Stefanie Brachfeld, Ph.D.

Vice Provost for Research
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EDUCATION

Ph.D.	Geophysics	University of Minnesota, Minneapolis, MN	1999
M.S.	Geology	California Institute of Technology, Pasadena, CA	1992
B.S.	Geology	University of Rochester, NY, *magna cum laude*	1990

ACADEMIC LEADERSHIP POSITIONS

Office of Research, Montclair State University

Vice Provost for Research **July 2024 to present**
Acting Vice Provost for Research **August 2022 – June 2024**
Areas of Responsibility:

The Office of Research supports and facilitates research development, production, administration, and compliance. As head of the Office of Research, I work across University divisions and offices to build a culture of research within and beyond Academic Affairs, improve the University's research infrastructure (broadly defined as staffing, staff training, policies, internal practices, facilities), engage in research master planning, and promote and advance Montclair's leadership role in New Jersey as a public doctoral research university. Activities and areas of responsibility include:

- Office of Research and Sponsored Programs: Pre-award and non-financial post-award support (Director and 6 professional staff);
- Office of Research Compliance and Regulatory Programs: Compliance committees (IRB, IACUC, IBC), export control, conflict of interest management, responsible conduct of research, research integrity, research misconduct allegations, (Director and 4 professional staff, and 2 staff searches in progress);
- Research Development;
- Policy Writing for the University's research and sponsored program enterprise;
- Limited submission competitions;
- Support University personnel with applications for extramural funding, for example working with new applicants upon request, assistance with institutional data assembly, providing pre-reviews of proposal components upon request; and preparing letters of institutional support;
- Preparing nomination letters and supporting materials for faculty researchers for external fellowships such as the Sloan Research Fellowship, Carnegie Corporation Fellowship, Moore Inventor Fellowship, Alan T. Waterman Award, etc;
- Internal Research, Scholarship, and Creative Activities Seed Grants Program
- University Undergradudate Research Pilot Program (Spring 2023);

- University-wide Working Groups convened to identify and remove barriers to research and scholarship;
- Content management and administrative oversight for Research with Montclair, a web platform and user group sponsored by the NJ Commission on Science, Innovation and Technology in order to help businesses and entrepreneurs identify and collaborate with NJ's academic institutions.
- Represent research and incorporate research master planning in major planning initiatives such as Middle States Accreditation, revision of the University's mission statement, and development of the University's strategic plan;
- Represent Montclair State University in external organizations to faciliate new partnerships including the New Jersey Research & Development Council, New Jersey Association of State Colleges and Universities Research Commercialization Group, and Research with New Jersey Stakeholder's group;
- Support the University in the recruitment and retention of academic leaders;
- Diversity, Equity, Inclusion, and Belonging in research
    - Committee co-chair for annual Student Research Symposia, a no-cost venue for all Montclair students to showcase their research and scholarly activities;
    - Task force leader for Montclair's implementation of the NSF-mandated "Safe and Inclusive Working Environmental Off-campus" policy;
    - Panelist, "Women in Science, Technology, Engineering, and Mathematics Fields" Office of Equity and Diversity (OED) Lecture series;
    - Financial and administrative support for the annual Black Lives Matter in Research Symposium led by the Office of Research Compliance and Regulatory Programs.

Major accomplishments as Vice Provost

- Modernization of the University's former internal awards program into a seed grant program, including conceptual design and implementation of the new Research, Scholarship, and Creative Activities (RSCA) Seed Grants program (under negotiation);
- Conceptualization, design, and implementation of the Student-Led Research, Scholarship, and Creative Activities Grants program, launched in Spring 2024, and its student-led Proposal Review Committee; Designed and implemented training activities for the Proposal Review Committee including recognizing and avoiding COI, recognizing and mitigating implicit bias, and providing constructive feedback;
- In collaboration with Grant Accounting, revised data gathering practices for the NSF HERD survey to properly and thoroughly capture Montclair's internal investments in research and development;
- Led the University's first external assessment of research administration and support infracstructure to inform research master planning;
- Updating limited submission procedures such that internal mini-proposals reinforce required program elements and strengthen program concepts for the full competition, for example NSF competitions (MRI, NRT, HSI), NJ Department of Labor competitions (PACE), and Faculty Fellowships and Awards (Carnegie, Moore);

- Lead author of University's successful application to the pilot NIH Engagement and Access for Research-Active Institutions program, and subsequent selection and coordination of Montclair participants;
- Lead author of new University policies on PI eligibility, Cost-Sharing, and Safe and Inclusive Workplans for Research Off-Campus;
- Lead author of Montclair's successful application to the North Atlantic Coast Cooperative Ecosystems Studies Unit;
- In collaboration with Grant Accounting and the Office of Sponsored Programs, leading the integration of Sponsored Programs operations following Montclair State University's merger with Bloomfield College (in progress);
- Chaired successful searche commmitees for the inaugural Vice Provost for Undergraduate Education, Student Success and Academic Innovation and Inaugural Associate Dean for Research for the College for Community Health;
- Implementation of Interfolio Faculty Activity Reporting module (in progress).

College of Science and Mathematics, Montclair State University

Associate Dean for Academic Affairs and Research **July 2018 to August 2023**
Acting Associate Dean **Sept. 2017 to June 2018**

Areas of responsibility:

- Academic Affairs and Curriculum:
    - Support faculty and department chairs in the preparation of new courses, new programs, and program modifications;
    - Provide College-level review and approval of proposals for new courses; new degree and certificate programs and program revisions;
    - Represent the College on the University Undergraduate Curriculum Committee (voting member), the Academic Affairs body under the Office of the Provost that reviews all undergraduate curriculum and makes recommendations to the Provost;
    - Dean's Office point person for Graduate Education, including:
        - Liaison with The Graduate School for graduate curriculum and policy issues; Address individual student matters related to degree program progress, program milestones, and advisor-advisee interactions;
        - Provide College-level review and approval of doctoral dissertation committees and external committee member nominations;
        - Represent the College on the University Graduate Council (non-voting member), the Academic Affairs body that advises the Dean of the Graduate School on graduate curriculum and policy;
        - College-level review, approval, and oversight of graduate and doctoral assistantships;
        - In collaboration with the Dean, optimize use of TGS funds, Foundation funds, external grants, and adjunct funds to support doctoral students;
        - Serve as Summer Doctoral Program Director (DPD) for the Environmental Science and Management Program, as needed, when the regular DPD was off contract;

        - Represent the College on Graduate School Working Group on the Roles and Responsibilities of Graduate Program Coordinators/Doctoral Program Directors;
    - Represent the College on the University Academic Policy Committee (voting member), the Academic Affairs body that develops, reviews, and revises university academic policies and makes recommendations to the Provost;
    - In collaboration with Department Chairs and the Office of the Provost, oversee transfer course equivalencies from New Jersey's 2-year institutions to ensure smooth in-take of student transfer credits;
    - Serve as point person for joint BS-DMD program with the Rutgers School of Dental Medicine (RSDM), including responding to initial inquiries from prospective students and parents, collaborating on administrative actions with RSDM leadership and staff, and educating Montclair personnel in Academic Affairs, Enrollment Management, and Student Development and Campus Life on program logistics;
    - Represent the College on the Curriculum Process Task Force;
    - Represent the College on the End-User Testing Group for the Course Information Management System (CIM).

- <u>Facilities Management</u>
    - Facilities management in 5 lab- and equipment-intensive STEM buildings and one research greenhouse:
        - Oversight of work order requests, coordination of routine maintenance and repairs with University Facilities and external service providers;
        - College point person for major equipment installation, major renovations, and new construction including attending weekly design and construction meeting with University Capital Projects group, General Contractors, and subcontractors to ensure end user needs are properly communicated and implemented;
        - Coordinate individual and departmental moves including coordination with University movers, telecommunications, and Information Technology to ensure minimal disruption of activities and services;
        - Administer access control annually for > 500 College personnel (full-time faculty and staff, adjuncts, graduate assistants, student employees, postdocs, and visitors);
        - In collaboration with the Dean, identifying office space and research space for new faculty and arranging renovations, as needed;
        - Space management and classroom scheduling for College and University special events, 3rd party continuing education classes and training events, and College summer programs including PSEG ISS Green Teams, Weston Science Scholars Program, NSF-funded summer camps and REUs;
        - Assist the Dean with preparing annual space renovation requests for new faculty research spaces.
    - Oversight of shared research facilities and support units and supervision of their personnel, including:
        - Microscopy and Microanalysis Research Laboratory (1 Director/Technician);

        - Vivarium (1 Director, 1 Animal Care Technician, 1-2 student workers, and all researchers);
        - Computer Operations for Research and Education (2 professional staff);
        - Research greenhouse;
    - Represent the College on the University Safety Committee, the University-wide body that advises University Police on campus health and safety matters;

- Research Administration, Development, and Support:
    - Assist the Dean with managing and allocating resources including cost share/matching funds, Foundation funds, College indirect cost funds, equipment, and physical facilities;
    - In collaboration with the College Budget Manager and Grants and Contracts specialist, provide post-award support for grants, fee for service contracts, operational funds, and department- and PI-indirect costs funds;
    - Locate and distribute faculty and student funding opportunities;
    - Support faculty and students with proposal preparation, grant applications, and fellowship applications, for example assistance with institutional data assembly, assistance with building budgets, preparing letters of institutional support, and providing pre-reviews of proposal components;
    - In collaboration with the Grants and Contracts specialist, assist faculty with developing fee for service contracts, for example developing description of services, developing fee structures, providing boilerplate language for College instrumentation and facilities;
    - Assisting faculty with reviewing and interpreting facility use agreements for conducting work at off-campus facilities, arranging review by University Legal Counsel, and providing College-level approval, as needed;
    - Sponsored Programs proposal routing signature authority on behalf of Dean's Office;
    - Support faculty with capital procurement of research instrumentation, including assembly of vendor forms (NJ Business Registration, Political Contributions Disclosure; EEO Monitoring, MacBride Principles, etc);
    - Dean's Office reviewer for the University Internal Awards Program
    - Head of CSAM laboratory safety committee;
    - Review and approve material transfer agreements;
    - Represent the College on the Export Control Committee.

- Faculty Affairs
    - Maintain cohort information and 5-year application cycles for the Faculty Scholarship Program (FSP, the university program to provide faculty with research reassigned time), oversee in-take of new scholarly agendas, mid-term activity reports, and final reports for the Dean's review and approval;
    - Maintain cohort information and 4-year application cycles for College Doctoral faculty in the Environmental Science and Management Program and Math Education Program, and communicate regularly with the Doctoral Program Directors regarding faculty due for renewal;
    - Track doctoral faculty engagement in dissertation advisement and dissertation committes for Dean's review;

- Manage annual elections of faculty representatives to university committees including University Sabbatical Committee, Graduate Council, Grade Grievance Committee, and University Distinguished Teacher Committee;
- Oversee separation of faculty from the University, including inventories and return of University owned and leased equipment, materials, and supplies; Vacating office and research space; Cessation of key and card access; Coordination with Environmental Health and Safety, as needed; In collaboration with the Dean, disposition of major equipment and unspent funds (IDC) to departments and/or core faciliites.

- Finance Management
  - Point person for assembling College capital equpment and capital technology requests during the annual budget process;
  - Assist the Dean with preparation of the College annual budget request narrative;
  - In collaboration with Budget Manager, oversee finances for academic, instructional support, research, gift/donor, and revenue cost centers;
  - Administration of donor funds that support student research including Sokol Student-Faculty Research grants, Novartis US Foundation Science Scholarships, and the (former) Science Honors Innovation Program (SHIP);
  - In collaboration with the College Budget Manager and Grants and Contracts specialist, provide post-award support for grants, fee for service contracts, operational funds, and department- and PI-indirect costs funds;
  - Finance oversight and support for the US Department of Education-funded Educational Oppportunties Fund (EOF) Health Careers Program including review of proposal budgets and annual financial reports.

- Marketing and Student Recruiting
  - In collaboration with the Dean, Associate Dean for Student Affairs, Assistant Dean, and Department Chairs, represent the College at undergraduate and graduate Open House recruiting events, Accepted Student days, and ad hoc events to promote the College and its degree programs;
  - Assemble promotional materials and prepare text for Undergraduate Admissions, The Graduate School, and University Communications and Marketing for use in websites, brochures, and marekting materials;
  - In collaboration with the College Director of Data and Digital Media, review College and Department web content for accuracy and currency and prepare new content;

- Student Support and Development
  - Administrative and finance management support for the NSF-funded Garden State Louis Stokes Alliance for Minority Participation in STEM program (GS-LSAMP);
  - Presenter and trainer for PSEG-ISS Summer Green Teams interns:
    - Preparing and delivering oral presentations
    - Data visualization
    - STEM communication

- Presenter, Graudate Assistant Orientation, The Graduate School
- Panelist and guest speaker for the Center for Advising and Student Transitions "Discover" Panels for Undeclared Freshmen

- University Leadership and Professional Staff Recruitment

  - Search Committee Chair for College leadership positions and key staff positions including the CSAM Assistant Dean, Grants and Contracts Specialist, Grants and Projects Specialist, and Vivarium Director;
  - Search Committee Member for Inaugural Director of the CSAM Student Success Center and its Academic Advisors;
  - Search Committee member for University-wide leadership positions and key staff positions including Associate Dean of the Library, STEM Facilities Director (University Facilities); Assistant Vice President for Occupational Safety, Environment Services and Biosafety (University Facilities); Director of Mechanical Services (University Facilities); Laboratory Controls Technician (University Facilities); Grant Accounting Specialist (Finance and Treasury).

Major Activities and Accomplishments as Associate Dean:

- Redesigned Environmental Science and Management doctoral assistant funding models to increase the number of students supported per year;
- In collaboration with CSAM Budget Manager, redesigned CSAM's new faculty start-up cost centers to faciliate account management and streamline fiscal year close-outs;
- In collaboration with Grant Accounting and Human Resources, redesigned and implemented a summer salary request and approval process in Workday Finance software;
- Redesigned the CSAM curriculum committee to increase frequency of meetings of ensure timely processing of curriculum proposals;
- Facilitated the acquisition of ~ $2M in major research equipment by assisting CSAM researchers with the capital procurement process, co-writing and editing 15 sole source and single source justifications, and working with University Facilities to prepare spaces for equipment installation, including: Handheld X-ray Fluoresence spectrometer, isotope ratio mass spectrometer, research-grade fluorescence microscope, ultra performance liquid chromatograph mass spectrometer, multimodal collaborative robot system, set of student-level fluorescent microscopes, laboratory animal enclosures, service contract for laser scanning confocal microscope, optical components packages for Department of Physics Optics Research Laboratory, transmission electron microscope software upgrade, electron backscatter diffraction detector, Montclair State University weather station, inductively-coupled optical emission spectrometer, ion chromatograph, Western Blot system, set of biosafety cabinets.
- In collaboration with the Dean and University Facilities, redesigned the 4th floor of CCIS and 2nd floor of Richardson Hall for renovations to expand and improve instructional and research space for Math Education, Chemistry and Biochemistry;
- Collge point person and end-user liaison with University Facilities on 9 construction and renovation projects: Center for Computing and Information Science (CCIS), Richardson

Hall 1st and 2nd floors, Richardson 116 (temporary physics research lab during renovation), Richardson Hall 325 (for new equipment), RICH 326 (for new equipment), Clove Road Greenhouse (environmental controls upgrades, Mesocosm area, RO water system), Science Hall 317-322, CELS 107 (for new equipment), CELS suite 421 (for new equipment and establishing dedicated workspaces for different types of biohazardous materials).

- Developed and implemented multi-year swing space and storage spaces plans to minimize instruction and research disuptions during renovations;
- In collaboration with University Facilities, prepared successful proposal for a STEM facilities manager position and service contract budget for permanent equipment (fume hoods, RO water systems, autoclaves, cold rooms, environmental chambers);
- Close-out of a field station during the Covid pandemic, including comprehensive inventory of physical facilities, equipment, materials and supplies; Serving as temporay supervisor for CWA and AFT professional staff until new job assignments within the University were finalized; Managing finances, troubleshooting issues related to cancellation of programs, and paying remaining bills and all close-out costs; Identifying hazardous waste and arranging proper collection and disposal; Coordinating with University Facilities to return University files, records, and University-owned equipment to main campus; Collaborating with University Facilities to ensure all buildings and grounds were "broom clean;" Coordinating with the NJ Department of Environmental Protection (NJDEP) on the transfer of operating permits and the return of State-owned buildings and grounds management back to NJDEP; In collaboration with the Dean, disposition of educational and recreational materials and equipment to support a regional environmental education center.
- In collaboration with the Dean and program leads in University College, co-wrote and served as Co-PI on a successful Opportunity Meets Innovation Challenge (OMIC) grant from the NJ Office of the Secretary of Higher Education (NJ OSHE). The project titled "*Project CARE: Championing Access, Research, and Engagement*- Cultivating Research, Innovation and Talent," provided $500,000 to support undergraduate research as a high-impact practice for student success and retention following the Covid pandemic.
- In collaboration with the Dean and program leads in University Facilities, prepared text for use in a successful proposal to the NJ Higher Education Capital Facilities Programs, resulting in a $60M grant for new interdisciplinary STEM building.

Acting Vivarium Director: **February to August 2021 and May to October 2019**

Areas of responsibility:

- Facility management
- Supervision of one full-time staff member and student workers
- Conduct daily animal welfare checks and required facilities monitoring
- Consultation with Attending Veterinary as needed
- Coordination with vendors and service providers
- Liaison with IACUC, Research Compliance and Regulatory Programs, Environmental Health and Safety, Occupational Health, and University Facilities to ensure facility compliance with all applicable regulations and guidelines

Major accomplishments as Vivarium Director:

- Collaborated with University Facilities to establish service contracts and regular preventative maintenance for Vivarium equipment (environmental monitoring system, cage washer, autoclaves, and cage watering system);
- In collaboration with former and current Vivarium directors and University Facilities, designed and implemented 2 phases of Vivarium upgrades (vision panels, improved lighting controls, improved air exchanges in holding rooms, improved environmental controls) and served as project liaison until new Directors were hired;
- Point person for a successful, unannounced USDA inspection of the Vivarium in Spring 2021.

Director, PhD Program in Environmental Management July 2015 to August 2017

Areas of responsibility:

- Recruitment of new students and new doctoral faculty members;
- Chair of the Program Admissions Committee;
- Student onboarding, coursework advisement, informal degree audits, and administration of milestone activities (candidacy exams, proposal defense, dissertation defense);
- Educating new doctoral faculty on program milestones; policies, procedures, and expectations for candidacy exams, proposal defenses, and final dissertationd defense; educating new program faculty on program, College, and University resources to support graduate students;
- Allocation and administration of doctoral assistantships;
- Administration of the annual doctoral faculty application process; Providng first level of review of new and renewal applications;
- Tracking doctoral faculty engagement with dissertation advisement and communicating with the Dean regarding program faculty eligibility for reassigned time;
- Represent the College and doctoral program directors on Graduate School task forces.

Major accomplishments as Doctoral Program Director:

- Rebuilt trust, empowered and re-engaged program students, doctoral faculty, and the program Admissions Committee following an abrupt leadership transition;
- Conducted program audits and individual meetings with all students to ensure awareness of and preparation for program milestones, and to review accuracy of transfer credits and course substitutions and shepherd transactions through Graduate School and Registrar review and approval;
- Increased efficiency in use of doctoral assistantship resources to increase the number of full-time students supported per year and provide partial tuition support to part-time students;
- Redesigned EAES 790 Colloquium in Environmental Management to engage program doctoral faculty, broaden seminar topics, and instill science communication skills for PhD and MS student attendees;
- Redesigned EAES 895 and EAES 896 (Research Project I & II, respectively) to instill foundational research and communication skills and career exploration.

- Substantially revised the program website to include information on program milestones for both students and faculty mentors, links to Graduate School information and administrative forms, information on research clusters, and news on faculty and student grants and publications.

Chair, Department of Earth & Environmental Studies July 2013 to August 2017

Areas of responsibility:

- Provide leadership and vision for the Department's academic programs, curriculum, and research enterprise;
- Oversee course scheduling and staffing in collaboration with the Associate Chair;
- Oversee Instructional Service Reporting in collaboration with the Associate Chair;
- Student recruiting through representing the Department at Open Houses, Accepted Student Days, major fairs, and outreach to regional institutions;
- Initial advising and onboarding of new first-year students and transfer students during University orientation events;
- Oversight of departmental student services and student success activities including supervision of program advisors; major and minor discovery involving Earth and Environmental Studies programs; assisting students with registration permits, credit adjustments, change of major, change of minor, and applications to complete courses at another institution; connecting students with faculty mentors for independent studies and capstone experiences;
- Administration of 7-9 annual student scholarships and awards;
- Research facilitation through advocating for professional staff to manage major research instrumentation and train new users, using department IDC funds for preventative maintenance and repairs, procurement of research software (ArcGIS, Matlab), and using IDC funds to support faculty and student travel to professional conferences;
- Facilities planning and management;including oversight of all instructional and research spaces, space management for instruction and special events, work order requests; coordination with University Facilities and external personnel for maintenance, repairs, and new equipment installation; Administer access control annually for approximately 100 departmental personnel (full-time faculty and staff, adjuncts, graduate assistants, student employees, postdocs, and visitors); Identifying spaces in need of renovation and advocating to the Dean, Provost, University Facilities, and President;
- Planning, oversight and management of department resources including budgets and finances, equipment, teaching resources, and physical and digital facilities such as office space, classrooms, research space, and websites;
- Convene monthly department meetings for information exchanges, discussion of new initiatives, and strategic planning; Manage Department elections in collaboration with the Department Administrative Assistant to determine membership of standing and ad hoc committees including the Department Personnel Action Committee (DPAC), Curriculum committee, Sabbatical Review Committee, and search committees;
- Cost Center manager for Department operating budget, instructional budget, indirect cost funds, and funds administered through the University Foundation;

- Personnel management, including supervision and evaluation of 13-17 full-time AFT faculty, 2-3 AFT and CWA professional staff, 7-12 masters-level graduate assistants, 30-40 doctoral assistants, and 12-15 AFT adjunct instructors per semester;
- Faculty recruitment and mentoring new faculty;
- Conduct classroom observations for pre-tenure faculty, adjunct instructors, and tenured faculty subject to 5-year post-tenure review;
- Administering faculty personnel actions including reappointment, tenure, promotion, post-tenure review, faculty range adjustments, and sabbatical applications;
- Oversight of university-funded graduate assistants and assistantships allocated to, and working within, the Department of Earth and Environmental Studies;
- Assemble promotional materials and prepare text for Undergraduate Admissions, The Graduate School, and University Communications and Marketing for use in websites, brochures, and marekting materials;
- Represented the Department to the College through meetings with the Dean and during Administrative Council, a bi-weekly meeting of Department Chairs with the Dean's Office for information exchange, planning new initiatives, and coordinating instructional and research efforts between departments;
- Represented the Department to the University administration through meetings with the Provost and Associate Provosts, and at the University Chair's Council, as well as to the larger professional community and general public;
- Advocating to the College and upper administration for department resources and support including faculty lines, modern instructional and research space, new faculty start up packages, graduate and doctoral assistantships, and staff positions.

Major accomplishments as Chair:

- Prioritized student outreach and recruiting efforts resulting in a 42% increase in undergraduate enrollment across all programs (114 to 162 majors) between 2013-2017 by representing the Department at Open Houses, Accepted Student Days, major fairs, preparing brochures to highlight Department strengths, and through direct outreach to chairs and advisors at regional 2-year and 4-year institutions. Recruiting themes included small class size, department participation in learning communities, published multi-year course rotations for ease of planning, hands-on education through field work and lab work, mentoring intensive educational experiences with world class faculty, required meetings every semester with faculty advisors prior to course registration, abundant and diverse research opportunities, evening courses to accommodate working professionals, combined BS/MS programs, and alumni employment success.
- Led the Department through visioning and strategic planning during our 2013-2104 five-year external review committee visit (FERC), resulting in a faculty hiring roadmap that brought 4 new positions to the Department between 2014-2018 in the areas of Physical Oceanography and Coastal Geomorphology, Structure and Tectonics, Paleoclimatology, and Urban Sustainability. These new lines were enabled by enrollment growth and the Department's leadiing role in extramural funding and graduate student support;
- Led the Department through a major transition in the University's funding model that shifted from per-student course fees to block funding for instructional expenses;

Conducted a complete review of instructional related expenses for consumables, equipment servicing, equipment replacement life cycles, software licenses, and field trip expenes to determine our annual budget request;

- Initiated mandatory advising for all undergraduate majors (freshmen through senior) every semester through graduation, administered through use of a registration PIN code provided during advising meetings;
- Served as Department liaison to Dean's Office during during planning, design, and construction of the 107,000 sq. ft Center for Environmental and Life Sciences (CELS) building, providing design suggestions and representing end-user needs for teaching spaces and research laboratores;
- Created and supervised the University's first unified electron microscopy lab, now named the Microscopy and Microanalysis Research Lab, by advocating for, and participating in the design of a new facility to assemble previously disparate equipment and sample preparation facilities in support users across the universtiy;
- In collaboration with department colleagues, launched and recruited for new BS and MS degree programs in Sustainability Science;
- Designed and led the Department's first graduate assistant orientation program for new graduate students engaged in teaching and research. Topics included departmental teaching collections and resources, classroom management, lab safety and emergency procedures;
- Increased the number of masters-level assistantships allocated to the Department by leveraging previously untapped resources including Special Allocation GAs for large lecture sections, GA positions in support of new faculty recruitment, and GAs for building new graduate programs;
- Substantially revised the Department website to serve prospective and current students by including information on: all degree program offerings and sample curriculum workplans; our multi-year course rotation to help students with mult-year planning; information research activities and accomplishments of students and faculty researchers; links to scholarships and student grants; and information on alumni employment outcomes;
- In dual role as Masters Program Coordinator for the Masters in Earth and Environmental Science program, decreased time to degree completion by working closely with part-time masters students on coursework planning, use of summer independent studies, and early planning for capstone experiences to streamline time to graduation (this temporarily resulted in decreased program enrollment due to a drop in the number of continuing students, who were now completing their degrees faster);
- Allocated departmental indirect cost funds to support and encourage student travel to professional conferences;
- Initiator, committee Chair and lead writer on a substantial overhaul of Department bylaws (which had remained unchanged for more than 30 years) to codify roles, responsibilities, govering principles, and Departmental values for Departmental leadership and Departmental Committees. This project spanned several years, with the new bylaws completed and ratified by my successor shortly after I transitioned to the Dean's Office;
- Created 4 new student awards to cultivate a culture of teaching excellence (Outstanding Teaching Assistant Award), a culture of service (Department Service Award), and to

recognize outstanding juniors and seniors in our newly created Sustainability Science programs, comparable to existing student recognitions in Earth and Environmental Science and Geogrphy;
- Served on search committee for Vice President of University Facilities.

TEACHING AND RESEARCH APPOINTMENTS

Dept. of Earth & Environmental Studies, Montclair State University

Professor	9/13 - present
Associate Chair, Earth and Environmental Studies	7/10 - 6/13
Graduate Program Coordinator, Master of Geoscience Program	9/10 - 8/15
Associate Professor	9/07 - 8/13
Assistant Professor	9/03 - 8/07

Columbia University, Lamont Doherty Earth Observatory

Adjunct Senior Research Scientist	2009 - 2024

Ohio State University, Byrd Polar Research Center

Senior Research Associate	2002 – 2003
Byrd Postdoctoral Fellow	2001 – 2002

University of Minnesota, Department of Geology and Geophysics

Instructor, Department of Geology and Geophysics	Fall 2000
Postdoctoral Research Associate	1999-2000
Instructor, College of Liberal Arts Honors Division	1996
Doctoral Research Assistant	1994-1999
Instructor, College of Extension and Continuing Education	1992
Doctoral Teaching Assistant	1992-1994

Science Museum of Minnesota, St. Paul, MN

Instructor, Youth and Family Programs	July-August 1997

California Institute of Technology, Geological and Planetary Sciences Division

Teaching Assistant	1992
Research Assistant	1990-1992

Undergraduate Assistantships and Internships

Teaching Assistant, Dept. Geology, University of Rochester	1989
NASA Planetary Geology and Geophysics Undergraduate Research Program (PGGURP)	1989
Lamont Doherty Geological Observatory Summer Intern Program	1988

HONORS AND AWARDS

Association of Public and Land Grant Universities Council on Research (APLU COR) Research Leader Fellowship	2024
Provost's Research Award	2017
Montclair State University Commencement Gonfalonier representing the College of Science And Mathematics	2017
Montclair State University Commencement Gonfalonier representing the Graduate School	2016
"Millionaires Club" Recognition for Generating External Support for Research and Programs in CSAM	2013
Visiting Fellow, Institute for Rock Magnetism, University of Minnesota	2013
College of Science and Mathematics Faculty Research Award, Montclair State University	2011
Visiting Fellow, Institute for Rock Magnetism, University of Minnesota	2011
Herman and Margaret Sokol Faculty Fellow, Montclair State Univ.	2010
Geological Society of America Exceptional Reviewer	2008
Elected to Phi Kappa Phi Honor Society, Montclair State University	2007
University Distinguished Scholar, Montclair State University	2006
National Science Foundation Early Career Award	2004
Antarctic Service Medal, United States Congress and National Science Foundation	2002
Visiting Fellow, Institute for Rock Magnetism, University of Minnesota	2002
Visiting Fellow, Institute for Rock Magnetism, University of Minnesota	2001
Outstanding Student Paper, GP section, American Geophysical Union	1999
Visiting scientist, Laboratoire des Sciences du Climat et de l'Environment, Gif-sur-Yvette, France	1997
Sigma Xi Scientific Research Honor Society	1997
Harold M. Mooney Award, Dept. Geology, University of Minnesota	1996
Outstanding Student Paper, GP section, American Geophysical Union	1995
Conductus iMAG award	1995
Outstanding Teaching Assistant, Dept. Geology, University of Minnesota	1993
Elected to Phi Beta Kappa Honor Society, University of Rochester	1990
Lattimore Prize, Dept. Geology, Univ. Rochester	1990
Kaidaeans Honor Society, Univ. Rochester	1990
Leadership award, Univ. Rochester	1990
Katherine M. Block Women in Science Award, Univ. Rochester	1989

RESEARCH EXPEDITIONS AND FIELD EXPERIENCE

2019 *RV JOIDES Resolution*, IODP Expedition 382, Scotia Sea
2013 *RVIB Araon*, Joint U.S.-South Korea expedition to Antarctic Peninsula (watch chief)
2012 *RVIB Nathaniel B. Palmer*, Abrupt Environmental Change in Larsen Ice Shelf region, cruise 2, shore-based PI with two student advisees on ship
2010 *RVIB Nathaniel B. Palmer*, Abrupt Environmental Change in the Larsen Ice Shelf region, cruise 1 (watch chief)

2006 *RVIB Nathaniel B. Palmer*, Paleohistory of the Larsen Ice-shelf, cruise 3 (watch chief)
2006 Antarctic Drilling Program McMurdo Ice Shelf (ANDRILL MIS) shore-based science team member.
2005 *U.S. Coast Guard Cutter Healy*, Chukchi Sea, Arctic Ocean, paleoceanography
2005 *RV Laurence M. Gould*, Paleohistory of the Larsen Ice-shelf, cruise 2, shore-based PI, with 2 undergraduate advisees on ship.
2004 *RV Laurence M. Gould*, Paleohistory of the Larsen Ice-shelf, cruise 1 (watch chief)
2003 *RV Marion Dufrésne*, North Atlantic Deep Water Variability
2001 *RVIB Nathaniel B. Palmer*, History of the East Antarctic Margin (wach chief)
2000 *RVIB Nathaniel B. Palmer*, Paleohistory of the Larsen Ice-shelf
1999 *RVIB Nathaniel B. Palmer*, Antarctic Peninsula - Holocene paleoclimate
1998 *R.V. JOIDES Resolution*, Ocean Drilling Program Leg 178
1997 Lake Pepin, MN - Holocene paleosecular variation
1995 Lake Pepin, MN - Human impact on the Upper Mississippi River Watershed
1991 Neo-tectonics of Mono Basin, California
1990 Princeton University Geology Field Methods Camp, Yellowstone Bighorn Research Association, Red Lodge, Montana
1990-96 Field-based coursework and field seminars: San Bernadino Mountains, CA; Death Valley, CA; Mojave Desert, CA; Great Sand Dune National Monument, CO; Valley of Fire, NV; Colorado Plateau, Rio Grande Rift System; Hawaiian Islands

RESEARCH AND PROGRAMMATIC GRANTS

PI = Principal Investigator at home institution; Co-PI = Co-principal investigator;
Collaborator = PI, co-PI, or co-Investigator at another university on multi-institutional grant

Proposals Under Review

Fe-oxides and rock magnetism of grain-size fractions across MIS 33-30, Fram Strait Paleo-Archive, Post Expedition Activity (PEA) support for Olga Libman-Roshal, S. Brachfeld (Administrative PI), O. Libman-Roshal (Exp 403 Science Team member), $20,000, US Science Support Program, Columbia University, *submitted 09/05/2024.*

Grants

Planning: Advancing AI Implementation at Emerging Research Institutions, R Ruediger (Lead PI, Ithaka S+R), S. Brachfeld (co-PI at Montclair State University), and Douglas Dechow (co-PI at Chapman University), NSF GRANTED program, $19,311 (Montclair budget), 12/15/2024 to 03/31/2026.

Future of Ocean Drilling in the US (FOCUS) Co-chair, S. Brachfeld (PI), $67,110, US Science Support Program, Columbia University, 02/01/2024 to 09/30/2024.

Participation of Olga Libman-Roshal on IODP Expedition 403, S. Brachfeld (Administrative PI), O. Libman-Roshal (Exp 403 Science Team member), $19,482, US Science Support Program, Columbia University, 06/01/2024 to 05/31/2025.

Collaborative Research: Linking Marine and Terrestrial Sedimentary Evidence for Plio-pleistocene Variability of Weddell Embayment and Antarctic Peninsula Glaciation, S. Hemming (Columbia University, lead PI), I. Bailey, M. Kaplan, B. Keisling, S. Brachfeld (Montclair PI), T. Williams, S. O'Connell, B. Reilly, L. Tauxe, J. Warnock, E.T. Rasbury, $191,890, NSF Office of Polar Programs, 09/01/21 to 08/31/2026.

Opportunity Meets Innovation Challenge (OMIC), *Project CARE: Championing Access, Research, and Engagement*- Cultivating Research, Innovation and Talent. L. Billings (CSAM PI), S. Brachfeld (co-PI), New Jersey Office of the Secretary of Higher Education, $510,775, 07/12/21 – 07/11/24.

Collaborative Research: Tracing coal ash solids in the environment- Implications for long-term contamination of the aquatic ecosystem, A. Vengosh (Duke University, lead PI), E. Cowan (Appalachian State University PI), and S. Brachfeld (sub-award from App. State Univ), $23,621, NSF Geobiology and Low Temperature Geochemistry, 03/01/2020 - 02/28/2024.

U.S. Science Support Program Office in association with the International Ocean Discovery Program (USSSP-IODP), S. Brachfeld (PI), "Antarctic Ice Sheet Dynamics tracked by Lithic Clast and Fe-oxide Provenance," Expedition 382 Post-Expedition Activity Award, sub-contract from Columbia University, U.S. Science Support Operator for IODP, $17,994, 12/01/2019 – 05/31/21.

U.S. Science Support Program Office in association with the International Ocean Discovery Program (USSSP-IODP), Expedition 382 Salary Support, S. Brachfeld (PI), sub-contract from Columbia University, U.S. Science Support Operator for IODP, $61,746, 3/01/19-5/31/19.

Collaborative Research: Elucidating the role of magnetite in rhyolite vesiculation, J. Hammer (lead PI Univ. Hawaii), S. Brachfeld (Montclair PI), and T. Shea (co-PI), NSF Petrology and Geochemistry, $113,225, 04/01/19 – 03/31/24.

Use of Native New Jersey Plants to Remove Metals from Contaminated Soils, Separately Budgeted Research grant, S. Brachfeld (PI), $4878, Montclair State University, 7/16 - 6/17.

MRI: Acquisition of an Inductively Coupled Plasma- Mass Spectrometry (ICP MS) for elemental concentration and speciation analysis at Montclair State University, X. Li (PI) with MSU co-PIs S. Brachfeld, Y. Deng, S. Passchier, and D. Sarkar, $168,245, National Science Foundation Major Research Instrumentation Program, 9/1/15 – 8/31/17.

Collaborative Research: Deglacial ice dynamics in the Weddell Sea embayment using sediment provenance, S. Brachfeld (Montclair PI), $157,056, National Science Foundation Antarctic Earth Sciences Program, 9/1/14 – 8/31/19.

Static and shock pressure treatment of synthetic Mars basalts: Implications for understanding the evolution of crustal magnetic anomalies, S. Brachfeld (P.I.), $450,742, National Aeronautics and Space Administration Mars Fundamental Research Program, 7/13/11-8/31/16, with collaborators J. Hammer, A. Withers, J. Bowles, S. Stuart

Acquisition of a spinner magnetometer and ancillary paleomagnetic equipment at Montclair State University, S. Brachfeld (P.I.), National Science Foundation Earth Sciences Instrumentation and Facilities Program, $132,443, 4/15/10 - 4/14/12.

Upgrade of the Optical ICP at Montclair State University, M. Gorring (P.I.) with MSU co-PIs S. Brachfeld, S. Passchier, G. Pope, D. Sarkar, National Science Foundation Earth Sciences Instrumentation and Facilities Program, $28,050, 4/15/10-3/31/11.

Enhancing Holocene Ice Sheet and Ice Shelf Geochronology using Geomagnetic Paleointensity Variations, S. Brachfeld (PI), National Science Foundation Antarctic Earth Sciences, $119,406,7/01/09-6/30/11.

Collaborative Research in IPY: Abrupt Environmental Change in the Larsen Ice Shelf System, a Multidisciplinary Approach, Cryosphere & Oceans, Marine and Quaternary Geosciences, & Marine Ecosystems, S. Brachfeld (PI), National Science Foundation Office of Polar Programs, $247,456, 1/08-12/13.

Rock-magnetic and geochemical provenance tracers applied to the McMurdo Ice Shelf Iron-oxide Assemblage, MIS Modified Research Plans, ANDRILL JOI-AUSSP, $18,567, 06/01/07 – 8/31/09.

Acquisition of a Scanning Electron Microscope at Montclair State University, S. Brachfeld (P.I.) with MSU co-PIs A. de Picciotto, J. Farnum, M. Gorring, S. Passchier, $264,579, National Science Foundation, Major Research Instrumentation, Earth Sciences Division, 8/01/06 – 7/31/09.

Collaborative Research: Investigating Holocene Paleoclimate in the Western Arctic Ocean Using Very High Resolution Marine Records Off Alaska, S. Brachfeld (MSU PI) with collaborators D. Darby (lead PI), G. Cutter, J. Bischof, L. Polyak, J. Ortiz, $22,818 to MSU of $775,617 multi-institution total, National Science Foundation Arctic Natural Sciences, 7/01/06 – 6/30/08.

Geomagnetic Paleointensity Dating and Environmental Magnetism of the McMurdo Ice Shelf Record, ANDRILL JOI-AUSSP, $10,511, 06/01/06 – 05/31/07.

Acquisition of a Vibrating Sample Magnetometer at Montclair State University, S. Brachfeld (PI) with MSU co-PIs Z. Feng, M. Gorring, G. Pope, M. West, $197,649, National Science Foundation, Major Research Instrumentation, Earth Sciences Division, 8/15/05-8/14/06.

Integrated Mineralogic and Rock Magnetic Study of Synthetic Martian Basalt: Implications for Understanding Crustal Magnetic Anomalies, S. Brachfeld (MSU PI) with collaborator J. Hammer (lead PI Univ. Hawaii), $33,621 to MSU of $206,566 multi-institution total, National Aeronautics and Space Administration, Mars Fundamental Research Program, 8/1/05 – 7/30/07.

Antarctic Ice Sheet history investigated with sediment geochemistry, Separately Budgeted Research grant, S. Brachfeld (PI), $2500, Montclair State University, 10/04 - 9/05.

CAREER: Tracing Antarctic Sediment Transport Pathways and Antarctic Ice Sheet Stability Using Iron-titanium Oxide Magnetic and Chemical fingerprints, S. Brachfeld, (PI), $400,301, National Science Foundation Office of Polar Programs, 07/01/04-06/30/11.

Collaborative Research, Paleohistory of the Larsen Ice Shelf: Phase II, S. Brachfeld, (MSU PI) with collaborators E. Domack, A. Leventer, S. Ishman, and L. Padman, $140,274 to MSU of $800,000 multi-institution total, National Science Foundation Office of Polar Programs, 04/01/04-03/31/07.

Collaborative Research: Holocene Climatic Changes in the Mongolian Plateau, $147,130 to MSU of $370,641 multi-institution total, Z. Feng (PI), S. Brachfeld (co-PI) and

collaborators K. Liu, and A. Prokopenko, National Science Foundation, Earth Systems History, 07/01/04- 06/30/06.

Petrologic and Experimental Evaluation of an Igneous Origin for Magnetic Anomalies on Mars, J. Hammer (PI), with S. Brachfeld (co-PI, funded as temporary 3-month employee of Univ. Hawaii, January-March 2003), and collaborators M. Rutherford and B. Moskowitz, National Aeronautics and Space Administration, Mars Data Analysis Program, $15,000 to Ohio State of $70,000 multi-institution total, 9/1/2002 – 8/31/2004.

An igneous origin for Martian magnetic anomalies? J. Hammer (P.I.), S. Brachfeld (PI), and collaborators B. Moskowitz, M. Rutherford, Institute for Rock Magnetism Visiting Fellowship, 10/02.

Establishing the stratigraphy of glacigenic bedforms on the Chukchi Borderland, Arctic Ocean, to reconstruct the history of Pleistocene Arctic ice shelves, L. Polyak (PI), S. Brachfeld (co-PI) and collaborators D. Darby and J. Bischof, $132,076 to OSU of $252,000 multi-institution total, 3/01/02-2/28/04, National Science Foundation Arctic Natural Sciences.

Towards the Development of Magnetic Provenance Tracers in Antarctic Glacial-Marine Sediment: A Pilot Study in the Antarctic Peninsula, S. Brachfeld, (PI), $70,190, 7/01/02-6/30/04, National Science Foundation Office of Polar Programs.

US-France Collaborative Research: High-resolution u-channel magnetic study of Late Quaternary sediment cores from the East Antarctic Margin, S. Brachfeld, (PI) with collaborators C. Laj and Catherine Kissel, $17,600, 11/01/01-10/30/03, National Science Foundation International Programs (NSF-INT) Western Europe Division.

High Resolution Quaternary Glacial History and Paleoenvironments of the East Antarctic Margin, S. Brachfeld, (PI), with collaborators A. Leventer, R. Dunbar, P. Manley, and C. McClennen, $60,000 to OSU of $376,000 multi-institution total, 7/01/00-6/30/03, National Science Foundation Office of Polar Programs.

Supplemental Request: High Resolution Quaternary Glacial History and Paleoenvironments of the East Antarctic Margin, $11,063, S. Brachfeld, (PI), 6/01/02-6/30/03, National Science Foundation Office of Polar Programs.

High-field magnetic susceptibility: A tracer of diamagnetic (biogenic) content in sediments? S. Brachfeld, (PI), Institute for Rock Magnetism, University of Minnesota, Visiting Fellowship, 9/01.

Holocene paleoenvironmental change along the Antarctic Peninsula: A test of the solar/bi-polar signal, A. Leventer (PI), S.K. Banerjee (co-P.I.), S. Brachfeld (co-P.I.), with collaborators E. Domack, R. Dunbar, R. Gilbert, S. Ishman, and P. Manley, $50,894 to UMN of $212,000 multi-institution total, 7/01/97-6/30/00, National Science Foundation Office of Polar Programs.

Rock-magnetic and paleomagnetic techniques for the examination, correlation, and dating of Holocene paleoclimatic and geomagnetic signals in Antarctic glacial-marine sediments, 4/01/98-12/30/99, S. Brachfeld, (PI), $22,000, Joint Oceanographic Institutions United States Science Support Program.

Paleoclimate and geomagnetic paleointensity variability from a high-latitude southern site: Rock-magnetic and isotope investigations from the west-Antarctic Peninsula, S. Brachfeld,

P.I., with S.K. Banerjee (co-PI), $20,727, 6/01/98-2/28/00, Joint Oceanographic Institutions United States Science Support Program.

Holocene paleoproductivity signal of the Antarctic coastal ocean: linkages among the sun, atmosphere, ocean, sea ice and biota, E. Domack (lead PI) with collaborators S. Brachfeld, A. Leventer, R. Murray, T. Janecek, S. Ishman, J. Kennett, Site Selection for Ocean Drilling Program Leg 178.

RESEARCH GRANTS AND RECOGNITIONS TO STUDENT MENTEES

Hassan Kasshif (Student author) and S. Brachfeld (Administrative PI and faculty mentor), VentureWell E-Team Program Stage 1 Grant, $5000, 07/01/22 to 03/21/23.

Richard James (Student author), "Use of Native New Jersey Plants to Remove Metals from Contaminated Soils", Geological Society of America Stuent Research Grant, Awarded with Outstanding Mention, $2250, 2016. S. Brachfeld: Research mentor

Brendan Reilly, Masters Research Award, College of Science and Mathematics Awards of Excellence, Montclair State University, 2013. S. Brachfeld: Research mentor

Cathleen (Dale) Doherty, Outstanding Graduate Student in Geoscience Award, Montclair State University, 2009. S. Brachfeld: Research mentor.

Molly Rosig, "Defining the Provenance Characteristics of Weddell Sea and Northeastern Antarctic Peninsula Sediment: A Multi-proxy Approach," Montclair State University Sigma Xi Student Research Symposium, Best Oral Presentation, 2007. S. Brachfeld: Research mentor.

PRE-DOCTORAL RESEARCH GRANTS, SCHOLARSHIPS, AND FELLOWSHIPS

Joint Oceanographic Institutes (now Schlanger) Graduate Fellowship	1998
Doctoral Dissertation Fellowship, Univ. Minnesota	1997-98
Grant for Dissertation Research Abroad, Univ. Minnesota	1997
Doctoral Dissertation Special Grant, Univ. Minnesota	1997
CIC Women in Science and Engineering Travel Grant	1997
Louise T. Dosdall Fellowship, Univ. Minnesota	1996-97
Shevlin Fellowship, Univ. Minnesota	1995-96
GEOFLUIDS Fellowship, Dept. Geology, Univ. Minnesota	1994-95
John W. Gruner Fellowship, Dept. Geology, Univ. Minnesota	1994-95
Society of Exploration Geophysicists Foundation Scholarship	1994-95
Francis Gibson Fellowship, Dept. Geology, Univ. Minnesota	1993-94
Dennis Fellowship, Dept. Geology, Univ. Minnesota	1992-93
Society of Exploration Geophysicists Mobil Oil Co. Scholarship	1988

RESEARCH SUPERVISION, MENTORING, AND OTHER TRAINING

Postdoctoral Researchers

Dr. Christina Verhagen, 2023 to present

Thesis and Dissertation Advisees

Gina Quiñones, M.A., Environmental Sciences May 2006 (now Project Scientist at Arcadis)
Dr. Cathleen (Dale) Doherty, M.S. Geoscience, May 2009 (now Associate Professor of Professional Practice and Director of Inorganic Analysis Facility, EOHSI, Rutgers University)
Kenneth Kacperowski Jr., M.S., Geoscience, August 2009 (now Senior Geologist at WSP Environment and Infrastructure USA)
David Cuomo, M.S., Geoscience, August 2010 (now Geologist at Louis Berger Group)
Carl Natter, M.S. Geoscience, August 2011 (now Scientist at TetraTech)
Dr. Brendan Reilly, M.S. Geoscience, May 2013 (now Lamont Assistant Research Professor and Core Lab Director, Lamont-Doherty Earth Observatory, Columbia University)
Deepa Shah Dwyer, M.S. Geoscience, May 2013 (now PhD student at Oregon State University).
Rachel Perez-Darley, M.S., Geoscience, January 2014 (now Field Arborist at AECOM)
Natalie Romanoff, M.S., Geoscience, January 2015 (now Project Manager at Arizona Department of Environmental Quality)
Ashley Cirone Hodge, M.S. in Earth and Environmental Science, May 2017 (now Source Water Protection Coordinator, Maine CDC)
Olga Libman-Roshal, PhD in Environmental Science and Management, in progress

Research seminar/applied project advisees (Masters programs, non-thesis track)

Douglas Sieradzki, M.S. in Geoscience, 2008, "Paleoclimate investigations in Lake Champlain, VT."
Gary Landis, M.S. in Geoscience, 2008, "Downhole imaging tools." (now President and Founder, G Environmental)
Brian Tate, M.A. in Environmental Studies, 2011, "GIS visualization of Antarctic Sediment Provenance Datasets" (now Environmental Scientist at Potomac-Hudson Environmental)
Dr. Jesse Kolodin, M.S in Geoscience, 2012, "New Jersey Coastal Processes and Coastal Restoration." (now Research Scientist, New Jersey State Department of Banking and Insurance)
Molly Rosig Borst, M.S., Geoscience, 2014. "Geochemical tracers of sediment provenance in the Weddell Sea, Antarctica." (now Senior Manager, Pearl River Site Affairs and External Engagement, Pfizer)
Kelly Searfoss, M.S. Geoscience, 2014, "Geochemical analysis of the Perseverance Drift," Spring 2014 (now K-12 science educator in New Jersey)
Richard James, MS in Sustainability Science, 2020, "Heavy metal contamination in NJ Urban Soils"

Thesis and Dissertation Committee Member

Deborah Katchen, M.S. in Geoscience, May 2008 (now K-12 science educator in NJ)
Michael DaSilva, M.S. in Geoscience, May 2009 (now lab manager at William Patterson Univ.)

Candice Faulk, M.S. in Geoscience, May 2009 (now K-12 science educator in NJ)
Dr. Dan Hauptvogel, M.S. in Geoscience, May 2010 (now Instructional Associate Professor, Univ. Houston)
Dr. Melissa Hansen, Ph.D., Environmental Management, August 2016, MS 2011, (now adjunct instructor at Montclair State University)
Justin Kulick, M.S. in Geoscience, May 2012 (now K-12 science educator in NJ)
Eric Sonnenwald, M.S. in Geoscience, August 2013 (now K-12 science educator in NJ)
Kathleen Miller, M.S. in Geoscience, May 2014
Jay Patel, M.S. in Geoscience, May 2014 (now at AECOM)
Jessica Rosenberg, M.S. in Geoscience, May 2014 (now Geologist at GEI Consultants, Inc.)
Dr. Sushant Singh, Ph.D., Environmental Management, May 2015 (now Assistant Vice President of Data & Analytics OS, Sonata Software, USA)
April Kelly, M.S. in Earth and Environmental Science, May 2017 (now at U.S. Army Corps of Engineers)
Dr. Natalie Sherwood, Ph.D., Environmental Management, May 2017
Jennifer Light, M.S. in Earth and Environmental Science, August 2017 (now at GEI Consultants)
Dr. Mitchell Clay, M.S. in Earth and Environmental Science, August 2017 (now Lab Manager at Austin Peay State University)
Dr. Allison Lepp, M.S. in Earth and Environmental Science, May 2018 (now Postdoctoral Researcher at Univ. Virginia)
Matthew Sandefur, M.S. in Earth and Environmental Science, August 2019 (now NRCS Geological Services Unit (GSU) State Geologist for NY, NJ, and PA).
Eshariah Dyson, Ph.D. in Environmental Science and Management, in progress
Divomi Balasuriya, Ph.D. in Environmental Science and Management, in progress

External Thesis Committee Member/Dissertation Examiner

Jesse Louise Robbins, M.S. 2006, University of Otago, New Zealand
Elissa Barris, M.S. 2014, Université du Québec à Rimouski, Canada
Dr. Amy Chen, Ph.D., 2014, Macquarie University, Sydney, Australia
Dr. Julie Velle, Ph.D., 2019, Université du Québec à Rimouski, Canada
Dr. Becky Hopkins, PhD, 2023, University of Southampton, UK, (External Examiner)
Dr. Kelly McCartney, PhD, 2024, University of Hawaii

Graduate independent study projects advised

Marcia Anderson, ENVR-704, "Field and laboratory methods of sediment core collection and processing," Fall 2007
Everett Conklin, GEOS-592, "Advanced Oceanography," Fall 2011
Candice Falk, M.S. in Geoscience. GEOS-592, "Sediment core processing techniques," completed Fall 2007.
Brendan Reilly, M.S. in Geoscience, GEOS580 "Marine field methods in Geoscience", Spring 2012
Idali Rios, M.S. in Aquatic and Coastal Sciences candidate, EAES550, "Advanced Marine Geology: Diatoms as Environmental Indicators along the Antarctic Peninsula," Spring 2013.

Melissa Schlank, M.A. in Environmental Studies, 2007. ENVR-531, "Developing Unit Plans for Environmental Conservancy," completed Summer 2006.
Deepa Shah, M.S. in Geoscience, GEOS592 "Planetary Magnetism," Spring 2012
Deepa Shah, M.S. in Geoscience, EAES535 "Geophysics," Fall 2013
Jay Patel, M.S. in Geoscience, EAES599, Fall 2013 "SEM and X-ray microanalysis of Cordierite in New Jersey Highlands Metapelites."
Sushant Singh, Ph.D. in Environmental Management, EAES599, Summer 2014 "SEM and X-ray Microanalysis."
Richard James, MS in Sustainability Science, EAES 792.

Other Graduate Research Supervision

Melissa Hansen, grant funded GA, 9/10 – 6/11, Iron oxide tracer development in the Ross Sea, Antarctica
Michael Maresch, Goldfarb Fellow, 9/13 – 12/13, Iron oxide assemblages in sediment from the Whillans Ice Stream (now Geospatial Analyst at Continental Mapping Consultants)
David Sharpe, grant funded GA, 9/13 – 12/13, Magnetic and geochemical analysis of marine sediments (now Environmental Geologist at Ambient Environmental, Inc.)

Undergraduate Independent Study Projects Advised

Michael Cacciapuoti, B.S. in Geoscience, 2005. Investigating Potential source of titanium-rich Titanomagnetite in Palmer Deep middle Holocene sediment, Montclair State University, completed Fall 2005.

Thomas S. Clayton, B.S. in Geoscience with Earth Science Teaching Certification, 2012, Analysis of the geochemical signatures of Vincennes Bay coastline sediments, Completed Spring 2012.

Christopher Connallon, B.S. in Geoscience, Effects of forest fires on soil magnetic mineral assemblages, spring 2012.

Isamar Cortes, B.S. in Sustainability Science in progress, Provenance Tracers of Paleo-ice streams, Weddell Sea, Antarctica

David Cuomo, B.S. candidate in Geoscience. Magnetic properties of East Antarctic dropstones and dredge materials, Montclair State University, Fall 2008.

Jason Darley, B.S. in Geoscience, Grain-size dependent geochemistry of northeastern Antarctic Peninsula Holocene sediment, Montclair State University, Fall 2009-Spring 2011.

Stephanie Dulgar, B.S. in Geosciences 2007, Southern Illinois University, Bacterial Magnetite in Antarctic deep-sea sediment? Completed Fall 2006.

Kathleen Ottens, B.S. in Geoscience, 2015, Scanning Electron Microscopy and X-ray Microanalysis, Spring 2015.

Juliana Pinzon, B.S. in Biology, 2008. Magnetic Properties of the ANDRILL McMurdo Ice Shelf drill core, Montclair State University, completed Spring 2008.

Deepa Shah, B.S. in Geoscience in progress, Paleosecular variation and relative paleointensity recoreds from Maxwell Bay, Antarctic Peninsula, Summer 2010-present.

Emily Youcha, B.S. in Geoscience, 1999, University of Minnesota. Magnetic properties of sediments from Andvord Drift, Antarctica. Completed Spring 1999.

Nicholas Zarro, B.A. in Anthropology, in progress (co-advised with D. Chatr Aryamontri and G. Pope), SEM-EDS analysis of glass tesserae from the Villa of the Antonines, 2014-2015.

Shane Nicols-o'Neill, B.S. in Earth and Environmental Science, 2018, SEM-EDX Analysis of Bedrock from the Weddell Sea Embayment, Antarctica

Molly Minogue, B.S. in Earth and Environmental Science, 2019, Provenance of Ice Rafted Debris in the Scotia Sea

Student Laboratory Assistants and Technicians Supervised

Montclair State University

Juliana Pinzon, undergraduate laboratory assistant, 2004 - 2008, B.S. 2008
Luisa Bouhot, undergraduate laboratory assistant, 2005 - 2009, B.A. 2009
Joanna Carlsen, 05/04 – 12/04, graduate laboratory technician, M.A.T. 2005
Cathleen Dale, 5/09-09/09, laboratory technician/lab manager, B.S., 2007, M.S. 2009
Melissa Hansen, 6/11-1/12 and 1/2020 to present, laboratory technician, M.S. 2011, PhD 2016
Dan Hauptvogel, 1/11 – 8/11, laboratory technician, M.S. 2010
Joseph Kowalski, 10/12 – 08/13, laboratory technician, MA in Environmental Studies 2013
Juliana Pinzon, undergraduate laboratory assistant, 2004-2008, B.S., 2008
Elyse Petersen, graduate laboratory technician, 6/10 - 11/10, M.S. in Geosciences, 2011 (now geologist with Groundwater & Environmental Services, Inc.)
Elen Teo, laboratory technician, 1/13- 6/14, MS in Sustainability Science
Natalie Romanoff, laboratory technician, 1/12-present, M.S. in Geoscience 2015
Eric Slaff, undergraduate laboratory assistant, 11/04 – 05/05, B.A. 2007
David Sharpe, laboratory technician, 1/14-8/14 and 1/15/16 to present
Leah Thiel, undergraduate laboratory assistant, M.A. 2012, Now Environmental Scientist at Matrix New World Engineering, Inc.
Christina Verhagen, undergraduate laboratory assistant, 7/16 to 12/16
Timisha Woods, 7/04-9/04, Orange High School, NJ, participant in American Chemical Society's "SEED" Program, co-mentor Gregory Pope and Matthew Gorring

Ohio State University

Marc Yahl, Undergraduate laboratory technician, 7/02-8/03

University of Minnesota

Andrew Eller, undergraduate laboratory assistant, 1999-2002
Emily Youcha, undergraduate laboratory assistant, 1998-1999

Dr. Ramesh Attini, postdoctoral researcher, SIROM Scientific Solutions
Anne Bannister-Liekens, B.S. Physics, 2015
Christopher Canning, B.S. Geoscience, 2016
Mr. Joseph Carabillo, Louis Berger Group
Dr. Mitchell Clay, M.S. Earth and Environmental Science, M.S. August 2017
Chris Cicerale, M.S. Geoscience 2012
Ashley Cirone, M.S. Earth and Environmental Science, May 2017
Isamar Cortes, B.S. Sustainability Science, May 2017
David Cuomo, M.S. Geoscience 2010
Jason Darley, B.A. Geography 2015
Eric Freeburg, University of Massachusetts-Boston
Ali Gurhan, SOR Testing Labs, Cedar Grove, NJ
Dr. Melissa Hansen, M.S. Geoscience 2011; Ph.D. 2016
Dr. Daniel Hauptvogel, M.S. Geoscience 2010
John Herbeck, non-degree student (originally in MS program)
April Kelly, M.S. Earth and Environmental Science, May 2017
Amanda Kurezi, M.S. Chemistry, May 2017
Justin Kulick, M.S. Geoscience 2012
Olga Libman-Roshal, PhD in Environmental Science and Management, in progress
Jennifer Light, M.S. Earth and Environmental Science, August 2017
C.J. Madarang, M.S. Chemistry 2011
Michael Maresch, M.S. Geoscience, 2015
Matthew McAlister, M.S. Sustainability Science, May 2017
Kathleen Miller, M.S. Geoscience 2014
Dr. Mrinal Musib, Researcher, SUNY Downstate Medical College
Carl Natter, M.S. Geoscience 2011
Shane Nicols-O'Neill, B.S. Earth and Environmental Science, 2018
Derik Niziolek, M.S. Geoscience 2014
Dr. Rosita Nunez, Ph.D. Environmental Management 2017
Nadine Orejola, B.S. Geoscience 2012
Kathleen Ottens, B.S. Geoscience, 2015
Jay Patel, M.S. Geoscience 2014
Elyse Peterson, M.S. Geoscience 2013
Brendan Phillips, M.S. Geoscience 2012
Joshua Rader, M.S. Geoscience 2014
Dr. Sudipta Rakshit, postdoctoral researcher
Dr. Brendan Reilly, M.S. Geoscience 2013
Sean Rittinger, M.S. Geoscience, 2017
Natalie Romanoff, M.S. Geoscience 2015
Matthew Sandefur, M.S. Earth and Environmental Science, 2019
Deepa Shah, M.S. Geoscience 2013
David Sharpe, M.S. Geoscience, 2015
Marian Stepanova, GEI Consultants
Eric Sonnenwald, M.S. Geoscience 2013
Andrew Temples, M.S. Geoscience 2012

Dr. Christina Verhagen, B.S. Earth and Environmental Science 2017
Dr. Mary Lou West, Professor Emeritus, Mathematics and Physics
Nicolas Zarro, B.A. in Classics 2017
Salvatore Zerbo, MA Environmental Studies 2017

GRADUATE TEACHING ASSISTANTS SUPERVISED

Christin Cifelli, M.S. 2009, GEOS112 laboratory instructor 2003-04
Cathleen Dale, MS 2009, GK-12 Graduate Teaching Fellow, 2007-09
Matthew Dougherty, BS 2007, MAT 2009, GEOS114 laboratory instructor 2007-2008
Jennifer Haag, MA 2005, PHMS210 laboratory instructor 2003-04
Melissa Hansen, MS 2011, Ph.D. candidate, PHMS210 laboratory instructor, 2011
Faith Justus, Ph.D. candidate, EAES250 laboratory instructor, 2014
Naushad Kollikkathara, Ph.D., 2009, PHMS210 laboratory instructor 2007-2008
Shavon Letang, 2008, Ph.D. candidate, PHMS210 laboratory instructor 2008
Rita Papagian, MA candidate, PHMS210 laboratory instructor 2005
Hayley Rosado, MS candidate, EAES250 laboratory instructor, 2015

PUBLICATIONS, DATASETS, AND PRESENTATIONS

* = current or former Montclair student

§ = student author at another institution

Peer-reviewed Publications

Cowan, E.A., Wang, Z., **Brachfeld, S**., Vengosh, A., Hageman, S.J., Seramur, K.C., Pearson, W.F., §Wilson, J., §Karcher, R., Hill, R., Role of coal ash morphology and composition in delivery and transport of trace metals in the aquatic environment, *Environmental Pollution*, https://doi.org/10.1016/j.envpol.2024.124982.

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TEACHING EXPERIENCE

** indicates a newly designed course*
§ indicates a substantially revised course

Semester	Institution	Course Title	Enrollment
No teaching duties as of Fall 2017 following transition to full time academic leadership			
Spring 2017	Montclair State Univ.	Research Project in Env. Management II (EAES896)	8
Spring 2017	Montclair State Univ.	Colloquium in Env. Mgmt. (EAES790)	35
Fall 2016	Montclair State Univ.	X-ray Microanalysis (EAES525)	8
Spring 2016	Montclair State Univ.	§Research Project in Env. Management II (EAES896)	6
Spring 2016	Montclair State Univ.	Colloquium in Env. Mgmt (EAES790)	35
Fall 2015	Montclair State Univ.	§Research Project in Env. Management I (EAES895)	7
Fall 2015	Montclair State Univ.	§Colloquium in Env. Mgmt (EAES790)	35

Spring 2015	Montclair State Univ.	Intro Marine Science (EAES250)	24
Fall 2014	Montclair State Univ.	X-ray Microanalysis (EAES496/525)	8
Spring 2014	Montclair State Univ.	Intro Marine Science (EAES250)	24
Fall 2013	Montclair State Univ.	Honors Seminar in Science (HONP210)	32
Spring 2013	Montclair State Univ.	Earth Systems Science (EAES700)	5
Fall 2012	Montclair State Univ.	X-ray Microanalysis (EAES525)	10
Fall 2012	Montclair State Univ.	Honors Seminar in Science (HONP210)	36
Spring 2012	Montclair State Univ.	*Research Seminar (GEOS490)	8
Fall 2011	Montclair State Univ.	Intro Marine Sciences (PHMS210)	26
Fall 2011	Montclair State Univ.	Advanced Marine Geology (GEOS560)	25
Fall 2011	Montclair State Univ.	Honors Seminar in Science (HONP210)	36
Spring 2011	Montclair State Univ.	Earth Systems Science (ENVR770)	28
Fall 2010	Montclair State Univ.	*X-ray Microanalysis (GEOS547)	8
AY09-10	Sabbatical leave		
Spring 2009	Montclair State Univ.	Earth Systems Science (ENVR770)	5
Fall 2008	Montclair State Univ.	Substitute instructor, Sedimentology (GEOS437)	9
Fall 2008	Montclair State Univ.	Honors Seminar in Science (HONP210)	26
Fall 2008	Montclair State Univ.	Environmental Geoscience (GEOS525)	43
Spring 2008	Montclair State Univ.	Historical Geology (GEOS114)	22
Spring 2008	Montclair State Univ.	Intro. Marine Sciences (PHMS210)	25
Fall 2007	Montclair State Univ.	Advanced Marine Geology (GEOS560)	15
Fall 2007	Montclair State Univ.	Honors Seminar in Science (HONP210)	34
Spring 2007	Montclair State Univ.	Earth Systems Science (ENVR770)	18
Spring 2007	Montclair State Univ.	Intro. Marine Sciences (PHMS210)	56
Fall 2006	Montclair State Univ.	§Environmental Geoscience (GEOS525)	26
Fall 2006	Montclair State Univ.	*Honors Seminar in Science (HONP210)	38
Spring 2006	University Distinguished Scholar Semester		
Fall 2005	Montclair State Univ.	Intro. Marine Sciences (PMHS210)	55
Fall 2005	Montclair State Univ.	§Advanced Marine Geology (GEOS560)	15
Spring 2005	Montclair State Univ.	§Earth Systems Science (ENVR770)	13
Fall 2004	Montclair State Univ.	Physical Geology (GEOS112)	49
Fall 2004	Montclair State Univ.	Intro. Marine Sciences (PHMS210)	56
Fall 2004	Montclair State Univ.	§Contemporary Issues (GNED201)	96
Spring 2004	Montclair State Univ.	Physical Geology (GEOS112)	49
Spring 2004	Montclair State Univ.	Intro. Marine Sciences (PHMS210)	37
Fall 2003	Montclair State Univ.	Physical Geology (GEOS112)	40
Fall 2003	Montclair State Univ.	§Intro. Marine Sciences (PHMS210)	44
Fall 2000	Univ. Minnesota	Oceanography (GEO 5006)	87
Summer 1997	Science Museum MN	*Journey to Mars	8
Summer 1997	Science Museum MN	*Earthquakes, Tornadoes, Tidal Waves and Volcanoes	20
Spring 1996	Univ. Minnesota	*Geology Gone Wrong (HCOL1010)	22
Summer 1992	Univ. Minnesota	Physical Geology Extension Course	60
Summer 1992	Univ. Minnesota	Historical Geology Extension Course	46

ACADEMIC SERVICE

Montclair State University

University Service

2024	Presenter and facilitator, "Brainstorming your Next Grant Proposal," Dean of Students Office Retreat
2024	Search Committee Chair, Vice Provost for Undegraduate Education, Success, and Academic Innovation
2024	Search Committee Chair, Associate Dean for Research, College for Community Health
2024	Chair, Student Research Symposium Organizing Committee
2024 to present:	Co-chair for Working Group I, Middle States Commission on Higher Education Accreditation Steering Committee, Standard I on University Mission and Goals
2023	Member, University Committee on Generative Arificial Intelligence
2023 to present	University Safety Committee
2022	Search Committee member, Associate Dean, Sprague Library
2022	Search Committee member, STEM Facilities Director
2022	Curriculum Process task force member
2022	Export Control Committee member
2021	Search Committee member, Assistant Vice President for Occupational Safety, Environment Services and Biosafety
2021-2022	Search Committee member, Grant Accounting Specialist
2021-2022	Academic Policy Committee member
2021	University Strategic Plan Implementation Committee
2020-2022	End-user testing group, Course Information Management System (CIM)
2019	Presenter, Graudate Assistant Orientation, The Graduate School
2019	Search Committee member, Director of Mechanical Services, University Facilities
2019	Search Committee Chair, Laboratory Controls Technician, University Facilities
2018-2022	Member, University Undergraduate Curriculum Committees
2018-19	Member, Working Group on Protecting Minors on the MSU Campus
2018	Panelist, "Women in Science, Technology, Engineering, and Mathematics Fields" Office of Equity and Diversity (OED) Lecture series, March 26, 2018
2018	Member, Graduate School Working Group on Roles and Responsibilities of Graduate Program Coordinators
2018	Panelist, Center for Advising and Student Transitions "Discover" Panels for Undeclared Freshmen
2016-17	Mentor, Research Academy for Univerity Learning, Engaged Teaching Fellows Program
2015	V-1004 Search Committee, Vice President for University Facilities
2015	Presenter, "Scholar's Day" recruiting event for Undergraduate Admissions
2015	Graduate Council task force on Evaluating Graduate Degree Programs
2014	Presenter, "The College Career Ready Academy," July 16, 2014
2008	Presenter, College of Humanities and Social Sciences, Humanities in the Schools Day: "Carpe Futura: Visions of the Future"
2008	Presenter, New Faculty Workshop, "Grant Seeking at Montclair State University"

2008	VF379 Search Committee, Vice Provost of Academic Affairs and Assessment
2006-2008	University Graduate Council (CSAM representative)
2006	Marie Frazee Scholarship Committee
2005	Presenter, Graduate Development Conference
2005	Marie Frazee Scholarship Committee
2003	Global Education Center Grant Proposal Evaluation Committee

College of Science and Mathematics

2022	Search Committee Co-chair, Grants and Projects Specialist
2021	Search Committee Chair, Assistant Dean, College of Science and Mathematics
2021	Search Committee Chair, Vivarium Director
2020	CSAM Consultative Group, Montclair State University Restart Plan
2018	V-1563 Program Associate Search Committee Chair
2018	CSAM Student Success Center, Director and Advisors search committees
2018	Presenter: PSEG-ISS Green Teams training
2017-2022	CSAM Dean's Office representative to Graduate Council
2017	V-1373 Grants and Contracts Specialist Search Committee Chair
2017	Presenter: PSEG-ISS Green Teams training
2016	Presenter, CSAM Discovery Day program for high school juniors
2016-2017	CSAM Advising Council
2015-2017	Sustainability Seminar Series Coordinator
2015	V-1021 Search Committee, CSAM Program Assistant
2015	LSAMP Seminar Series "The National Science Foundation Graduate Research Fellowship Program"
2014	Outstanding Student Presentation judge, Passaic River Symposium
2013-2015	Executive Committee member, Doctoral Program in Environmental Management
2013	Presenter, CSAM-Hitachi Electron Microscopy Workshop
2011	Passaic River Institute Director Search Committee
2011	V-589 Electron Microscopy Specialist Search Committee Chair
2009-2022	CSAM Chemical and Lab Safety Committee
2008-2011	Research Director, Microscopy and Microanalysis Research Laboratory
2007	CSAM Research Committee, Separately Budgeted Research, Summer Grant Development, Sokol Faculty and Student Research, and Distinguished Scholar proposal evaluation
2006	CSAM Research Committee, Separately Budgeted Research, Summer Grant Development, and Sokol Faculty and Student Research proposal evaluation
2005	CSAM Research Committee, Separately Budgeted Research, Summer Grant Development, and Sokol Faculty and Student Research proposal evaluation
2005	SMUG Workshop "Using Kaleidagraph for graphing and data presentation"
2005-2008	Undergraduate Research Committee

Department of Earth and Environmental Studies (EAES)

2013-17	Chairperson, Dept. Earth and Environmental Studies (elected 2 terms)
2012-13	V-731 Analytical Instrumentation Specialist search committee
2011	VF-20 Faculty Search Committee member, Geodynamics

2010-2013	Associate Chair, Dept. Earth and Environmental Studies (elected 1 term)
2010	VC-139 EAES Department Secretary Search Committee member
2010	VF-10 EAES Faculty Search Committee member, Earth Systems Modeling
2010-2015	MS in Geoscience Graduate Program Coordinator
2009-2011	Chair, Department Personnel Action Committee
2008- 2017	EAES Teaching Assistant Orientation Founder and Coordinator
2007-08	VF-32 Faculty Search Committee Chair, Environmental Management
2006-07	VF-40 Faculty Search Committee Chair, Environmental Management
2006	VF-28 Faculty Search Committee member, Surface Hydrology
2006-2009	Undergraduate advisor, B.S. in Geosciences
2004	VF-23 Faculty Search Committee member, Sedimentology
2004	Earth and Environmental Studies Department Curriculum Committee
2003-2017	Presenter, Undergraduate Admissions Open House events
2006-2017	Presenter, Graduate School Open House events
2003-2010	Student Awards Committee
2003-2013	Department facilities committee

Byrd Polar Research Center, Ohio State University

2002	Byrd Postdoctoral Fellow Search Committee
2001	Wight Scholarship Selection Committee

Department of Geology and Geophysics, University of Minnesota

1995-97	Student member, Graduate Studies Committee
1993	Graduate recruiting assistant: This position was dedicated to increasing the number of women in geoscience graduate programs
1992	Geology tutor for learning disabled student

University of Minnesota

1992-97	Member, Student Emergency Loan Fund Advisory Board

SERVICE TO PROFESSIONAL COMMUNITY

Academic External Review Committees

2023	Chair, External Review Team, Michigan Technological University, Department of Geological and Mining Engineering & Sciences
2020	Massachusetts Board of Higher Education, Review Team Member for University of Massachusetts-Lowell for new PhD program in Earth Systems Science
2017	Academic Quality Assessment and Development (AQAD) External Review Committee, University of Massachusetts-Lowell Department of Environmental, Earth, and Atmospheric Science

Advisory Boards (National)

2021- 2025 Member, United States Advisory Committee to Scientific Ocean Drilling (USAC) and Chair of Science Communication Subcommittee, US Science Support Program (USSSP)
2021 Chair, Curatorial Advisory Board, US Polar Rock Repository, Ohio State University
2019-2020 Member, Curatorial Advisory Board, US Polar Rock Repository, Ohio State University
2015-2018 Member, Polar Research Subcommittee for the National Science Foundation Geoscience Directorate Advisory Committee
2012-16 Member, Review and Advisory Committee (RAC), Institute for Rock Magnetism, University of Minnesota
2006-2008 Member, Antarctic Research and Supply Vessel Scientific Advisory Committee, National Science Foundation
2005-2016 Member, Antarctic Marine Geology Research Facility Advisory Committee, Florida State University

American Geophysical Union

2023 Session Convener and Chair, Fall 2023 American Geophysical Union Session PP016, "Contributions of Scientific Ocean Drilling to Understanding Earth Systems Science and Earth Systems History at High Latitudes"
2010 Session Convener, American Geophysical Union Session GC20, "Past and Present Dynamics of the Antarctic Peninsula Ice Cap System"
2007 to present Outstanding Student Presentation Award (OSPA) Judge
1999 to present: Manuscript reviews: *Antarctic Research Series, Geochemistry-Geophysics-Geosystems, EOS, Geophysical Research Letters, International Journal of Geomagnetism and Aeronomy, Journal of Geophysical Research B. Solid Earth, Paleoceanography and Paleoclimatology*
1996 Co-chair, Fall 1996 AGU Special Session, "Geomagnetic Paleointensity Records"
1995 Co-chair, December 1995 AGU Special Session, "Perspectives of Past Climate Changes From Worldwide Sediment Magnetic Studies."
1994 to present: Member (currently Lifetime Member)

Editorial Boards

2023 – present Editorial Board, *Marine Geology* (Elsevier)
2013 Review Editor, Frontiers in Geomagnetism and Paleomagnetism, open access online journal

Funding Agency Panels and Proposal Reviews

<u>National Aeronautics and Space Administration (NASA)</u>

- NASA Panels (2)
  - NASA Postdoctoral Fellowship Program
  - Solar System Workings
- NASA Proposal reviews

- NASA Earth and Space Science Fellowship
- Mars Data Analysis Program (MDAP)
- Postdoctoral Fellowship program
- Solar System Workings Program (SSW)

National Science Foundation (NSF)

- NSF Panels (16)
  - Office of Polar Programs (OPP)
    - Arctic Natural Sciences (ANS)
    - Antarctic Earth Sciences (AES)
  - Division of Earth Sciences (EAR)
    - Cooperative Studies of Earth's Deep Interior (CSEDI)
    - Graduate Research Fellowship Program (GRFP)
    - Paleo-Perspectives on Climate Change (P2C2)
    - Paleo Perspectives on Present and Projected Climate (P4CLIMATE)
- NSF Proposal reviews
  - Office of Polar Programs (OPP)
    - Arctic Natural Sciences
    - Arctic Systems Sciences
    - Antarctic Earth Sciences
    - Antarctic Glaciology
    - Antarctic Organisms and Ecosystems
    - Post Doctoral Fellowship program
  - Earth Sciences (EAR)
    - Biogeosciences
    - Cooperative Studies of Earth's Deep Interior
    - Geophysics
    - Instrumentation and Facilities
    - Sedimentology and Paleobiology
    - Paleo-Perspectives on Climate Change
    - Paleo Perspectives on Present and Projected Climate
  - Ocean Sciences (OCE)
    - Marine Geology and Geophysics
    - Ocean Drilling Program
    - Post Doctoral Fellowship program
  - Major Research Instrumentation (MRI)
  - Growing Research Access for Nationally Transformative Equity and Diversity (GRANTED)

International Funding Agency Proposal Reviews

- Antarctic Drilling Program (ANDRILL)

- Czech National Science Foundation
- Integrated Ocean Drilling Program (IODP) Site Selection Program
- Israel Science Foundation
- New Zealand Antarctic Research Institute
- Swiss ETH-Zurich Research Commission
- United Kingdom Natural Environment Research Council (NERC)

Geological Society of America

2025 Session Organizer and Chair, 2025 Northeast Regional GSA Meeting Technical Session T13 "Reconstructing Environmental Change from Marine, Lacustrine, and Terrestrial Sedimentary Records" (scheduled)
2024-2027 Geological Society of America Student Research Grants Committee
2016 Research Mentor for Geological Society of America Student Research Grant recipient, Richard James, Awarded with Outstanding Mention.
2008 Outstanding Reviewer, *Geological Society of America Bulletin*
2006 Session Organizer and Chair, Technical Session T102 "Atmosphere–Ice Sheet–Ocean Interactions: Modern Observations and Historical Interpretations," Geological Society of America, Philadelphia, PA, Oct. 22-25, 2006.
1999-present: Manuscript reviews: *Geology, Geological Society of America Bulletin, Geological Society of America Special Papers*
1998 to present: Member (currently Lifetime Member)

Institute for Rock Magnetism, University of Minnesota

2012-2016 Member, Review and Advisory Committee (RAC)
2006 Invited speaker, 7th Conference on Rock Magnetism, Santa Fe, NM, June 22-25, 2006.
2006 Session convener, 7th Conference on Rock Magnetism, Santa Fe, NM, June 22-25, 2006.
1996 Third Conference on Rock Magnetism and Environmental Magnetism, Santa Fe, NM
1995 Sedimentary Bio-geo-magnetism Workshop, Univ. Minnesota
1994 Second Conference on Rock Magnetism and Environmental Magnetism, Santa Fe, NM

Manuscript Reviews for Other Professional Societies (see above for American Geophysical Union and Geological Society of America journals)

- *American Mineralogist* (Mineralogical Society of America)
- *Geological Society of London Monograph Series* (Geological Society of London)
- *Geophysical Journal International* (Royal Astronomical Society)
- *Oceanography* (The Oceanography Society)
- *Proceedings of the National Academy of Sciences* (National Academy of Sciences)
- *Studia Geophysika* (Institute of Geophysics of the Academy of Sciences of the Czech Republic)

Manuscript Reviews for Other Publishers

Antarctic Science, Earth and Planetary Science Letters, Earth Planets and Space, Frontiers in Earth Science, Frontiers of Environmental Science and Engineering in China, Global and Planetary Change, Holocene, Journal of Quaternary Science, Journal of Sedimentology, Marine Geology, Nature Communications, Palaeography-Palaeoclimatology-Palaeoecology, Physics and Chemistry of the Earth, Physics of the Earth and Planetary Interiors, Quaternary Research, Quaternary Science Reviews, Surveys in Geophysics, Tectonophysics, Wiley Blackwell Books

US Science Support Program for Scientific Ocean Drilling (USSSP)

2021- 2025 Member, United States Advisory Committee to Scientific Ocean Drilling (USAC) and Chair of Science Communication Subcommittee, US Science Support Program (USSSP)

2023-present Co-chair Future of US Ocean Drilling (FOCUS) Initiative and workshop series under the US Science Support Program (USSSP) for Scientific Ocean Drilling

2022 Member, U.S. Post-IODP Planning working group

2021-2022 Convener: IMPACT 2022 Advancing Scientific Ocean Drilling Workshop, US Science Support Program

2008-present Proposal reviews:

- Post Expedition Activity (PEA) grants
- Novel Projects Program
- Science Outreach Officer project grants
- Schlanger Graduate Fellowship Program
- Antarctic Drilling Program post expedition activity grants

1998 to present: Manuscript reviews for Ocean Drilling Program (ODP) Legs 175, 183, 195, and 202 *Scientific Results Volumes*

Workshop Participation (Invited)

2024 Invited participant, Future of US Marine Seafloor and Subseafloor Sampling Capabilities Workshop, Woods Hole Oceanographic Institution, MA, March 26-28, 2024.

2023 Invited participant, National Academies' Decadal Survey of Ocean Sciences for the National Science Foundation: Workshop on Scientific Ocean Drilling Research Priorities, August 2-3, 2023.

2023 Invited speaker, National Academy of Sciences, Engineering, and Medicine, "Geomagnetic Field Variability at High Southern Latitudes," Future Directions for Southern Ocean and Antarctic Nearshore and Coastal Research, Washington DC, February 9-10, 2023.

2013 Invited participant, Antarctic and Southern Ocean Drilling Workshop, Scientific Committee on Antarctic Research, Portland, OR, 2013

2005 Invited participant, National Science Foundation Earth Systems History PI's Meeting: Summarizing Progress and Planning Holocene Research, May 17-19, 2005.

2005 Invited participant, US-ANDRILL (Antarctic Drilling) Planning Workshop, Denver, CO, April 1-2, 2005.

2004 Invited speaker, Workshop on the Future Expansion of the Antarctic Research Facility, Florida State University, Tallahassee, FL, August 12-13, 2004.
2002 Invited participant, ANDRILL US Science Workshop, April 19-21, Lincoln, NE
2002 Antarctic Marine Geology and Geophysics Research Vessel Planning Workshop, March 23-24, Washington, D.C.
1997 Antarctic Ice-Margin Evolution (ANTIME) Workshop, Hobart, Tasmania
1997 Palmer Long-term Ecological Research (LTER) Workshop, Univ. California, Santa Barbara

PUBLIC EDUCATION AND OUTREACH

2020 Judge, St. Cassian School Middle School STEM Fair
2019 Earth2Class Presenter, Saturday Workshops for Educators, Lamont Doherty Earth Observatory
2019 SciChat Presenter, American Museum of Natural History, New York City, New York
2018 Panelist, Impacts of Climate Change, Fairleigh Dickinson University Freshmen Honors Research Writing Workshop, 4/24/18
2016 Presenter, Montclair Public Library Adult School
2013 Presenter, Montclair College Women's Club
2010 Instructor, "Marine Geology of the Larsen Ice Shelf, Break-Up: An NSF Sponsored Short Course for Students," July 11-24th, Hamilton College, Clinton, NY
2009 Presenter, Montclair State University Science and Math Day
2007 Panelist, New Jersey Technology Council "7 Predictions for 2007," February 15, 2007, Seton Hall University
2006 Event designer, Northern New Jersey Science Olympiad
2005 Presenter, Morris Museum Mineralogical Society, Morristown, NJ
2005 Co-mentor for American Chemical Society Project SEED summer intern
2003 Career Day events at Columbus city K-6 elementary schools
2002-03 Guest presenter, Columbus, Ohio K-6 visits to Byrd Polar Research Center
1997 Instructor, "Girls at the Center," Science Museum of Minnesota, MN
1996 Guest science instructor, Millington Elementary School, Millington, NJ
1995 Head geology Instructor, Bell Science Museum, Minneapolis MN, "Science is for Girls!"
1992-95 Head geology instructor, Women in Science and Engineering "Opportunities Day" for Girl Scouts, Institute of Technology, University of Minnesota
1990-92 Guest science instructor, Hillsborough Middle School, Bell Meade, N.J.

INVITED PRESENTATIONS AND SEMINARS

National Academy of Sciences, Engineering, and Medicine, "Geomagnetic Field Variability at High Southern Latitudes," Future Directions for Southern Ocean and Antarctic Nearshore and Coastal Research, Washington DC, February 9-10, 2023.
Montclair State University, NJ, Weston Scholars Program, "Tracking Antarctica's Ice Sheets, Ice Shelves, and Glaciers: Using the past to prepare for the future," July 26, 2018.
Montclair State University, NJ, Sustainability Seminar Series, February 2017
Women in Science and Engineering Seminar Series, William Patterson University of New Jersey, October 2016
48th Annual Fall Conference of the Metropolitan Association of College and University

Biologists, Keynote Speaker, November 2015
Montclair State University, NJ, Sustainability Seminar Series, September 2015
Montclair State University, NJ, Sustainability Seminar Series, September 2010
Lehigh University, PA, Department of Geological Sciences Seminar, September 2010
Kean University, NJ, School of Environmental Sciences, November 2009
Trinity College, CT, Department of Physics, September 2009
Institute of Geology and Geophysics, Chinese Academy of Sciences, Beijing China, Jan. 2008
Oceanography institute of China University of Geosciences, Beijing China, January 2008
Southern Illinois University Department of Geology, Carbondale, IL January 2007
Lamont Doherty Earth Observatory of Columbia University, Palisades, NY, July 2005
University of Hawaii Department of Geological Sciences, Honolulu, HI, February 2003
Indiana University Purdue University at Indianapolis, IN, April 2002
University of Minnesota Department of Geology and Geophysics, Minneapolis, MN, Jan. 2000

COVERAGE IN THE NEWS MEDIA

4/23/19	CBS News "Earth Matters: Climate Change Challenges from Every Corner of the Globe," coverage of IODP Expedition 382, https://www.cbsnews.com/live-news/earth-day-2019-earth-matters/
4/9/19	Science News, "Antarctica's iceberg graveyard could reveal the ice sheet's future," https://www.sciencenews.org/article/antarctica-iceberg-graveyard-climate-change
3/30/19	Science Times, "Iceberg History May Explain Climate Change", http://www.sciencetimes.com/articles/19387/20190330/iceberg-history-may-explain-climate-change.htm
3/27/19	BBC News "Drilling in Iceberg Alley," coverage of IODP Expedition 382 https://www.bbc.com/news/science-environment-47711600
3/25/19	National Science Foundation Research News, "Scientists set sail on expedition to investigate 'Iceberg Alley' off Antarctica," https://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=297997&WT.mc_id=USNSF_1
3/25/19	Geek.com News, "Scientists Study Ancient Icebergs For Clues About Modern Climate Change," https://www.geek.com/news/scientists-study-ancient-icebergs-for-clues-about-modern-climate-change-1779945/
Fall 2014	Research featured in *Forward Thinking, The Research Newsletter of Montclair State University*
7/28/14	Contributor to "Why is the Sky Blue?" *Asbury Park Press*. http://www.app.com/story/opinion/columnists/2014/07/26/issue-sky-blue/13190661/
1/13	Research featured in *Alumni Magazine*
09/12	Research featured in *CSAM Insights*
Fall 2012	Research featured in *Forward Thinking, The Research Newsletter of Montclair State University*

07/12	Subject of Scientific American article and web-based slide show "Scientists Forge through Severe Sea Ice to Better Determine Why Antarctica's Glaciers are Collapsing," http://www.scientificamerican.com/article.cfm?id=antarctica-scientists-determine-why-glaciers-are-collapsing
12/25/09	Subject of *NJ Star Ledger* article: Corbett, N., "Montclair University professors heading up Antarctica trips to study global warming effects"
07/09	Featured in Montclair State University's 2009 President's Report
03/31/08	Interview with NJN regarding the Wilkins Ice Shelf collapse, Antarctica
03/27/08	Interview with The Weather Channel regarding the Wilkins Ice Shelf collapse, Antarctica
02/07/07	Subject of *Montclair Times* article: Porter, Mark. S., "Global warning: MSU scientist witnesses glacial disintegration"
03/16/07	Interview with NJN on Climate Change in Antarctica
1/16/06	Interview with Kent State News on Arctic Ocean expedition, see http://media.www.kentnewsnet.com/media/storage/paper867/news/2007/01/16/News/Professors To.Make.Arctic.Trek.Study.Climate.Change-2633101.shtml
June 2004	Featured in New Jersey Business magazine's special section on: The Innovative State, Technology Triumphs. "Colleges are the Catalysts for research and high-tech" with MSU colleagues Dr. Mark Chopping and Dr. Yuan Gao.
05/27/04	Subject of *Montclair Times* article: Porter, Mark. S., "Hot discovery in a cold ocean: MSU professor, student part of team verifying volcano in Antarctic Sound"
05/20/04	Interview with NJN on the discovery of an undersea volcano in Antarctica
May 2004	Coverage of Antarctic undersea volcano discovery carried by the following news agencies: Associated Press, L.A. Times, Newsday, San Francisco Chronicle, Atlanta Journal-Constitution, Detroit Free Press, USA Today, Toronto Star, Indianapolis Star, Kansas City Star, Pioneer Press (MN), Provo Daily Herald (UT), Newswise (news wire), Contra Costa (CA) Times, Monterey County Herald (CA), Charlotte Observer, The State (SC), Macon Telegraph (GA), Fort Sayne Journal Gazette and News Sentinel, Centre (PA) Daily Times, Myrtle Beach Sun News (SC) San Jose Mercury news (CA), San Luis Obispo Tribune (CA) Columbus Ledger-Enquirer (GA), Biloxi Sun-Herald (MS), Bradenton Herald (FL), Grand Forks Herald, (ND), Australian, Brisbane Courier-Mail, Australia; Advertiser, Australia; Melbourne Herald Sun (Australia), Daily Telegraph Australia. Broadcast news: NJN Channel 13, CBS News, Environmental News Network, MSNBC, CNN, WCNC-NC.
04/09/04	Interview with the Chronicle of Higher Education for story on Information Technology, Vincent Kiernan, http://chronicle.com/weekly/v50/i31/31a03101.htm

CONTINUING EDUCATION AND PROFESSIONAL DEVELOPMENT

2024 Society of Research Administrators International: NIH R-Series (1.5 CE credits)
2024 Society of Research Administrators International: Principles in Research Development (4.0 CE credits)
2024 Society of Research Administrators International: AI in Research Administration: Future Trends, Use Cases, and Collaborative Opportunities (1.0 CE credit)
2024 Society of Research Administrators International: AI in Research Administration: A New Challenge (1.0 CE credit)
2024 Society of Research Administrators International: Advancing Research Administration with AI-Powered Solutions at Emory University (1.0 CE credit)
2024 "The New and Future Senior Research Officer (SRO) Workshop, Association of Public and Land Grant Universities Council on Research.
2023 "The New and Future Senior Research Officer (SRO) Workshop, Association of Public and Land Grant Universities Council on Research
2012 "Quantitative X-ray Microanalysis: Problem Solving using EDS and WDS Techniques," Lehigh Microscopy School, June 4-8, 2012
2010 Hooke College of Applied Sciences (formerly McCrone Group College of Microscopy), INS 500, Modern Polarized Light Microscopy, July 12-16, 2010.
2010 Fred Pryor Seminars and Career Track "How to Communicate with Tact and Professionalism," June 9-10, 2010
2010 Fred Pryor Seminars and Career Track "Dealing with Difficult People," April 29, 2010
2009 McCrone Group College of Microscopy, COM250, Transmission Electron Microscopy (TEM) short course, October 27-29, 2009
2009 Bruker-AXS X-ray Microanalysis short course, July 20-23, 2009.
2009 Edison Chouest Offshore Helicopter Underwater Egress Training, March 18, 2009
2006 "Glacial Sediment Micromorphology Workshop," Hamilton College, June 5-9, 2006.
2004 "Analytical Electron Microscopy: Analysis Methods for TEM specimens," Short Course completed at Lehigh University Microscopy School, June 14-17, 2004.
2000 Lacustrine Diatom Analysis and Taxonomy Short Course, Univ. Minnesota
1996 Time Series Analysis Short Course, Univ. Minnesota
1995 Project WET, Water Education for Teachers, Great Lakes Research Center, Duluth, MN

PROFESSIONAL MEMBERSHIPS

American Association for the Advancement of Science (AAAS), American Geophysical Union (AGU), Association of Public and Land Grant Universities Council on Research (APLU-COR), Association for Women Geoscientists (AWG), Association for Women in Science (AWIS), Council on Undergraduate Research (CUR), Geological Society of America (GSA), National Council of University Research Administrators (NCURA), National Organization of Research Development Professionals (NORDP), Society of Research Administrators (SRA), Association of University Technology Managers (AUTM)