CURRICULUM VITAE

Bradley B. Sageman
Professor
Department of Earth and Planetary Sciences
Northwestern University

RESEARCH INTERESTS

Stratigraphy – sequence stratigraphy, chemostratigraphy, astrochronology
Sedimentary geochemistry/biogeochemistry
Paleoclimatology/paleoceanography
Molluscan paleoecology
Energy and Sustainability

EDUCATION

Ph.D.	Department of Geological Sciences,
1985-1991	University of Colorado, Boulder, CO

Dissertation : Stratigraphy, carbon geochemistry, and paleobiology of the Upper Cenomanian Hartland Shale Member, Greenhorn Formation, Western Interior, U.S., 572 p.

B.Sc.	Department of Biology
1975 - 1979	Denison University, Granville, OH

PRE-DOCTORAL AWARDS, HONORS AND FELLOWSHIPS

1987-1988	Fulbright Scholarship, Institut für Geologie und Paläontologie, Universität Tübingen, Germany

POST-DOCTORAL AWARDS, HONORS AND FELLOWSHIPS

2019	Fulbright Scholarship, University of Birmingham, UK
2018	Outstanding Paper of the Year, *Journal of Sedimentary Research*
2016	Associated Student Government, Faculty Honor Roll
2006	Elected Fellow, Geological Society of America
2004	Hewlett Award for Curricular Development: *Incorporation of HyperInteractive Teaching Technology in Undergraduate Teaching*
2001	Outstanding Paper of the Year, *Journal of Sedimentary Research*
1997 -2000	DuPont Young Professor Award
1997	Associated Student Government, Faculty Honor Roll
1996	Associated Student Government, Faculty Honor Roll
1994	Hewlett Award for Curricular Development: *Field Problems in Sedimentary Geology*

EMPLOYMENT

MSES Acad. Director	(2019-21)	Institute for Sustainability & Energy at Northwestern
Co-Director	(2013-)	
Associate Director	(2010-13)	
Department Chair	(2005-18)	Department of Earth & Planetary Sciences
Professor	(2004-)	Northwestern University
Associate Professor	(1998-04)	Evanston, IL
Assistant Professor	(1992-98)	

Research Associate (1991-92) Department of Geosciences
Penn State University
University Park, PA

TEACHING AND ADVISING

Areas of teaching:

Introductory Physical Geology	(majors)
Stratigraphy and Sedimentology	(majors/grad students)
Field Methods in Stratigraphy	(majors/grad students)
Paleobiology/Evolutionary Theory	(non-majors)
Sedimentary Geochemistry	(majors/grad students)
Energy, climate and sustainability	(majors and non-majors)

Courses taught:

EARTH 101 - *Geological Processes and Products*
EARTH 114 – *Evolution and the Scientific Method*
EARTH 201 – *Surface Processes*
EARTH 203 - *Historical Geology*
EARTH 330 - *Sedimentary Geology*
EARTH 331 - *Field Problems in Sedimentary Geology*
EARTH 340 – *Paleobiology*
EARTH 342/ISEN 410 – *Topics in Contemporary Energy & Climate Change*
SCS 391 - *Domination of the American Southwest*
EARTH 450 - *Advanced Topics in Sedimentary Geology:*
Carbon cycle and pCO_2 Reconstructions
Advanced Quantitative Stratigraphy; Facies Models and Sequence Stratigraphy
ISEN 130/230 - *Climate Change & Sustainability: Economic & Ethical Dimensions*
SCS 370 – *Environmental Field School*

Curriculum development:

2021 – I adapted EARTH 114 to an online format during the COVID pandemic in 2021.

2020 – I agreed to teach EARTH 201, a class I last taught in 2009, in Spring 2020 because colleague A. Jacobson was on research leave. Due to the COVID-19 pandemic I had to adapt the course to an online format.

2018 – I revised EARTH 330 – *Sedimentary Geology* because I felt that students would benefit from increased feedback and some modest lab experience in preparation for the fall quarter follow-up course, EARTH 331. Past exam questions were converted to weekly homework assignments, significantly increasing the amount of grading effort required for the class.

2017 – I taught a new course, adopted from a faculty colleague who is on a one-year research leave. The class, EARTH 342/ISEN 410 – *Topics in Contemporary Energy & Climate Change,* is a 300- to 400-level version of the material I present in ISEN 230, but my contribution to ISEN230 is typically only 4 lectures. As such, this class constituted a new preparation.

2017 – I initiated a revision of ISEN 230 this year, working to focus the course material on values and ethics related to climate change. This was the original intent of the class, and although it was thought that inclusion of economic and philosophical dimensions in one class would be enriching, we have learned it is very difficult to

adequately address both in a 10-week class. The new version of the class will run in Spring 2018.

2016 – As EPS department chair, I initiated an effort to revise the EPS undergraduate curriculum, in part to perform a decadal update, but more importantly, to allow new faculty members to implement their own perspectives and have a role in shaping our curriculum. The new major requirements have just been approved by the WCAS Curricular Review Committee and will go into effect in AY2018-19.

2011 – Revised ISEN 130 as part of ISEN curricular revision, changing to ISEN 230 and shifting emphasis to policy and ethics. New title - *Climate Change and Sustainability: Political, Economic and Ethical Dimensions*

2010 – Developed ISEN 130 - *Sustainability: Energy, Environment, and Ethics* with co-instructors Friesema and Sheldon in 2010.

2010 – Co-taught SCS-370 *Environmental Field School* with Yael Wolinsky; EARTH 105-online offered to high school students in AP science track during Fall quarter.

2009 – Started development of online geoscience course for Center for Talent Development (EARTH 105-online; *Climate Catastrophes in Earth History*).

2003 – Assumed responsibility for EARTH 201-*Surface Processes* and developed course with new textbook, new lab exercises, and new pedagogic approach. Also revised EARTH 114, using new textbook and new pedagogy.

1999 - Developed new 100-level course for SERTS program (Science and Engineering Research and Teaching Synthesis): GEOL 114 – *Uniformity, Catastrophe, and the Meaning of Evolution* taught for first time F99 and completely revised for F03.

1998 – collaborated with NU faculty (D. Schejbal, P. Freisema) to develop and teach innovative new course linking Environmental Science Program and University College: *Domination of the American Southwest*, included a week-long field trip to Lake Powell in southern Utah.

1997 - invited to participate in IGERT grant to the National Science Foundation (Integrated Graduate Education and Research Training program) linking Departments of Environmental Engineering, Chemistry, and Geological Sciences.

1996 - initiated graduate level seminar series in sedimentary geology.

1994 - initiated GEOL 319 (development of new course - supported by a Hewlett Award for curricular development.
- initiated GEOL 317 (development of new course)
- redesigned GEOL 313 (change of existing course)

1993 - redesigned GEOL 101 (change of existing course)

ADVISING:

Selected undergraduate research advisees	who left Northwestern to pursue…
S22- : Dana Small (w/A. Jacobson)	not yet graduated
S17-S18: Caroline Schuette	Field Museum research assistant
W17-S18: J. Todes (w/M. Osburn)	Fulbright Scholar, Poland
S15-S16: T. Kukla	PhD. candidate, Stanford U.
W11-S13: J. Mills	Ph.D. candidate, UC-Berkeley
W11-S13: A. Mayer	Ph.D. candidate, UC-Berkeley
F12- S13: R. Saywitz	PhD. candidate, Texas A&M
W07-S08: C. Carney	Mass spectrometry specialist, UCSC
S06-F06: B. Chartoff	The Urban Institute

S98-05: A. Blecha	completed Ph.D. at Stanford
F02-S04: P. Dejtrakulwong	completed Ph.D. at Stanford
F99-S02: M. Williams	completed M.S. at Ohio State U.
F01-S02: P. Pancoskova	completed M.S. at Northwestern
S97-F97: T. Huynh	completed M.S. at USC
F96: C.Albrecht-Buehler	completed M.S. at Northwestern
F93-S95: B. Van Mooy	research scientist USGS/WHOI-MIT
F97: K. Carrigan	practicing physician

Graduate research advisees (or co-advisees):

F21 – : Katarina Savatic (PhD.)	currently enrolled
F18 – : Luca Podrecca (PhD.)	currently enrolled
F16 – : A. Nelson (Jacobson lead; PhD.)	completed PhD., Colombia/LDGO post doc
F16 – : G. Kitch (Jacobson lead; PhD.)	completed PhD., 2022 NOAA Knauss Fellow
F15 – : J. Wang (PhD.)	completed PhD., Yale University post doc
F12 – 18: M. Jones (Ph.D.)	completed Ph.D.; Smithsonian Inst. post doc
F13 – 18: J.Lazarz (Jacobsen lead; Ph.D.)	completed PhD., Sandia Natl. Laboratory
F10 – : T.Bollman (vdLee lead; Ph.D.)	completed PhD., Chevron Corp.
F13 – 16: B. Kristall Hurtgen lead; Ph.D.)	completed PhD., private sector
F13 – 14: M.Gomes (Hurtgen lead; Ph.D.)	completed Ph.D.; Asst. Prof., J. Hopkins U.
F13 – 14: R. Bush (McInerney lead; Ph.D.)	completed Ph.D.; Northwestern, post-doc
F13 – 14: A.Baczynski (McInerney lead; Ph.D.)	completed Ph.D.; Penn State, post-doc
F06 – 13: Young Ji Joo (Ph.D.)	completed Ph.D.; U. Oklahoma, post-doc
F05 – 11: D. Adams (Hurtgen lead; Ph.D.)	completed Ph.D.; Exxon-Mobil Corp
F04 – 11: R. Barclay (w/McElwain; Ph.D.)	completed Ph.D.; post doc Smithsonian
F01 – 08: J. Flaum	completed Ph.D.; Exxon-Mobil Corp.
F01 – 07: J. Borges (w/Huh)	completed Ph.D.; Chevron Corp.
F01 – 07: Robert Locklair	completed Ph.D.; Chevron Corp.
F02 – 04: Petra Pancoskova	completed M.S.; private sector
F02 – 03: Michael Fortwengler	completed M.S.; geologist-Shell Oil Co.
F01 – 03: Ramya Shivaraj	completed M.S.; secondary education
F97 – 03: Steve Meyers	completed Ph.D.; Prof. - U Wisc., Madison
F98 – F99: Shana Pimley	completed M.S.; private sector
W94 – S00: Adam Murphy	completed Ph.D.; instructor U. Phoenix
F93 – S94: Lotte Hass	completed M.S., private sector
W96 – S00: J. Werne (w/Hollander)	completed Ph.D., Professor, U Pittsburg
W96 – S00: M. Smith (Hollander lead)	completed Ph.D., private sector
F92 – F93: J. Rich (w/Birchfield)	completed Ph.D., private sector
F93 – S97: C. Gong (Hollander lead)	completed Ph.D.; Exxon-Mobil Corp.

Pre- and Post-doctoral advisees:

2021-23: Anna Waldeck, PhD., Harvard Univ., working on geochemical assessment of ocean acidification, (co-advised with dept. colleagues A. Jacobson and M. Hurtgen)

2017-19: Ben Linzmeier, PhD, University of Wisconsin-Madison, working on geochemical assessment of ocean acidification, (co-advised with dept. colleagues A. Jacobson and M. Hurtgen)

2013-14: Dorothée Husson, Ph.D., University Pierre and Marie Curie (UPMC) working on carbon sequestration and carbon mineralization under high pressure (co-advised with my colleagues, S. Jacobsen and C. Bina)

1999-03: Jiri Laurin, Fulbright Scholar, Ph.D. candidate from Charles U., Czech Republic (I served as outside member of committee); currently research scientist, Czech Academy of Sciences

1997-99: Dr. C.A. Ver Straeten, Northwestern University Environmental Council post doctoral fellow; currently research scientist, New York State Geological Survey.

Departmental Advising: F97 – 03; F21 – present, Director of Undergraduate Studies

SERVICE

Northwestern University

Departmental and program offices

F21- : Director of Undergraduate Studies
F05-S18: Department Chair
F00-S02: Seminar Director
F98-S03: Director of Undergraduate Studies
F98-S03: Chair - Departmental Honors Committee
F01-S03: Chair, Faculty Search Committee
F98-S99: Chair, Faculty Search Committee
W93-S96: Co-director - Graduate Admissions Committee
F92-F96: Chair - Krumbein Lecture Committee

Departmental and program committees

F05-18: As dept. chair, I served ex officio on numerous faculty search committees, curriculum committees, outreach committees, and computing committees.
F01-S07: Member – Departmental building/relocation committee
W95-S05+W12-S13: Member - Faculty Search Committees

WCAS or University committee office or membership

F13-18: Co-Director, Institute for Sustainability and Energy
W13-18: Co-chair, Sustainability Council (w/ Prof. E. Masanet)
F09-S18: Chair, ISEN curriculum committee
W14: Member, Faculty Senate Committee on Global Warming
W09-S18: Advisory board member, Center for Interdisciplinary Exploration & Research in Astrophysics (CIERA)
S10-13: ISEN Associate Director of Education and Special Projects
W-S11 : Search Committee Member, Science/Engineering sustainability position
W-S10 : Co-Chair, Environmental Sciences Committee
F09-S10: Member, Executive Committee, Northwestern Institute of Sustainable Practices
F09-S10: Member, Physical Sciences and Engineering Advisory Board
F03-S07: Member, Curricular Policies Committee
F95-S06: Member - Environmental Sciences Program Committee
F01-S02: Co-chair – Environmental Sciences Task Force
F01-S02: Member – Board of College Scholars
F00-S02: Member - Committee on Academic Standing
S00-S01: Member - Ad hoc Committee for Promotion of Lecturer Faculty
F99-S00: Member -Environmental Council Core Management Group
S94: CAS Representative for Prospective Undergraduate Applicants Panel

Student relations

F94-S07: Faculty Associate, Shepard Residential College; Hosted Shepard student dinner and attended various residential college events and outings.

F94-F06: Departmental field trip leader (Colorado-Utah '94; Iowa '00; Wisconsin '01, Big Bend and Yellowstone NP's'06; Yucatan '10)

Peer Review Activities

Books: SEPM Special Publications; Columbia University Press; GSA Special Publications; Springer Verlag

Journals: ***American Journal of Science, Associate Editor*** (Jan.1, 2015-2019)

Palaios (Associate Editor 96-03); *Nature*; *Geology*; *Paleoceanography*; *GSA Bulletin*; *AAPG Bulletin*; *Chemical Geology*; *Earth & Planetary Science Letters*; *Journal for Sedimentary Research*; *Palaeogeog, Palaeoecol., & Palaeoclim.*

Funding Agencies: National Science Foundation, Earth Sciences
Sedimentary Geology & Paleontology (Panel Member)
Low temperature geochemistry and geobiology
American Chemical Society, Petroleum Research Fund
Netherlands Organisation for Scientific Research
National Geographic Society

Other Peer Review service:
Geological Society of America: L.L. Sloss Award Committee, 2005-08
National Research Council: *Understanding Earth's Deep Past: Lessons for our Climate Future*

Professional Affliations

Member: American Geophysical Union (AGU), Geological Society of America (GSA), Geochemical Society (GS), Society for Sedimentary Geology (SEPM), International Association of Sedimentologists (IAS).

Professional Organizations

Voting Member, Cretaceous Subcommittee of International Commission on Stratigraphy

PUBLICATIONS [current Scopus H-index: 34]

I have been lead author or co-author of 103 published works, mostly in peer-reviewed geoscience journals or edited volumes. See Publications link for full listing.

RESEARCH FUNDING

I have been lead PI, or a co-PI on grant awards that total over ~$4M in research funding; about $2M of this has been awarded in direct support to my research program. The bulk of the funding has come from the National Science Foundation. Other funding sources include the American Chemical Society-Petroleum Research Fund, NASA, scientific societies such as the Geological Society of America, American Association of Petroleum Geologists, Colorado Scientific Society, Gulf Coast Association of Geologic Societies, Evolving Earth Foundation, and DOSECC, several oil companies (Mobil, Whiting, and Encana Inc.), and the Institute for Sustainability and Energy at Northwestern (ISEN).

Updated: JULY, 2022