 2023

GPSA Spring 2022 Outstanding Research Award ($750) for my dissertation research on Cool Pavement in the City of Phoenix

GPSA Spring 2022 JumpStart Grant ($750) for Dissertation Research Resources

GPSA Individual Travel Award ($950) for AMS 2022

GPSA Director of Travel Scholarship ($6,200) for managing GPSA's travel grant program from June 2021 to May 2022

GPSA Leadership Scholarship ($700) for GPSA commitment Spring 2021

GPSA Support for Travel and Research (STAR) Committee Member of the Year Award ($500) on April 28, 2021

GPSA Assembly Operations Committee Member of the Year Award ($500) on April 28, 2021

GPSA Career Development Travel Grant ($150) for ISSR Spring 2021 Workshop registration

GPSA Spring 2021 JumpStart Grant ($279) for Dissertation Research Resources

GPSA Conference Travel Award for remote conference registration ($50) for AMS 2021

Honorable Participation at 17th Arizona Pavements/Materials Conference ($75) on Nov 12, 2020

GPSA Leadership Scholarship ($500) for GPSA commitment Fall 2020

GPSA Certificate of Committee Achievement – Internal Affairs ($500) on April 17, 2020

GPSA Leadership Scholarship ($500) for GPSA commitment Spring 2020

GPSA Conference Travel Award ($950) for AMS 2020

Graduate College Travel Award ($500) for AMS 2020

GPSA Leadership Scholarship ($500) for GPSA commitment Fall 2019

Walton Global Sustainability Studies Scholarship ($2,500) for Study Abroad on Urban Sustainability in Hong Kong 2019

Honorable Mention for Poster Presentation at 2nd Urban Climate Research Center Poster Symposium, Tempe, Arizona, 2019

EXTRACURRICULAR RECOGNITION & ACTIVITY

Inter-confessional and politically independent Scout Group Leader 2005–2010

Student organization member: Elferrat Physics and Geosciences 2011–2016, Leipzig University

Graduate and Professional Student Association Member and Leader in multiple positions, Arizona State University since April 2019

PROFESSIONAL DEVELOPMENT: WORKSHOPS & SPECIALIZED TRAINING

JUNE 2021

1-Week Gold Online Dissertation Writing Camp, ASU

MAY 2021

Institute for Social Science Research Workshops, ASU:
Content Analysis; Reflexivity and Positionality

OCT 2016–DEC 2016

Geographic Information Systems; ArcGIS
Cimdata Bildungsakademie GmbH, Leipzig, Germany

PUBLIC MEDIA

Consensus Digital (Online—April 20, 2022): American Innovators: How America's Hottest City is Handling the Heat. https://youtu.be/hrDHPYmJJ-A

Geo (Online—January 25, 2022): Phoenix, métropole la plus chaude des Etats-Unis et laboratoire du changement climatique. https://www.geo.fr/geopolitique/phoenix-metropole-la-plus-chaude-des-etats-unis-et-laboratoire-du-changement-climatique-207328

Geo Magazine (Print—December, 2021): Ce monde qui change: Phoenix, la métropole la plus chaude des États-Unis. https://photo.geo.fr/arizona-enquete-a-phoenix-ville-en-surchauffe-47245#l-ete-des-le-printemps-cvmbh

The State Press (October 21, 2021): A new kind of MaRTiny: ASU researchers hope device will help gather heat data. https://www.statepress.com/article/2021/10/new-device-developed-by-asu-measures-heat-effect

ASU News (September 21, 2021): Trying to cool off neighborhoods with a new kind of road surface. https://news.asu.edu/20210921-arizona-impact-phoenix-coolseal-pavement-heat-study

Gilbert Sun News (September 12, 2021, p. 16): Heat topic of HD South speaker's talk. https://issuu.com/timespub/docs/gilbert_sun_news_0912/1?e=8633901/87206811

PBS Terra (June 7, 2021): How America's Hottest City is Innovating to Survive | Weathered https://www.youtube.com/watch?v=Q2RQjtucG3M

ASU News (June 3, 2021): Do trees provide the best shade for urban environments? https://news.asu.edu/20210603-discoveries-asu-researchers-measure-comfort-power-different-kinds-city-shade

Fox 10 News (September 2019): ASU professor studies how different types of shade can help keep us cool in the heat https://www.fox10phoenix.com/news/asu-professor-studies-how-different-types-of-shade-can-help-keepus-cool-in-the-heat

KTAR (September 2019): ASU researchers say shade is not all created equal https://ktar.com/story/2714082/arizona-researchers-say-shade-is-not-all-created-equal/

Cronkite News (August 2019): 50 grades of shade: Researchers find that it's not all created equal https://cronkitenews.azpbs.org/2019/08/29/climate-change-research-shade/

New York Times (August 2019): As Phoenix Heats Up, the Night Comes Alive https://www.nytimes.com/interactive/2019/climate/phoenix-heat.html

ASU Cronkite News (July 2019): 50 Grades of Shade https://www.youtube.com/watch?v=uaBu7pnFMNw&feature=youtu.be