Sandra PASSCHIER
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ACADEMIC POSITIONS

2014-	Professor, Montclair State University, Montclair, New Jersey, U.S.A.
2022-	Adjunct Senior Research Scientist, Lamont-Doherty Earth Obs., Columbia Univ.
2014-2022	Adjunct Research Scientist, Lamont-Doherty Earth Observatory, Columbia Univ.
2010-2014	Associate professor, Montclair State University, Montclair, New Jersey, U.S.A.
2005-2010	Assistant professor, Montclair State University, Montclair, New Jersey, U.S.A.
2001-2005	Research geologist, TNO-National Geological Survey Geo-marine Division, Utrecht, The Netherlands
1996-2000	Graduate research/teaching assist./instructor, The Ohio State University, U.S.A.
1992-1996	Graduate research/field assistant, Free University Amsterdam, TNO-National Geological Survey, University of Amsterdam, The Netherlands, and Irish Geological Survey, Ireland

EDUCATIONAL BACKGROUND

2000	Ph.D. in Geological Sciences, The Ohio State University, Columbus, Ohio, U.S.A.
1994	M.S. (Doctorandus) in Physical Geography, University of Amsterdam, The Netherlands

SHIPBOARD AND FIELD SCIENCE TEAM EXPERIENCE

2023	Sedimentologist, IODP Exp. 400, NW Greenland
2022-2023	Beach sampling, Sandy Hook New Jersey, Permit#: GATE-2022-SCI-0041
2019	Sedimentologist, IODP Exp. 379, Amundsen Sea, Antarctica
2014	MSP On-shore Science Party, Bremen, Germany, IODP Exp. 347 Baltic Sea
2010	Sedimentologist (coordinator), IODP Exp. 318, Wilkes Land, Antarctica
2007	Miers Valley, Royal Society Range, day trip from McMurdo Station, Antarctica
2007	Sedimentologist, Antarctic Drilling Program (ANDRILL), McMurdo Station
2007	Field geology, sedimentology, Boston Bay Group, Squantum MA
2001-2002	Sedimentologist/co-chief scientist (four 2-week surveys, vessels Zirfea and Arca), North Sea, Delft Cluster (Dutch National Research Program)
2000	Sedimentologist, Ocean Drilling Program Leg 188, Prydz Bay, Antarctica
1998	McMurdo Erratics, Mt. Discovery, Antarctica, 1 day (with David Harwood)
1997-1998	Wright Valley, Victoria Valley, Taylor Valley, Suess Glacier, Transantarctic Mountains (several 1-day helicopter drops out of McMurdo Station)

1998 Cape Roberts Drilling Project, McMurdo Station, Antarctica
1997 McMurdo Ice Shelf, Ross Sea, Antarctica, 1 day (with Richard Aronson)
1997 Cape Roberts Drilling Project, McMurdo Station, Antarctica
1992 Field team member, GIMEX-92, Greenland Ice Margin Experiment (with F. van Tatenhove, M. van den Broeke, University of Amsterdam, Utrecht University)

EXTERNAL GRANTS ($ amount to Montclair State University)

2023 PI, Subaward NSF-OCE "U.S. Science Support Program…IODP" for IODP Expedition 400, NW Greenland. 08/01/2023-07/31/24 $65,278.
2023 Co-PI (MSU PI), Subaward NSF-OCE "IODP Exp 393 Post-Expedition Activity Award for Victoria Hojnacki" 04/01/2023 to 03/31/2024 $20,000 (PI: Ph.D. student Victoria Hojnacki)
2022 Co-PI (MSU PI), Subaward NSF-OCE "U.S. Science Support Program…IODP" for Ph.D. student Victoria Hojnacki's participation in IODP Expedition 393, South Atlantic Transect. 06/01/2022-02/28/2023 $11,147. (PI: Ph.D. student Victoria Hojnacki)
2021 PI, NSF-OPP grant: "West Antarctic Ice Sheet change and paleoceanography in the Amundsen Sea across the Pliocene Climatic Optimum" 08/15/2021 to 07/31/2024, Award # 2114839, $410,572
2019 PI, Subaward NSF-OCE "U.S. Science Support Program…IODP" for IODP Expedition 379, Amundsen Sea, Antarctica. 01/01/2019-11/30/21 $73,278.
2018 PI, NSF-OPP grant: "Timing and spatial distribution of Antarctic Ice Sheet growth and sea-ice formation across the Eocene-Oligocene Transition". 06/15/2018-5/31/2021, ANT 1743643 $323,113.
2015 Co-PI, NSF-MRI grant: "Acquisition of an Inductively Coupled Plasma- Mass Spectrometry (ICP MS) for elemental concentration and speciation analysis at Montclair State University", (PI: Xiaona Li), 9/1/2015-8/31/2016, EAR 1531719 $168,245
2015 Co-PI, NJ Council for the Humanities grant for: "Rising Tide: What We can Learn From the Dutch and their Relationship with Water." (PI: Steven Shapiro) $20,000
2014 PI, Subaward NSF-OCE, Consortium for Ocean Leadership, "Expedition 347 Baltic Sea Onshore Science Party" IODP USSSP Salary Support and PEA award, 01/22/2014-01/21/2016 (no-cost extension) $32,892
2012 PI, NSF-OPP award: "The Stratigraphic Expression of the Onset of Glaciation in Eocene-Oligocene Successions on the Antarctic Continental Margin", 6/1/2013-5/31/2018, ANT 1245283 $118,937
2011 PI, NSF-ODP award: "Early Pliocene record of Antarctic ice rafting and paleoenvironmental conditions, Wilkes Land Margin, Antarctica", 3/15/2011-2/28/2016, OCE 1060080 $183,565
2010 PI, NSF-ODP Subaward, Consortium for Ocean Leadership, IODP Exp. 318 USSSP Salary Support and PEA award: "Cenozoic Antarctic ice-sheet dynamics based on ice-rafted debris and bulk geochemical studies", 1/4/2010-1/4/2013, IUSSP410-T318A72 $53,485
2010 Co-PI, NSF-IF award: "Upgrade of the Optical ICP at Montclair State University", (PI: Matt Gorring), 05/01/10-04/30/12, EAR 0948992 $28,050.
2009 PI, NSF-OPP award: "Determining Middle Miocene through Pliocene changes in basal ice conditions in East Antarctica through sedimentological analyses of core samples" 07/01/09-08/31/11, ANT 0838842 $75,817

2008 PI, NSF-OPP subaward: "Recording Middle Miocene through Pliocene Antarctic cryospheric change based on shifts in sedimentary facies, particle size, heavy minerals and SEM analyses of quartz grain surface textures" 06/01/08-02/28/11, ANT 0342484 (25-0550-0001-152) $71,229

2007 PI, NSF-OPP subaward: "Recording glacier regime and sediment dispersal through the Neogene using analysis of sedimentary facies and laser particle size measurements" 06/01/07-02/28/11, ANT 0342484 (25-0550-0001-132) $46,068

2006 Co-PI, NSF-MRI grant: "Acquisition of a Scanning Electron Microscope at Montclair State University", (PI: S. Brachfeld), EAR 0619402, $264,579

2000 PI, Ocean Drilling Program post-cruise research grant (JOI INc.) #F001171/F001282, 04/10/00-08/31/02, $6684.00

2000 Ocean Drilling Program shipboard salary grant (JOI INc.), (PI: P.N. Webb) 01/13/00-04/14/00, $7527.90

1998 Geological Society of America Student Research Grant #6306-98, 04/27/98-01/30/99 $793

INTERNAL GRANTS, MONTCLAIR STATE UNIVERSITY

2022 Co-PI, Faculty Research Mentoring Award, Montclair State University $5000

2019 PI, Separately Budgeted Research award, Montclair State University: "X-ray fluorescence of sediment cores from Amundsen Sea, Antarctica", $4920

2013 PI, Global Education Center, Montclair State University, "Strengthening existing collaborations between Utrecht University, the Netherlands and MSU" $2000

2007 PI, Sokol Faculty-Student Research award, College of Science and Mathematics, Montclair State University: "Analysis of ice-stream drainage patterns in Antarctica using heavy mineral assemblages from marine sediment cores" 06/01/07-06/30/08, $1850

2007 PI, Separately Budgeted Research award, Montclair State University: "Field geology and inorganic geochemistry of Snowball Earth rocks, Boston Bay Group, Massachusetts" 06/01/07-12/31/08, $1130

2006 PI, Summer Grant Proposal Development Award, Montclair State University: "Laser particle size analyses and SEM analyses of quartz grain surface textures on core samples from Antarctica", $4000

2006 PI, Global Education Center, Montclair State University, travel award $800

HONORS / AWARDS / SCHOLARSHIPS / FELLOWSHIPS

2022 Fellow, Geological Society of America

2018 Gonfalonier, College of Science and Mathematics, Montclair State University, The Graduate School Commencement, January 14

2013-2014 Distinguished Lecturer - International Ocean Discovery Program

2013 College of Science and Math Faculty Research Award, Montclair State University

2011-2012 Visiting scientist (3 months), Department of Earth Sciences, Utrecht University (Sponsored by Netherlands Science Foundation-NWO, PI: Henk Brinkhuis)

2003 Gratification for Scientific Input, Internat. Workshop on Land-Sea Stratigraphic Correlation, Utrecht, The Netherlands (TNO-Marine Geology Division) € 500

2000 Spieker Award, outstanding graduating PhD student (The Ohio State Univ.) $100

2000 U.S. Antarctic Service Medal (National Science Foundation)

1997 Lois M. Jones Fellowship, Dept. of Geological Sciences, The Ohio State University

INVITED PRESENTATIONS

2022 "Antarctica's deep connections in the Earth System", Saint Peter University, Jersey City, New Jersey (online talk).

2020 "The Pliocene sedimentary record offshore the Amundsen Sea, West Antarctica: initial results from IODP Expedition 379" by Passchier, S., Hillenbrand, C.D., Frederichs, T., Libman-Roshal, O., Gohl, K., Wellner J. and Expedition 379 Scientists, American Geophysical Union, C037-0008 (Invited)

2020 "Detecting glacial sediment using scanning electron microscopy of quartz sand surface textures" (online seminar) – IODP Expedition 382 Iceberg Alley IRD research group (Hemming/O'Connell/Siddoway/Warnock/Kaplan/Thomson and students)

2019 "Antarctic sedimentary systems under different climate states in the Miocene and Pliocene" and "The Eocene-Oligocene transition in Antarctica" PAIS-IODP Antarctic Summer School, Texas A&M University, College Station TX.

2018 "Detrital and authigenic sediment recorders of past meltwater production and ice retreat" Lamont Doherty Earth Observatory Geochemistry seminar.

2017 "Sedimentological proxies of Antarctic continental aridity, melt supply, iceberg concentrations, and ocean circulation under different mean climate states." Ice-shelves: Models and Observations Workshop, PAIS conference, Trieste, Italy.

2017 "The geological archive of polar ice behavior in a warmer climate extracted from ocean drillcores on Antarctica's continental margin" Wesleyan University, CT.

2016 "An Antarctic stratigraphic record of step-wise ice growth through the Eocene-Oligocene greenhouse-icehouse transition" University of Wisconsin, Milwaukie.

2015 "Neogene sedimentation in onshore to offshore transects off East Antarctica and paleoclimatic interpretations" Interdisciplinary Antarctic Earth Sciences Meeting, Loveland, Colorado.

2015 "Dynamic ice sheets in a warmer world: unraveling the sedimentary paleo-archive within the Antarctic continental margin", MARUM Lecture Series, Univ. of Bremen.

2014 "Building high-latitude sequence stratigraphic models, with examples from Eocene through Miocene successions on the Antarctic continental margin". AAPG/SEPM Hedberg research conference "Latitudinal Controls on Stratigraphic Models and Sedimentary Concepts" 9/28– 10/1 2014, Banff, Canada.

2014 "The sedimentary record of Antarctic ice dynamics during past warm periods", Geoscience Colloquium, University of Pennsylvania.

2013-2014 "The footprint of an ice sheet on the Antarctic continental margin" (IODP Distinguished Lecturer) University of Kentucky, University of Cincinnati, Coastal Carolina University, University of South Carolina, Texas A&M University Corpus Christi, Texas State Aquarium, Appalachian State University, California State University Fresno.

2013 "The sedimentary signature of the Antarctic ice sheet during the Miocene Climatic Optimum", Department of Earth and Planetary Sciences, Rutgers University.

2012 "Orbitally-paced shifts in the paleobathymetry of the Antarctic continental shelf in response to ice dynamics during the Miocene climatic optimum", Institute for Marine and Atmospheric research Utrecht, Utrecht University, The Netherlands.

2012 "High-latitude drillsites record Antarctic ice dynamics during Miocene and Pliocene

climatic optima", MARUM-Center for Marine Environmental Sciences, University of Bremen, Germany.

2011 "Linkages between ice dynamics and ocean temperatures in sediment records on the Antarctic continental margin", IPPU, Department of Earth Sciences, Utrecht University, The Netherlands.

2011 "Reconstruction of Eocene to Miocene Antarctic surface temperature, aridity, and paleoceanography from bulk sediment geochemistry of continental margin drillholes", Lamont Doherty Earth Observatory, Columbia University, Geochemistry seminar.

2011 "The challenge of climate change and sea level prediction: the role of the Antarctic ice sheets", LaSalle University, Philadelphia, Geology department seminar.

2010 "The challenge of sea level and climate change prediction: a progress report on the sustainability of the cryosphere", MSU Sustainability Symposium.

2009 "Glacial extent from lithofacies distribution and terrigenous supply in cores from the Antarctic margin", Workshop: Marine Proxies for Antarctic Ice Volume: Continental Shelf Sequence Stratigraphy and delta^{18}O Records from High and Low Latitudes, Granada, Spain.

2007 "High Latitude Sedimentology and Stratigraphy", Workshop: Marine Proxies for Antarctic Ice Volume: Continental Shelf Sequence Stratigraphy and delta^{18}O Records from High and Low Latitudes, Santa Barbara CA. (Invited speaker with C. Fielding and R. Powell)

2006 "Antarctic Climate Evolution", II Simposio Latinamericano Sobre Investigationes Antarcticas y VI Reunion Chilena de Investigacion Antartica, Concepcion, Chile.

2004 "Dynamic or stable East Antarctic Ice Sheet in the Neogene: an update on the Sirius Group debate", Antarctic Earth Science Symposium, University of Amsterdam, The Netherlands.

2000 "First results of ODP Leg 188", Cape Roberts Project Meeting, Columbus, Ohio.

1999 "Cenozoic Antarctic glacial history: the stratigraphic record from the continent and the continental margin", Department of Earth Sciences, Free University, Amsterdam, the Netherlands.

TEACHING

2005-ongoing Instructor of Stratigraphy, Sedimentology, Advanced Marine Geology, Glacial Deposits, Physical Geology, Planet Earth, Earth System History, Understanding Weather and Climate, Invertebrate Paleobiology, Montclair State University

2022 Instructor, GLASS Glacial Sediment Summer School, Oregon State University

2019 Instructor, PAIS/IODP Antarctic Summer School, Texas A&M University

2002 Instructor, Marine Geology short course for Chinese visiting scientists, TNO-National Geological Survey

1999 Instructor of Historical Geology at the Department of Geological Sciences, The Ohio State University (Winter Quarter)

1996 Teaching assistant of Introductory Geology at the Department of Geological Sciences, The Ohio State University (Fall Quarter)

GRADUATE STUDENTS

Ph.D. Dissertation Committee Chair (all Montclair State University)

2022- Monika Ghimire: Recording the last deglaciation in lake sediment records from

the southern Tibetan Plateau.
2021- Divomi Balasuriya: New Jersey coastal barrier sediment dynamics.
2019- Victoria Hojnacki: The Eocene-Oligocene transition in West Antarctica.
2019-2022 Olga Libman-Roshal: West Antarctic Ice Sheet during the Pliocene Climatic Optimum.
2014-2015 Daniel J. Ciarletta: Preliminary investigation of shore attached ridges, Mantoloking, New Jersey (switched dissertation chair vs. committee role with J. Lorenzo-Trueba).
2012-2016 Melissa A. Hansen: An assessment of Antarctic ice sheet dynamics from a Pliocene polar paleoclimate archive.

Ph.D. Dissertation committee member or external reviewer
Qingting Wu, Montclair State University (in progress).
Hermann Bermudez, Montclair State University (in progress).
Bhagyashree Vaidya, Montclair State University (2022).
Daniel J. Ciarletta, Montclair State University (2019).
Rocio Duchesne-Onorio, Montclair State University (2015).
Nina Immonen, University of Oulu, Finland (2014).
Kevin Olsen, Montclair State University (2014).
Mark T. Lloyd Davies, Univ. of Amsterdam, The Netherlands (2004).

M.S./M.A. Students, primary advisor (all Montclair State University)
2023 Celina Flores Garza: Trace and Rare Earth Element (REE) analysis of Oligocene and Miocene diamictites in the Cape Roberts Drilling Project cores, Ross Sea, Antarctica (M.S. thesis, in progress).
2022 Ridley Joseph: Antarctic Peninsula ice sheet dynamics in the Pliocene from sedimentological interpretation of Ocean Drilling Program Site 1097 (M.S. Thesis).
2021 Josie Horowitz: Identification of Ice-rafted Debris in the Weddell Sea to Characterize Glaciation at the Eocene-Oligocene Transition (M.S. Thesis).
2020 Mathew Sandefur: The Behavior of the Baltic Sea Ice Stream during the Deglaciation of the Baltic Ice Lake, recorded in the Particle Size and Geochemistry within Bornholm Basin, IODP Site M0065 (M.S. Thesis).
2019 Abbey States: Glauconite Formation in Upper Eocene ODP Site 696 Sediment in West Antarctica (M.S. Thesis).
2018 Allison Lepp: Geochemical and Sedimentological Analysis of Marine Sediments at ODP Site 696 and the Onset of Antarctic Glaciation (M.S. Thesis)(College Research Award).
2017 Peter Bodor: Teaching Antarctic Marine Geology in High School Curriculum (non-thesis, M.S. Geoscience Research Seminar and Comp. Exam)
2017 Jennifer Light: Geochemical and Particle Size Analysis of East Antarctic Shelf Sediments Through the Eocene Oligocene Transition (M.S. Thesis).
2017 April L. Kelly: Determining Late Pleistocene to Early Holocene deglaciation of the Baltic Ice Lake through sedimentological and geochemical analysis of IODP Site M0064 (M.S. Thesis)(GSA student research award $1875).
2016 Taylor A. Krolik: Grain Size and Organic Geochemistry of Kattegat Sediment to Determine Paleoenvironments of the Last Interglacial-Glacial Cycle (M.S. Thesis).
2015 Vicky Sekkas: Bedform morphodynamics and environmental implications in the New

York Bight apex (M.A. Thesis).

2014 Jessica Rosenberg: Late Pliocene ice-rafted debris mass accumulation rates from IODP Site U1359, Wilkes Land continental rise, Antarctica (M.S. Thesis).

2014 Daniel J. Ciarletta: Characterization of Eocene-Oligocene depocenters in Prydz Bay, East Antarctica: a lithostratigraphic correlation of Sites 739, 742, and 1166 (M.S. Thesis).

2011 Melissa A. Hansen: Middle Miocene basal ice conditions in southern McMurdo Sound, Montclair State University (M.S. Thesis).

2010 Daniel Hauptvogel: Ice dynamics in the past 17 Myr in Southern McMurdo Sound: a heavy mineral analysis (M.S. Thesis).

2010 Audrey Burns: Quartz surface microtextures in AND-2A (non-thesis, M.S. Geoscience Research Seminar and Comp. Exam).

2009 Candice J. Falk: Paleoenvironment and paleoclimate of coastal East Antarctica during the middle Miocene: Particle size results of the ANDRILL Southern McMurdo Sound Project (M.S. Thesis).

2009 Efe J. Erukanure: Stratigraphy and geochemistry of the Squantum Tillite, Boston Bay Group, using field log and ICP analysis (M.S. Thesis).

M.S./M.A. Thesis committee member or external reviewer

Shane Nichols-O'Neill (M.S. in progress), Maura DePalma (M.S. 2022), Norjmaa Khosbaatar, Madeline Kollegger (M.S. 2021), Christopher Tenebruso, Liliana Calderon, (M.S., 2020), Ashley Cirone, (M.S., 2017), David Sharpe, (M.S., 2015), Diane Hagmann, (M.A., 2015), Rachel Darley (Perez), (M.S., 2014), Brendan Reilly, (M.S., 2012), Carl Natter, Jaroslav Slusarczyk, (M.S., 2011), David Cuomo, (M.S., 2010), Ken Kacperowski, Cathleen L. Dale, (M.S., 2009), Matthew Hill, University of Otago, NZ (M.S., 2006), Rik Wemmenhove, Twente Univ., The Netherlands (M.S., 2004).

M.S. Comprehensive exam, examiner or moderator, Montclair State University

Cassie Southard (2022), Jessica Purpura (2019), Peter Bodor (2018), Renee Rehfuss (2017), Melissa McCrink (2017), Sean Rittinger (2016), Hayley Rosado (2016), Sam Spangler (2016), Jeff Olivieri (2015)

INDEPENDENT STUDIES AND LABORATORY TRAINING

Sponsorship/mentorship of undergraduate/first-year graduate students

2022 Jessica Scheinbaum, LSAMP Scholar

2021-2022 Lisbeth Mino-Moreira, LSAMP Scholar

2021-2022 Ronald DeLeon, LSAMP Scholar

2019 Adrienne Novack, laboratory student worker: grain-size analysis of IODP Exp 347 Baltic Sea/Kattegat sediment drillcore samples

2018 Ridley Joseph, laboratory student worker: ICP geochemical analyses of ODP Site 696, Antarctica (B.S. Earth and Environmental Science student)

2017 Dylan Cone: particle size analyses of Eocene sediments at ODP Site 696, Antarctica (B.S. Geoscience Indep. Study)

2016 Tim Maravegias: particle size and depositional environments of the Cloudmaker Formation, Transantarctic Mountains (B.S. Geoscience Indep. Study)

2015-2016 Christina Verhagen: ICP analysis of Antarctic core samples from DVDP-11. (B.S.

Geoscience Indep. Study)(TechLaunch Future Scientist 1st place $1000)

2014-2015 Rose Miriagos: ICP analysis of Antarctic core samples from across the Eocene-Oligocene boundary (B.S. Geoscience Indep. Study)

2014 Chemin Bushman: Comparing Grain Size Based on Differences in Obscuration (B.S. Geocience Indep. Study)

2013 Vicky Sekkas: The record of Late Oligocene ice growth at IODP Site U1356, Wilkes Land margin Antarctica (B.S. Geoscience Honors Project)

2012-2013 J. Patel: How far south does the Chon Aike igneous province extend into Antarctica? (M.S. Geoscience Independent Study)

2010-2012 Nadine Orejola: Pliocene ice dynamics from IODP Site U1358 (B.S. Geoscience Honors Project)(Science Honors Internship Program -SHIP- fellowship).

2011 Victor Henao: Ice dynamics and productivity during the Miocene Climatic Optimum from ICP-OES of IODP Site U1356 (B.S. Geocience Indep. Study).

2009-2010 R. Linda Martin: particle size and bulk geochemistry of CRP cores, Antarctica (M.S. Graduate Research Assistant).

2008 Ian Johnson: Particle size record for the Plio-Pleistocene of AND-2A (B.S. Geoscience Honors Project).

2008 Jason Darley and Dan Hauptvogel, laboratory student workers, Sokol Faculty-Student research project: Heavy Minerals in Antarctic Sediment Cores from Prydz Bay, East Antarctica (B.S. Geoscience students).

2007 Ryan Ippolito: Carbon dioxide and climate studies based on Eocene paleotemperature records (B.A. Geography Senior Project).

2006 Sarah E. Busch: Particle Size Analysis of Eocene-Oligocene Antarctic Core Samples, ODP Site 1166, (B.A. Geography Senior Project).

2005 Bas Berdee (Univ. Utrecht): Ice-contact fluvioglacial sediments near Werpeloh and Balderhaar (Germany) M.S. Physical Geography field research project.

Additional MSU-based students hosted in sedimentology lab

2019 Bhagyashree Vaidya, Ph.D. Environmental Science & Mgt (advisor Nina Goodey)

2019 Anastasia Figueroa, M.S. Earth & Environmental Science (advisor Greg Pope)

2014-2017 Diane Hagmann, M.A./Ph.D. Environmental Management (advisor Nina Goodey)

2016 Adam Fernandez, M.S. Geoscience (advisor Greg Pope)

2014 Abhishek RoyChowdhury, Ph.D. Env. Management (advisor Dibs Sarkar)

2013 Carolyn Mathieu, B.S. Chemistry, SHIP honors program (advisor Nina Goodey)

2011 Elena Noonan, Kiara Jones, REU: "Environmental Research on Forest Lakes" (advisor Greg Pope)

2010 Nicole Bujalski, M.S. Geoscience (advisor Mike Kruge)

2009 Barbara D. Soares, M.S. Biology (advisor Ann Marie DiLorenzo)

2009 Jennifer LaPoma, M.S. Geoscience (advisor Greg Pope)

2007 Jennifer Callanan (nee Reynard), Ph.D. Env. Managem. (advisor Greg Pope)

2006 Molly Rosig, M.S. Geoscience (advisor Stefanie Brachfeld)

2006 Rachel Darley (nee Perez), M.S. Geoscience (advisor Stefanie Brachfeld)

Visiting faculty, post-docs, and students hosted at Montclair State University

2014 Dr. Peter K. Bijl, Utrecht University, The Netherlands (laboratory, science visit)

2013 Samantha Berger (undergrad.), Rutgers University (several visits, laboratory use)

2012 Francesco Iacoviello (Ph.D.), University of Siena, Italy (2 weeks)

2012 Linda Martin (M.S.), Rutgers University (several visits, laboratory use)
2010 Jhon J. Gonzalez (Ph.D.), University of Granada, Spain (2 months)
2009 Dr. Jennifer Callanan (nee Reynard), William Paterson University, N.J. (several visits, laboratory use)

PROFESSIONAL SERVICE

International and national committee service

2021-2024 Member, Research Grants Committee, Geological Society of America
2020-2023 Member, Science Evaluation Panel of the International Ocean Discovery Program
2019-2020 Member, international Science Framework Working Group "Exploring Earth By Scientific Ocean Drilling"
2018-2019 Member, Steering Committee Scientific Ocean Drilling beyond 2023 (SOD 23+)
2017 Participant, watchdog, JOIDES Resolution drillship Assessment Workshop, Denver
2013-2016 Member, U.S. Advisory Committee for Scientific Ocean Drilling (USAC)
2012-2014 Curatorial Advisory Board, Polar Rock Repository, The Ohio State University
2005-2013 Member, International Steering Committee, Antarctic Climate Evolution, Scientific Committee of Antarctic Research (SCAR-ACE)

Reviews, panels, editorial, research community

2023- Editorial board Marine Geology
2020-2022 Associate Editor (geological and physical science) for The Holocene
2009-present Panelist, National Science Foundation (4), Schlanger Fellowship (USSSP-IODP)
2002-present Proposal ad-hoc reviewer, National Science Foundation, National Environmental Research Council (NERC), U.K., Australian Antarctic Science program, Geschäftsstelle des Gutachterpanels Forschungsschiffe (GPF)(Germany), The Netherlands Science Foundation (NWO), Swiss National Science Foundation (SNSF), ACS Petroleum Research Fund, NERC-IODP and U.S. Science Support Program (USSSP-IODP)
1999-present Journal reviewer: Nature, Nature Geoscience, Nature Communications, Scientific Reports, Earth and Planetary Science Letters, Geology, GSA Bulletin, Quaternary Science Reviews, Paleoceanography, Int. Assoc. Sedimentologists Special Publication, Sedimentology, Marine Geology, Palaeogeography/ Palaeoclimatology/Palaeoecology, Global and Planetary Change, Journal of Quaternary Science, Geo-Marine Letters, Netherlands Journal of Geosciences, Antarctic Science, Journal of Asian Earth Sciences, Terra Antartica.
2012 Expert Reviewer, Second Order Draft of the WGI contribution to the IPCC Fifth Assessment Report (AR5) Climate Change 2013: The Physical Science Basis
2007 Co-editor of – "Antarctica: A Keystone in a Changing World" – Online Proceedings of the 10th ISAES, USGS Open-File Report 2007-1047
2004 Guest editor, Netherlands Journal of Geosciences

Conference session convener or chair

2020 Primary Convener and Session Chair GSA Annual Meeting (virtual) "Ice-Sheet and Sea-Ice Paleo-Reconstructions from the Arctic, Antarctica, and the Southern

	Ocean"
2018	Primary Convener and Session Chair AGU Fall Meeting (oral, poster) "Development of the cryosphere: evidence from sedimentary records in the high latitudes"
2017	Oral session chair, Past Antarctic Ice Sheet Dynamics symposium, Trieste, Italy
2012	Primary Session Chair AGU Fall Meeting (oral, poster) "Antarctica and the Southern Ocean During Past Warm Episodes of the Icehouse"
2008	Poster session chair, Antarctic Climate Evolution, GSA Northeastern, Buffalo NY
2007	Oral session chair, 10th Internat. Symposium on Antarctic Earth Sciences
2004	Co-organizer (with K.F. Rijsdijk) of 3-day field trip for the Sedimentology Section of the Netherlands Geoscience and Mining Society (KNGMG)
2003-2005	Co-organizer, session chair, international symposium "Integrated Land-Sea Stratigraphic Correlation", w/ field trip (TNO-Nat. Geol. Survey, Netherlands)

UNIVERSITY/COLLEGE SERVICE

2019-	Member, Admissions Committee, Ph.D. Environmental Science & Management
2019-2020	Member, CSAM Mentoring and Student Research Oversight Committee
2017-2018	Member, (elected college rep.), University General Education Committee
2013-2017	Member, College Safety Committee (CSAM)
2014-2016	Member (invited), University Honorary Degree Committee
2014-2016	Member (elected), Ph.D. Environmental Management, Executive Council
2015	Member, Search Committee "CSAM Budget Manager"
2015	Member, CSAM Awards of Excellence committee
2010-2014	Team leader "Geodynamics" lab cluster development for CELS (CSAM)
2013-2014	Member (invited), Canvas Review Committee and Canvas Early Adopter
2013-2015	Member, Academic Technology Comm.-Learning Management Systems
2007-2011	Member, Academic Computing Comm.-Learning Management Systems
2013	Panelist and moderator, MSU Student Research Symposium
2012-2013	Chair and Member, Search "Director Institute for Sustainability Studies"
2011-2012	Volunteer, Moodle Pilot
2010-2012	Provost's working group Learning Management Systems
2010-2011	Provost's Appointee on University's Graduate Council
2010	Member, Institute for Sustainability Studies Strategic Planning Committee
2009	Moderator, MSU Student Research Symposium
2008	Member (elected CSAM rep.) University Research Committee
2008-2011	Member, College Research Committee (CSAM), EAES Rep.

DEPARTMENTAL SERVICE

2022-2023	Graduate Program Coordinator M.S. Earth and Environmental Science
2020-2022	Chair (elected), Departmental Personnel Assessment Committee (DPAC)
2020-2022	Member, Departmental Sabbatical Review Committee
Fall 2019	Member, Departmental Personnel Assessment Committee (DPAC)
2017-2018	Chair (elected), Search Committee "Paleoclimatology" faculty position
2015-2018	Graduate Program Coordinator M.S. Geoscience/Earth and Environmental Science
2014-2015	Graduate Application Reviewer M.S Geoscience (9 applications, GPC request)

2016-2017 Chair (elected), Departmental Curriculum Committee
2014-2017 Member, Departmental Curriculum Committee
2012-2014 Member, Departmental Personnel Assessment Committee (DPAC)
2012-2013 Member, Search Committee "Analytical Instrumentation Specialist" (EAES)
2011-2012 Member, Search Committee "Geodynamics" faculty position
2010-2011 Chair (elected), Search Committee "Earth Systems Modeler" faculty position
2009-2011 Program Coordinator B.S. Geoscience
2006-2007 Member, Search Committee "Surface hydrologist" faculty position
2006 Member, Departmental Laboratory Facilities Committee
2005 Member, Departmental Laboratory Safety Committee

COMMUNITY SERVICE, OUTREACH AND MEDIA COVERAGE

2023 **High School Professional Development, Bergen County Technical Schools,** "Antarctica's ice sheet and climate history from scientific ocean drilling" (online lecture and discussion).
2022 **Montclair State University Sustainability Seminar Series**, "Sustainability challenges produced by melting ice sheets: insights from the sediment archives" (in-person lecture)
2022 **Earth Day Awareness Week**, Montclair State University "Antarctica's deep connections in the Earth System" (online lecture).
2019 **Climate debate and panel**, organized by Sussex County Community College, Dec. 14
2019 **Four Seasons at Great Notch retirement community**, "Antarctic Ice & Climate Change", October 2.
2019 **Montclair Public Library**, Adult School, Lecture: "Antarctic Ice & Climate Change". April 30.
2019 **Web conference with Robert Fulton School, North Bergen, NJ.** 6th grade. From Punta Arenas, Chile, March 18.
2019 **Web conference with Redwood Elementary School, West Orange, NJ.** 5th grade (2 classes, ~50 students) from JOIDES Resolution drillship in transit to Antarctica. January 25.
2019 **Classroom visit at Redwood Elementary School, West Orange, NJ.** 5th grade (2 classes, ~50 students) Antarctic and polar science module (1 hour). January 11.
2017 **K-12 Visiting Scientists Program**: "Antarctic ice, climate, and sea level" Eastern Christian High School, North Haledon, NJ
2016 **American Museum of Natural History**, invited scientist/Milstein Lecturer "Wild Antarctica" day: "When Antarctica's coast changed from subtropical to deep freeze", 4/10/16 (~8000 museum visitors)
2016 **Duke Farms** (dukefarms.org), invited scientist/lecturer in short course on climate change and sustainability; presented: ""Climate change, the global perspective: the science of past warm periods and what to expect towards the end of the century" 3/16/16
2014 **Montclair Society of Engineers**, public lecture: "Greenland ice mass loss: the role of an efficient plumbing system" article in **Montclair Times** (based on phone interview) http://www.northjersey.com/news/241482871_Ice_sheets_and_Montclair.html
2013 **The Christian Science Monitor**, 7/24/2013 and **Alaska Dispatch**, 7/25/2013: "Parts of East Antarctic ice sheet have melted before and could again", (based on phone interview) http://www.csmonitor.com/Science/2013/0724/Parts-of-East-Antarctic-ice-sheet-have-melted-before-and-could-again

2013 **Somerset County Environmental Education Center**: **"**The Challenges of Climate Change & Building Resilient Communities", presenter and panelist, Basking Ridge NJ, 5/13/2013

2013 **Phys.org**: The Antarctic polar icecap is 33.6 million years old, research finds, http://phys.org/news/2013-05-antarctic-polar-icecap-million-years.html

2013 **Ocean Leadership Press Release**: "Development of Antarctic Ice Sheet Triggered a Unique Marine Ecosystem" http://www.oceanleadership.org/2013/development-of-antarctic-ice-sheet-triggered-a-unique-marine-ecosystem/

2012 **New Zealand Science Media Centre** "In The News": http://www.sciencemediacentre.co.nz/2012/08/02/antarcticas-near-tropical-past/

2012 **Radio 1, National Public Radio, The Netherlands, TROS Nieuwsshow:** invited news commentary on drilling of Antarctic subglacial lakes.

2011 **Discovery News online**: "Under the Ice, Antarctic Land Comes Into Focus" http://news.discovery.com/earth/under-the-ice-the-land-of-antarctica-comes-into-focus-110603.html

2011 **Science News online**: "How Antarctica got its ice" http://www.sciencenews.org/view/generic/id/73759/title/News_in_Brief_EarthEnvironment

2010 **Fox/My9 News**: "Montclair Univ professor joins Antarctica expedition" http://www.my9tv.com/dpp/news/going_green/Antarctica-Expedition (includes TV footage and interview)

2009 **Star Ledger**: "Montclair University professors heading up Antarctica trips to study global warming effects" (based on phone interview) http://www.nj.com/news/index.ssf/2009/12/montclair_university_professor.html

2009 **Science Daily online**: "Major Arctic Sea-Ice Formed Earlier Than Thought" http://www.sciencedaily.com/releases/2009/07/090715131435.htm

2009 **Association of Polar Early Career Scientists (APECS)** "Careers in the Field of Polar Research" ACE Symposium, Granada, Spain (Panel Member)

2008 **NJN News Sounds of Science** with Patrick Regan: interview in Episode 4 "Antarctic Perspectives" together with Michael Bender, Princeton University - http://www.njn.net/radio/programs/soundsofscience.html (radio interview)

2008 **COMMERCE: The Business of New Jersey**, March 2008 "One of the frozen chosen studying global warming on Antarctica's ice sheet: meet Dr. Sandra Passchier" (based on phone interview) – print only

2008 **WMBC News**: "Focus the nation on Climate Change- PV/MSU Congressman Bill Pascrell" http://video.google.com/videoplay?docid=-6830645042575927105

2008 **The Record, Bergen**: "Students Get Cold Facts From Experts On Climate", The Record, Bergen County, NJ, February 16, 2008, http://record-bergen.vlex.com/vid/students-cold-facts-experts-climate-62980561

2008 **The Christian Science Monitor**; "Scientists read Antarctic Mud for climate change insight: http://www.csmonitor.com/Environment/Global-Warming/2008/0220/scientists-read-antarctic-mud-for-climate-change-insight/%28page%29/2

2007 **Star Ledger**: "Blogging from the Bottom of the World" http://blog.nj.com/jerseyblogs/2007/11/blogging_from_the_bottom_of_th.html (interview).

2007 **The Record, Bergen**: "Studying Warming in Earth's Icebox ; Professor Digs Into Antarctica's History" The Record, Bergen County, NJ, December 04, 2007 - http://record-

bergen.vlex.com/vid/studying-warming-icebox-digs-antarctica-62951749
2006 **Northern New Jersey Science Olympiad,** Preparer and judge, at MSU

MEMBERSHIP ORGANIZATIONS

Fellow, Geological Society of America (GSA)
Member, American Geophysical Union (AGU)
Member, Society for Sedimentary Petrology and Mineralogy (SEPM)
Member, International Association of Sedimentologists (IAS)
Member, American Association for the Advancement of Science (AAAS)
Member, Association for Women Geoscientists (AWG)

PUBLICATIONS

Refereed journal publications (*denotes MSU student author, ^ other student author)

1 *Light, J.J., **Passchier, S.**, 2023 (in press). Eocene to Oligocene cooling and ice growth based on the geochemistry of interglacial mudstones from the East Antarctic continental shelf. *Antarctic Science*.

2 *Hojnacki, V., *Lepp, A., *Horowitz Castaldo, J., *States, A., Li, X., & **Passchier, S.**, 2022. Impact of Eocene-Oligocene Antarctic glaciation on the paleoceanography of the Weddell Sea. *Paleoceanography and Paleoclimatology*, 37, e2022PA004440. https://doi.org/10.1029/2022PA004440

3 ^Gille-Petzoldt, J., Gohl, K., Uenzelmann-Neben, G., Grützner, J., Klages, J. P. & the Expedition 379 Scientists (**S. Passchier**), 2022. West Antarctic Ice Sheet Dynamics in the Amundsen Sea Sector since the Late Miocene—Tying IODP Expedition 379 Results to Seismic Data. *Frontiers in Earth Science*, 10, 976703.

4 Gohl, K., Uenzelmann-Neben, G., ^Gille-Petzoldt, J., Hillenbrand, C.-D., Klages, J.P., Bohaty, S.M., **Passchier, S.**, Frederichs, T. Wellner, J.S., ^Lamb, R., Leitchenkov, G. and IODP Expedition 379 Scientists, 2021. Evidence for a highly dynamic West Antarctic Ice Sheet during the Pliocene. *Geophysical Research Letters*, 48, e2021GL093103. https://doi.org/10.1029/2021GL093103

5 **Passchier, S**., *Hansen, M.A., *Rosenberg, J., 2021. Quartz grain microtextures illuminate Pliocene periglacial sand fluxes on the Antarctic continental margin. *The Depositional Record*,7: 564– 581. https://doi.org/10.1002/dep2.157

6 Tibbett, E.J., Scher, H.D., Warny, S., Tierney, J.E., **Passchier, S.**, & Feakins, S.J., 2021. Late Eocene record of hydrology and temperature from Prydz Bay, East Antarctica. *Paleoceanography and Paleoclimatology*, 36, e2020PA004204, doi:10.1029/2020PA004204

7 Wu L., Wilson D., Wang R., **Passchier S.**, Krijgsman W., Yu X., Wen T., Xiao W., Liu Z., 2021. Late Quaternary dynamics of the Lambert Glacier-Amery Ice Shelf system, East Antarctica. *Quaternary Science Reviews*, v. 252, doi:10.1016/j.quascirev.2020.106738

8 Hyttinen, O., Quintana Krupinski, N., Bennike, O., Wacker, L., Filipsson, H., Obrochta, S., Jensen, J.B., Lougheed, B., Ryabchuk, D., **Passchier, S.**, Snowball, I., Herrero-Bervera, E., Andrén, T., Kotilainen, A.T., 2020. Deglaciation dynamics of the Fennoscandian Ice Sheet in the Kattegat, the gateway between the North Sea and the

Baltic Sea Basin. *Boreas*, doi:10.1111/bor.12494

9 Dunkl, I. et al. (incl. **Passchier, S.)**, 2020. Comparability of heavy mineral data – the first interlaboratory round robin test. *Earth Science Reviews*.

10 *Vaidya, B.P., Hagmann, D.F., Balacco, J., **Passchier, S.**, Adams Krumins, J., Goodey, N.M., 2020. Plants mitigate restrictions to phosphatase activity in metal contaminated soils, *Environmental Pollution*, 114801, https://doi.org/10.1016/j.envpol.2020.114801.

11 Jovane, L., Florindo, F., Acton, G., Ohneiser, C., Sagnotti, L., Strada, E., Verosub, K.L., Wilson, G.S., Iacoviello, F., Levy, R.H., **Passchier, S.**, 2019. Miocene glacial dynamics recorded by variations in magnetic properties in the ANDRILL-2A drill core. *Journal of Geophysical Research: Solid Earth*, doi: 10.1029/2018JB016865.

12 *Kelly, A.L., **Passchier, S.**, 2018. A sub-millennial sediment record of ice-stream retreat and meltwater storage in the Baltic Ice Lake during the Bølling-Allerød interstadial. *Quaternary Science Reviews*, 198, p. 126-139. doi:10.1016/j.quascirev.2018.08.018

13 ^Valletta, R.D., Willenbring, J.K., **Passchier, S.**, Elmi, C., 2018. $^{10}Be/^{9}Be$ ratios reflect Antarctic Ice Sheet freshwater discharge during Pliocene warming. *Paleoceanography and Paleoclimatology*, v. 33, 9, p. 934-944. doi: 10.1029/2017PA003283

14 Colleoni, F., De Santis, L., Siddoway, C.S., Bergamasco, A., Golledge, N.R., Lohmann, G., **Passchier, S**. and Siegert, M.J., 2018. Spatio-temporal variability of processes across Antarctic ice-bed–ocean interfaces. *Nature Communications.* doi: 10.1038/s41467-018-04583-0

15 Field, B.D., Browne, G.H., Fielding, C.R., Florindo, F., Harwood, D.M., Judge, S.A., Krissek, L.A., Panter, K.S., **Passchier, S.**, Pekar, S.F., Sandroni, S., and Talarico, F.M., 2018. A sedimentological record of early Miocene ice advance and retreat, AND-2A drill hole, McMurdo Sound, Antarctica. *Geosphere*, v. 14, no. 4, p. 1–24, doi: 10 .1130 /GES01592.1.

16 Sangiorgi, F., Bijl, P., **Passchier, S.**, Salzmann, U., Schouten, S., McKay, R., Cody, R., Pross, J., van de Flierdt, T., Bohaty, S., Levy, R., Williams, T., Escutia, C., and Brinkhuis, H., 2018. A warm Southern Ocean and retreated Wilkes Land ice sheet (East Antarctica) during the mid-Miocene. *Nature Communications.* doi:10.1038/s41467-017-02609-7

17 **Passchier, S.**, *Ciarletta, D., *Henao, V, *Sekkas, V., 2018. Sedimentary processes and facies on a high-latitude passive continental margin, Wilkes Land, East Antarctica. *Geological Society of London, Special Publication*, v. 475, 181-201, doi:10.1144/SP475.3

18 ^Pierce, E. L., van de Flierdt, T., Williams, T., Hemming, S.R., Cook, C.P., **Passchier, S.**, 2017. Evidence for a dynamic East Antarctic ice sheet during the mid-Miocene climate transition. *Earth and Planetary Science Letters*, v. 478, doi:10.1016/j.epsl.2017.08.011

19 **Passchier, S.**, *Ciarletta, D., *Miriagos, T., Bijl, P., Bohaty, S., 2017. An Antarctic stratigraphic record of step-wise ice growth through the Eocene-Oligocene Transition. *Geological Society of America Bulletin,* v. 129, no. 3-4, 318-330, doi: 10.1130/B31482.1.

20 *Hansen, M.A. and **Passchier, S.**, 2017. Oceanic circulation changes during early Pliocene marine ice-sheet instability in Wilkes Land, East Antarctica. *Geo-Mar Lett.*, doi:10.1007/s00367-016-0489-8

21 ^Dijkstra, N., Slomp, C.P., Behrends, T. and Expedition 347 Scientists (incl. **Passchier**), 2016. Vivianite is a key sink for phosphorus in sediments of the Landsort Deep, an

intermittently anoxic deep basin in the Baltic Sea. *Chemical Geology* 438, 58-72.

22 Levy, R., Harwood, D., Florindo, F., Sangiorgi, F., Tripati, R., von Eynatten, H., Gasson, E., Kuhn, G., Tripati, A., DeConto, R. and Fielding, C., Field, B., Golledge, N., McKay, R. Naish, T., Olney, M., Pollard, D., Schouten, S., Talarico, F., Warny, S., Willmott, V., Acton, G., Panter, K., Paulsen, T., Taviani, M., SMS Science Team (incl. **Passchier**) 2016. Antarctic ice sheet sensitivity to atmospheric CO_2 variations in the early to mid-Miocene. *Proceedings of the National Academy of Sciences*, p.201516030.

23 *Hansen, M. A., **Passchier, S.,** Khim, B.-K., Song, B., and Williams, T., 2015. Threshold behavior of a marine-based sector of the East Antarctic Ice Sheet in response to early Pliocene ocean warming, *Paleoceanography*, 30, doi:10.1002/2014PA002704.

24 St. John, K., **Passchier, S.**, Tantillo, B., Darby, D., Kearns, L., 2015. Microfeatures of modern sea ice-rafted sediment and implications for paleo-sea ice reconstructions. *Annals of Glaciology* 56 (69), doi: 10.3189/2015AoG69A586.

25 ^Iacoviello, F., Giorgetti, G., Turbanti Memmi, I., **Passchier, S.**, 2014. Early Miocene Antarctic glacial history: new insights from heavy mineral analysis from ANDRILL AND-2A drill core sediments. *International Journal of Earth Sciences,* DOI 10.1007/s00531-014-1117-3.

26 ^Patterson, M. O., McKay, R., Naish, T., Escutia, C., Jimenez-Espejo, F. J., Raymo, M. E., Meyers, S. R., Tauxe, L., Brinkhuis, H., Klaus, A., Fehr, A., Bendle, J. A. P., Bijl, P. K., Bohaty, S. M., Carr, S. A., Dunbar, R. B., Flores, J. A., Gonzalez, J. J., Hayden, T. G., Iwai, M., Katsuki, K., Kong, G. S., Nakai, M., Olney, M. P., **Passchier, S.**, Pekar, S. F., Pross, J., Riesselman, C. R., Rohl, U., Sakai, T., Shrivastava, P. K., Stickley, C. E., Sugasaki, S., Tuo, S., van de Flierdt, T., Welsh, K., Williams, T., Yamane, M., 2014. Orbital forcing of the East Antarctic ice sheet during the Pliocene and Early Pleistocene, *Nature Geoscience* 7, 11, p. 841-847, doi:10.1038/ngeo2273.

27 *Orejola, N., **Passchier, S.**, and IODP Expedition 318 Scientists, 2014. Sedimentology of lower Pliocene to Upper Pleistocene diamictons from IODP Site U1358, Wilkes Land margin, and implications for East Antarctic Ice Sheet dynamics. *Antarctic Science*, doi:10.1017/S0954102013000527.

28 ^Cook, C. P., van de Flierdt, T., Williams, T., Hemming, S.R., Iwai, M., Kobayashi, M., Jimenez-Espejo, F.J., Escutia, C., Gonzalez, J.J., Khim, B.-K., McKay, R.M., **Passchier, S.**, Bohaty, S.M., Riesselman, C.R., Tauxe, L., Sugisaki, S., Galindo, A. L., Patterson, M. O., Sangiorgi, F., Pierce, E.L., Brinkhuis, H., and & IODP Expedition 318 Scientists, Dynamic behaviour of the East Antarctic Ice Sheet during Pliocene warmth, *Nature Geoscience*, doi: 10.1038/ngeo1889.

29 ^Bijl, P.K., Bendle, J.A.P., Bohaty, S.M., Pross, J., Schouten, S., Tauxe, L., Stickley, C.E., McKay, R.M., Rohl, U., Olney, M., Sluijs, A., Escutia, C., Brinkhuis, H., & Expedition 318 Scientists (incl. **Passchier, S.)**, 2013. Eocene cooling linked to early flow across the Tasmanian Gateway. *Proceedings of the National Academy of Sciences*, 110, (24), 9645-9650. (doi:10.1073/pnas.1220872110).

30 Rijsdijk K.F., Kroon I.C., Meijer T., **Passchier S.**, van Dijk T.A.G.P., Bunnik, F.P.M., and Janse A.C., 2013. Reconstructing Quaternary Rhine-Meuse dynamics in the Southern North Sea: Architecture, seismo-lithofacies assemblages and malacological biozonation. *Journal of Quaternary Science*, doi: 10.1002/jqs.2627.

31 **Passchier, S.**, Bohaty, S.M., Jiménez-Espejo, F., Pross, J., Röhl, U., van de Flierdt, T., Escutia, C., Brinkhuis, H., 2013. Early Eocene – to – middle Miocene cooling and

aridification of East Antarctica. *Geochemistry, Geophysics, Geosystems,* 14 (5), 1399-1410, doi:10.1002/ggge.20106. (Research Highlight in *Nature Geoscience*, June 2013).

32 Stocchi, P., Escutia, C., Houben, A.J.P., Vermeersen, B.L.A., Bijl, P.K., Brinkhuis, H., DeConto, R.M., Galeotti, S., **Passchier, S.**, Pollard, D., and IODP Expedition 318 scientists, 2013, Relative sea level rise around East Antarctica during Oligocene glaciation. *Nature Geoscience,* online April 21, doi:10.1038/ngeo1783.

33 ^Houben, A.J.P., Bijl, P.K., Pross, J., Bohaty, S.M., **Passchier, S.**, Stickley, C.E., Röhl, U., Sugisaki, S., Tauxe, T., van de Flierdt, T., Olney, M., Sangiorgi, F., Sluijs, A., Escutia, C., Brinkhuis, H., and the Expedition 318 Scientists, 2013. Reorganization of Southern Ocean plankton ecosystem at the onset of Antarctic glaciation. *Science,* 340, no. 6130, p. 341-344, doi: 10.1126/science.1223646.

34 **Passchier, S.**, *Falk., C. and Florindo, F., 2013. Orbitally-paced shifts in the particle size of the Antarctic continental shelf in response to ice dynamics during the Miocene Climatic Optimum. *Geosphere,* v. 9, p. 54-62, doi:10.1130/GES00840.1.

35 Pross, J., Contreras, L., Bijl, P.K., Greenwood, D.R., Bohaty, S.M., Schouten, S., Bendle, J.A., Röhl, U., Tauxe, L., Raine, J.I., Huck, C.E., Van De Flierdt, T., Jamieson, S.S.R., Stickley, C.E., Van De Schootbrugge, B., Escutia, C., Brinkhuis, H., & Integrated Ocean Drilling Program Expedition 318 Scientists (incl. **Passchier, S.)**, 2012: Persistent near-tropical warmth on the Antarctic continent during the early Eocene epoch. *Nature*, doi: 10.1038/nature11300.

36 Tauxe, L., Stickley, C.E., Sugisaki, S., Bijl, P.K., Bohaty, S.M., Brinkhuis, H., Escutia, C., Flores, J.-A., Houben, A.J.P., Iwai, M., Jimenez-Espejo, F., McKay, R., **Passchier, S.**, Pross, J., Riesselman, C.R., Roehl, U., Sangiorgi, F., Welsh, K., and 13 others (2012). Chronostratigraphic framework for the IODP Expedition 318 cores from the Wilkes Land Margin: Constraints for paleoceanographic reconstruction. *Paleoceanography* 27, PA2214, 19 pp., doi:10.1029/2012PA002308.

37 *Hauptvogel, D.W. and **Passchier, S.**, 2012. Early-middle Miocene (17-14 Ma) Antarctic ice dynamics reconstructed from the heavy mineral provenance in AND-2A, Ross Sea, Antarctica. *Global and Planetary Change,* 82-83, 38–50.

38 **Passchier, S.**, Browne, G., Field, B., Fielding, C.R., Krissek, L.A., Panter, K., Pekar, S.F. and ANDRILL-SMS Science Team, 2011. Early and middle Miocene Antarctic glacial history from the sedimentary facies distribution in the AND-2A drill hole, Ross Sea, Antarctica. *Geological Society of America Bulletin,* 123, no. 11-12, 2352-2365, doi: 10.1130/B30334.1.

39 **Passchier, S.**, 2011. Linkages between East Antarctic Ice Sheet extent and Southern Ocean temperatures based on a Pliocene high-resolution record of ice-rafted debris off Prydz Bay, East Antarctica. *Paleoceanography,* 26, PA4204, doi:10.1029/2010PA002061.

40 Fielding, C.R., Browne, G.H., Field, B., Florindo, F., Harwood, D.M., Krissek, L.A., Levy, R., Panter, K.S., **Passchier, S.**, Pekar, S.F., 2011. Sequence stratigraphy of the ANDRILL AND-2A drillcore, Antarctica: A long-term, ice-proximal record of Early to mid-Miocene climate, sea-level and glacial dynamism, *Palaeogeography, Palaeoclimatology, Palaeoecology,* 305, 1-4, 337-351.

41 **Passchier, S.,** and *Erukanure, E., 2010. Paleoenvironments and weathering regime of the Neoproterozoic Squantum “Tillite”, Boston Basin: no evidence of a snowball Earth. *Sedimentology,* 57, 1526–1544.

42 **Passchier, S.**, Laban, C., Mesdag, C., Rijsdijk, K.F., 2010. Subglacial bed conditions during late Pleistocene glaciations and their impact on ice dynamics in the southern North Sea. *Boreas,* 39, 633–647,10.1111/j.1502-3885.2009.00138.x. ISSN 0300-9483.

43 Stickley, C.E., St John, K.E., Koç, N., Jordan, R.W., **Passchier, S.**, Pearce, R.B., Kearns, L.E., 2009. Evidence for middle Eocene Arctic sea ice from diatoms and ice-rafted debris. *Nature*, 460, 376-379.

44 Siegert, M.J., Barrett, P., DeConto, R., Dunbar, R., Ó Cofaigh, C., **Passchier, S.**, Naish, T., 2008. Recent advances in understanding Antarctic climate evolution. *Antarctic Science*, 20 (4), 313-325. doi:10.1017/S0954102008000941.

45 **Passchier, S.**, Krissek, L.A., 2008. Oligocene–Miocene Antarctic continental weathering record and paleoclimatic implications, Cape Roberts drilling Project, Ross Sea, Antarctica, *Palaeogeography, Palaeoclimatology, Palaeoecology*, 260, 30-40. doi:10.1016/j.palaeo.2007.08.012.

46 **Passchier, S.**, Whitehead, J.M., 2006. Anomalous geochemical provenance and weathering history of Plio-Pleistocene glaciomarine fjord strata, Bardin Bluffs Formation, East Antarctica. *Sedimentology*, 53, 929-942.

47 Baptist, M.J., van Dalfsen, J., Weber, A., **Passchier, S.**, and van Heteren, S., 2006. The distribution of macrozoobenthos in the Southern North Sea in relation to meso-scale bedforms. *Estuarine, Coastal and Shelf Science*, 68, 538-546.

48 **Passchier, S.**, Kleinhans, M.G., 2005. Observations of sand waves, megaripples and hummocks in the Dutch coastal area and their relation to currents and combined flow conditions. *Journal of Geophysical Research-Earth Surface,* 110, F04S15.

49 Rijsdijk, K.F., **Passchier, S.**, Weerts, H.J.T, Laban, C., Van Leeuwen, R.J., and Ebbing, J.H., 2005. Revised Upper Cenozoic stratigraphy of the Dutch sector of the North Sea basin: towards an integrated lithostratigraphic, seismostratigraphic, and allostratigraphic approach. *Netherlands Journal of Geosciences*, 84(2), 129-146.

50 **Passchier, S.,** 2004. Variability in geochemical provenance and weathering history of Sirius Group strata, Transantarctic Mountains: implications for Antarctic glacial history. *Journal of Sedimentary Research*, 74(5), 607-619.

51 Strand, K., **Passchier, S.**, and Näsi, J., 2003. Implications of quartz grain microtextures for onset Eocene/Oligocene glaciation in Prydz Bay, ODP Site 1166, Antarctica. *Palaeogeography, Palaeoclimatology, Palaeoecology,* 198, 101-111**.**

52 **Passchier, S.**, O'Brien, P.E., Damuth, J.E., Januszczack, N., Handwerger, D.A. and Whitehead, J.M., 2003. Pliocene-Pleistocene glaciomarine sedimentation in eastern Prydz Bay and development of the Prydz trough-mouth fan, ODP Sites 1166 and 1167, East Antarctica. *Marine Geology,* 199, 279-305.

53 **Passchier, S.**, 2001. Provenance of the Sirius Group and related Upper Cenozoic glacial deposits from the Transantarctic Mountains, Antarctica: relation to landscape evolution and ice-sheet drainage. *Sedimentary Geology*, 144, 263-290.

54 Naish, T.R., Woolfe, K.J., Barrett, P.J., Wilson, G.S., and 25 others (incl. **Passchier, S.)** 2001. Orbitally induced oscillations in the East Antarctic Ice Sheet: Direct evidence from the Cape Roberts Drilling Project. *Nature*, *413*, 719-722.

55 Van der Wateren, F.M., Dunai, T.J., Van Balen, R.T., Klas, W., Verbers, A.L.L.M., **Passchier, S. ,** and Herpers, U., 1999. Contrasting Neogene denudation histories of different structural regions in the Transantarctic Mountains rift flank constrained by cosmogenic isotope measurements. *Global and Planetary Change*, 23, 145-172.

Book chapters, invited review articles, editorial

1. **Passchier, S.**, 2018. Chapter 16. Ice sheets and Climate: the Marine Geological Record. In: Past Glacial Environments, 2nd edition, J. Menzies and J.J.M. van der Meer (eds), Elsevier, the Netherlands.
2. **Passchier, S.,** 2011. Ancient Antarctic Fjords (News and Views). *Nature,* 474(7349), 46–47, doi:10.1038/474046a
3. **Passchier, S.,** 2009. **Book review of:** Chris Turney. Ice, mud, and blood – lessons from climates past. MacMillan, London, 2008. *The Holocene*, 19(1), 166-167.
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