

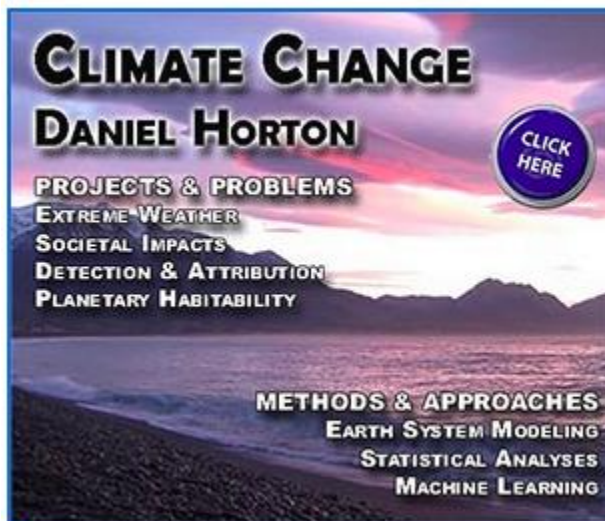
# PhD Opportunities in Earth and Planetary Sciences at Northwestern University

We are seeking future knowledge leaders in earth sciences to our PhD program. Find your fit by visiting our webpage - <http://www.earth.northwestern.edu/> or - click on the faculty fliers below.

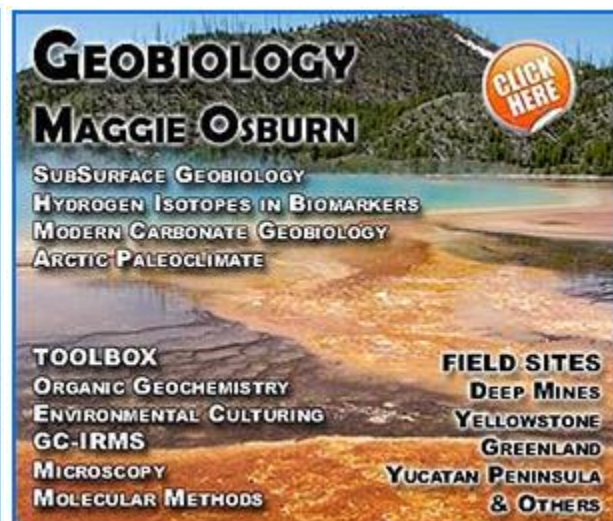
Our ~30 PhD students working with our 13 faculty undertake research of global significance from our great campus on the north shore of Chicago.

We recruit from across the STEM fields - - physics, biology, chemistry, math, computer science, engineering, and more.

We support all our PhD students with a competitive \$30k/year living stipend, in addition to full tuition and medical insurance.



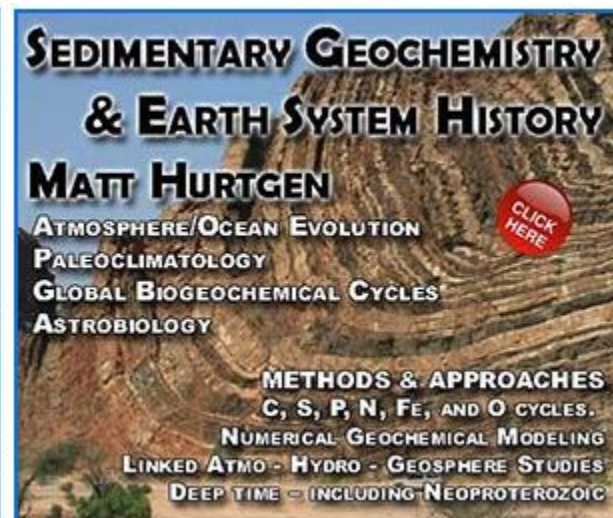
**CLIMATE CHANGE**  
**DANIEL HORTON**  
PROJECTS & PROBLEMS  
EXTREME WEATHER  
SOCIETAL IMPACTS  
DETECTION & ATTRIBUTION  
PLANETARY HABITABILITY  
METHODS & APPROACHES  
EARTH SYSTEM MODELING  
STATISTICAL ANALYSES  
MACHINE LEARNING  
CLICK HERE



**GEOBIOLOGY**  
**MAGGIE OSBURN**  
SUBSURFACE GEOBIOLOGY  
HYDROGEN ISOTOPES IN BIOMARKERS  
MODERN CARBONATE GEOBIOLOGY  
ARCTIC PALEOCLIMATE  
TOOLBOX  
ORGANIC GEOCHEMISTRY  
ENVIRONMENTAL CULTURING  
GC-IRMS  
MICROSCOPY  
MOLECULAR METHODS  
FIELD SITES  
DEEP MINES  
YELLOWSTONE  
GREENLAND  
YUCATAN PENINSULA  
& OTHERS  
CLICK HERE



**PALEOLIMNOLOGY**  
**YARROW AXFORD**  
ARCTIC AND ALPINE CLIMATE CHANGE FROM THE  
PLIOCENE TO THE PRESENT  
TOOLBOX  
GEOCHEMICAL, PHYSICAL & PALEOECOLOGICAL  
ISOTOPE RATIO MASS SPECTROMETRY  
14C AND PALEOMAGNETIC GEOCHRONOLOGY  
CLICK HERE



**SEDIMENTARY GEOCHEMISTRY  
& EARTH SYSTEM HISTORY**  
**MATT HURTGEN**  
ATMOSPHERE/OCEAN EVOLUTION  
PALEOCLIMATOLOGY  
GLOBAL BIOGEOCHEMICAL CYCLES  
ASTROBIOLOGY  
METHODS & APPROACHES  
C, S, P, N, Fe, AND O CYCLES.  
NUMERICAL GEOCHEMICAL MODELING  
LINKED ATMO - HYDRO - GEOSPHERE STUDIES  
DEEP TIME - INCLUDING NEOPROTEROZOIC  
CLICK HERE



# ISOTOPE GEOCHEMISTRY

## ANDREW JACOBSON

CHEMICAL WEATHERING  
CLIMATE CHANGE  
CARBON CYCLE  
ISOTOPE FRACTIONATION


[CLICK HERE](#)

### TOOLBOX

LOW T AQUEOUS GEOCHEMISTRY  
CA AND SR ISOTOPE GEOCHEMISTRY  
THERMAL IONIZATION MASS SPECTROMETRY  
NUMERICAL MODELING

### FIELD SITES

GREENLAND, ICELAND, NEW ZEALAND, & MORE



# GEOPHYSICS & NATURAL HAZARDS

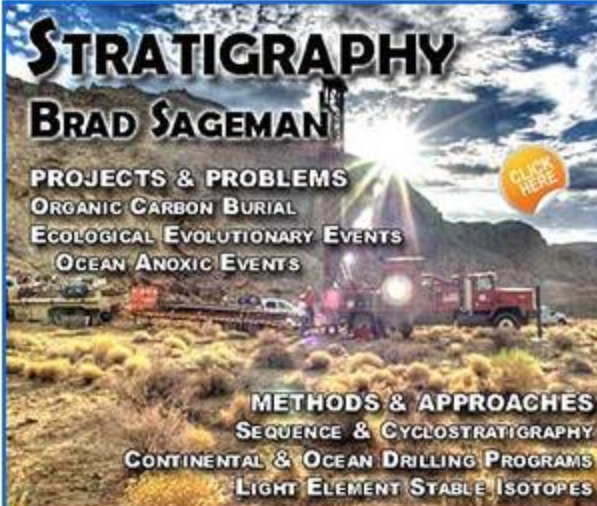
## SETH STEIN

EARTHQUAKE HAZARD MITIGATION SCIENCE AND POLICY  
PLATE BOUNDARY PROCESSES  
LITHOSPHERE DEFORMATION  
NORTH AMERICAN  
MID CONTINENT RIFT

[CLICK HERE](#)

### METHODS & APPROACHES

SEISMOLOGY  
HAZARD MAPPING  
SPACE BASED GEODESY



# STRATIGRAPHY

## BRAD SAGEMAN

PROJECTS & PROBLEMS  
ORGANIC CARBON BURIAL  
ECOLOGICAL EVOLUTIONARY EVENTS  
OCEAN ANOXIC EVENTS

[CLICK HERE](#)

### METHODS & APPROACHES

SEQUENCE & CYCLOSTRATIGRAPHY  
CONTINENTAL & OCEAN DRILLING PROGRAMS  
LIGHT ELEMENT STABLE ISOTOPES