Department of Earth and Atmospheric Science

(Division of Science)

Professor Pengfei Zhang, Chair • Department Office: MR 416 • Tel: 212-650-6984

General Information

The City College offers the following undergraduate degree in Earth and Atmospheric Sciences:

B.S. in Geology

Programs and Objectives

The Department of Earth and Atmospheric Sciences offers a unique version of the Earth System Science (ESS) model, the proposed national curriculum for the earth sciences. The ESS approach has been adopted by NASA and other government agencies as the appropriate method for understanding and modeling the complexities of the world system. By understanding the relationships that sustain the earth’s oceans and atmosphere we can better develop methods for phrasing and solving environmental problems. EAS/ESS emphasizes a curriculum that deals with the geochemical and geophysical relationships that produce an environmentally sound and self-perpetuating world.

This new approach attempts to be as multi-disciplinary as possible, allowing students to choose electives from other science departments and from engineering. The special strengths of the department include hydrology/subsurface remediation, geophysics and environmental geophysics, meteorology and remote sensing, and environmental geochemistry. Students graduating from EAS with the system science training are especially able to include geological/GIS mapping and remote sensing in their portfolio of skills. These and related skills are especially valuable to engineering geology companies, government agencies, such as NASA and NOAA, and a multitude of areas that involve spatial planning. By careful selection of electives students can be equally well prepared for careers ranging from classical Geology to Environmental Public Policy, and Terrestrial Ecology. Majors are also ideally prepared to pursue careers in education and advanced degrees in the Earth Sciences.

Departmental Facilities

The EAS Department maintains well-equipped hydrology, geochemistry, geophysics, remote sensing, and cryospheric processes laboratories. Geochemical equipment includes a Philips x-ray fluorescence station, a Thermo X-series2 ICP-MS, and Thermo flame and graphite furnace atomic absorption facilities. A Thermo Finnigan Trace DSO Gas Chromatography/Mass Spectrometry system with chemical ionization and autosampler, a Glax-Col Soxhlet extraction system, Dionex Summit HPLC with gradient pump and UV detector, a Kodak Image Station 2000MM Multi-Modal high performance digital imaging system and related equipment are available for contaminant hydrology. The High Pressure Laboratory includes a 0-100,000 PSI Harwood intensifier, a Honeywell temperature-regulating system, and a petrographic microscope laboratory. Additional equipment includes access to x-ray diffraction stations, a ZEISS Supra 55VP SEM with a Princeton Gammatech Energy Dispersive Analysis System, EDAX, and Philips DSM 940 Transmission Electron Microscopes. The Geophysics Laboratory is equipped with a 24-channel Strataview engineering seismograph system, an EM-31 electromagnetic ground conductivity meter, a Syscal Kid Switch 24 automated resistivity system, an older Sollist resistivity meter, a Worden student graviometer, and a GSI-197 proton precession magnetometer. In remote sensing, field gear supporting ground measurements for validation of remote sensing datasets concerning terrestrial ecosystem dynamics and the carbon and water cycles is available, as well as an HP XW9400 Workstation for analyzing satellite data. Finally, the Cryosphere Processes Laboratory maintains field equipment, including a Dragonfly remotely controlled helicopter, Ocean Optics and ASD FieldSpec spectrometers, Avaleport Model 106 Current Meter, a Hobo Water Level Data Logger, instruments for measuring snow properties, and a radiometer, for monitoring the melting of ice sheets.

Research

Qualified students are encouraged to become research assistants to faculty, and must complete a capstone research project as part of the major requirements sequence. Many are assisted in their research with support from the CCNY National Oceanic and Atmospheric Administration Cooperative for Remote Sensing Science and Technology (CREST) Center and the CUNY-GISS REU: Global Climate Change. Through an exciting research program with the United States Geological Survey (USGS), up to ten students per summer are supported to perform fieldwork under the direct supervision of USGS scientists. Student fieldwork under this program has been carried out from New Jersey to Massachusetts, with new possibilities being created for throughout the United States. Internships are also available in a variety of earth science disciplines with the NASA Jet Propulsion Laboratory in Pasadena, California.

Departmental Activities

CCNY Geology Club

The Geology Club has meetings during club hours. Meetings include guest lectures, environmental films, and field trips in the NYC area.

Society of Exploration Geophysicists (SEG)

A student chapter of this society has recently been formed, with a focus on the use of geophysics for environmental and engineering applications.

American Meteorological Society

The American Meteorological Society is for students interested in meteorology and its applications. Visits to weather stations are scheduled.

Awards

The Ward Medal

Presented each year to outstanding graduating seniors. For detailed information, see the Guide to City College Prizes, Awards, and Medals in the office of the Chair.

Advisement

For general advisement for all program options:

Professor Patricia Kenyon

MR 933; 212-650-6472

Dr. Angelo Lampousis

MR 046; 212-650-7590

Requirements for Majors

A GPA of 2.0 or higher in the major is required for graduation. The GPA in the major is calculated from courses in the major based in the major department only, and that have been taken at City College or through external program. There have been carried out from New Jersey to Massachusetts, with new possibilities being created for throughout the United States. Internships are also available in a variety of earth science disciplines with the NASA Jet Propulsion Laboratory in Pasadena, California.

The EAS Curriculum comprises a basic set of courses (Non-EAS Science and Math Courses and Earth Sciences Courses for EAS Majors) complemented by 33 credits of elective courses (Electives for Standard EAS Option). The EAS elective set is extensive and is supplemented by special topics courses offered on subjects of interest to students and faculty. Recent special topics courses have included Environmental Site Assessments, Geothermal Resources, and a course on the environmental applications of the MatLab computer program. Under certain circumstances, selected courses from other departments may also be counted toward the major. This option is limited, however, and is approved on a case-by-case basis. Selections from the set of EAS electives are chosen in consultation with either Dr. Lampousis or Professor Kenyon, to ensure a coherent program.

It is recommended that EAS majors complete PHYS 20700-20800, though the PHYS 20300-20400 sequence may be preferred for some students. MATH 20100-20300 is recommended, but MATH 20500-20900 is an acceptable option for some students. Recommendations are on a case-by-case basis.

Standard EAS Option, Leading to a B.S. Degree

All EAS majors in the standard option must complete the Basic Courses for EAS Majors with a grade of at least C in each course and pass 33 credits of courses from the elective list with a C average.

Required Non-EAS Science and Math Courses

Normal Sequence (for most students):

- MATH 20100: Calculus I
- MATH 20200: Calculus II
- MATH 20300: Calculus III
- CHEM 10301-10401: General Chemistry
- PHYS 20700-20800: General Physics

Alternative Sequence (for geobiology):

- MATH 20500: Elements of Calculus
- MATH 20900: Elements of Calculus and Statistics
- CHEM 10301-10401: General Chemistry
- PHYS 20300-20400: General Physics
Basic EAS Courses: 22
EAS 10600: Earth Systems Science (ENGR 10610 also accepted) 4
EAS 21700: ESS: Systems Analysis of the Earth 4
EAS 22700: Structural Geology 4
EAS 30800: ESS: Modeling/Databases 3
EAS 41300: Environmental Geochemistry 3
EAS 472**: Environmental Project 4-6

EAS Electives for Standard EAS Option: 33
EAS 30000: Earth & Environmental Sci. Seminar (2 credits max) 1
EAS 301**-304**: Honors I-IV (EAS301-304+310 =6 credits max.) varie
EAS 30900: Fundamentals of Atmospheric Science 3
EAS 310**: Independent Study (301-304+310 =6 credits max.) varie
EAS 311**-315**: Selected Topics in Earth System Science 3-4
EAS 32800: Global Environmental Hazards 3
EAS 33000: Geographic Information Systems 3
EAS 34500: Hydrology 3
EAS 36500: Coast and Ocean Processes 3
EAS 41700: Satellite Meteorology 3
EAS 43900: Mineral/Energy Resources 4
EAS 44600: Groundwater Hydrology 3
EAS 45000: Environmental Field Methods 3
EAS 48800: Climate Change 3
EAS 52800: Plate Tectonics/Geodynamics 3
EAS 56100: Geophysics 3
EAS 56500: Environmental Geophysics 3
EAS 56600: Solid Earth Geochemistry 3

Up to 9 credits of the 33 credits of electives may come from the non-EAS courses below:
BIO 10100: Biological Foundations I 4
BIO 10200: Biological Foundations II 4
CHEM 261: Organic Chemistry I 3
CHEM 262: Organic Chemistry Lab I 2
CHEM 263: Organic Chemistry II 3
CSC 10200: Introduction to Computing 3
ENGR 30100: Intro. To Satellite Remote Sensing and Imaging 3
ENGR 59910: Geographic Information Systems 3
MATH 39100: Methods of Differential Equations 3
MATH 39200: Linear Algebra and Vector Analysis 3
MATH 37500: Elements of Probability Theory 3
MATH 37600: Mathematical Statistics 4
MATH 37700: Applied Statistics and Probability 3
Total Standard Option Credits: 55

Requirements for a B.A. in EAS
B.A. Science Core 9
Required EAS Courses 22
EAS Electives 24
Total Credits: 55

Requirements for a Minor in EAS
A minor in EAS requires a minimum of 9 credits beyond EAS 10600. These courses are in addition to the science core requirements.

Secondary Education Concentration
Major requirements are listed below. Students must also take one of the sequences of required non-EAS science and math courses listed above. Pedagogical requirements are listed in the Department of Education section of this Bulletin.

Basic Earth Science Courses: 7
EAS 10600: Earth Systems Science 4
ASTR 30500: Methods in Astronomy 3

Required EAS Courses: 18
EAS 21700: ESS: Systems Analysis of the Earth 4
EAS 22700: Structural Geology 4
EAS 30800: ESS: Modeling Data Bases 3
EAS 41300: Environmental Geochemistry 3
EAS 47200: Environmental Project 4
EAS Electives chosen from the list below: 9
EAS 30900: Fundamentals of Atmospheric Science 3
EAS 311**-315**: Selected Topics in Earth System Science 3-4
EAS 32800: Global Environmental Hazards 3
EAS 33000: Geographic Information Systems 3
EAS 34500: Hydrology 3
EAS 41700: Satellite Meteorology 3
EAS 42600: Environmental Remote Sensing & Image Analysis 3
EAS 43900: Mineral and Energy Resources 4
EAS 44600: Groundwater Hydrology 3
EAS 45000: Environmental Field Methods 3
EAS 48800: Climate Change 3
EAS 52800: Plate Tectonics/Geodynamics 3
EAS 56100: Geophysics 3
EAS 56500: Environmental Geophysics 3
EAS 56600: Solid Earth Geochemistry 3
Total Secondary Education Concentration Credits: 34

Additional Requirements

GENERAL EDUCATION REQUIREMENTS ("PATHWAYS")
In general, students are required to complete 42 credits of General Education coursework, with some adjustments for transfer students. See the General Education Requirements (Pathways) section of the Bulletin for more information. Earth and Atmospheric Science students will satisfy their "Pathways" requirements most efficiently by following these recommendations:

Fixed Core
English Composition I: FIQWS
English Composition II: ENGL21003
Mathematical and Quantitative Reasoning: MATH 20100
Life and Physical Sciences: CHEM 10301

Flexible Core
World Cultures and Global Issues: any of CLAS offerings in this category Individual and Society: any of CLAS offerings in this category
U.S. Experience in its Diversity: any of CLAS offerings in this category
Creative Expression: any of CLAS offerings in this category
Scientific World: PHYS 20700
Additional course in Scientific World: CHEM 10401

College Option
Speech 11100, 00380 or exemption on the basis of demonstrated proficiency

Life and Physical Sciences: CHEM 10301

Earth and Atmospheric Science Course Descriptions

Core Earth and Atmospheric Science Courses

EAS 10000: The Dynamic Earth
Basic concepts of geology for non-science majors. The materials, structures, and surface features of the earth, and the processes which have produced them. 3 lect. hr./wk; 3 cr.

EAS 10100: The Atmosphere
An introduction to the processes and phenomena of our atmosphere for non-science majors. Topics include clouds, sky color, greenhouse effect, storms, climates and Ice Ages. 3 lect. hr./wk; 3 cr.

EAS 10300: Environmental Geology
An introduction to the geological aspects of environmental issues and sustainability for non-science majors. Presents the basic concepts of geology, followed by discussion of selected environmental issues, such as mineral and energy production; water supplies and pollution; flooding and erosion; earthquake and volcanic hazards. 3 lect., hr./wk; 3 cr.

EAS 10400: Perspectives of Global Warming
Provides a concise and current view of the factors governing global warming and climate change and its implications for society as a whole. The use of climate models and data analysis build an understanding of the quantitative elements of the climate system and demonstrate how climate change is measured. Topics include: Earth's energy balance, measuring climate change, statistical significance of cycles, natural and anthropogenic sources of climate change, consequences of climate change, and modeling and predicting climate change. This course is recommended for non-EAS majors with an interest in learning the science behind the climate change debate. 3 lect., 1 lab hr./wk; 3 cr.
Advanced Earth and Atmospheric Science Courses

EAS 21700: Systems Analysis of the Earth
Analysis and modeling of the grand cycles and systems in the Earth Sciences, including plate tectonics and climate change, by incorporating the underlying physical, chemical and biological principles. Physical and chemical properties of earth materials are examined. EXCEL and STELLA software are used extensively. Prereq.: EAS 10600, PHYS 20400 or CHEM 10301 or ENGR 10610, or equivalent. 3 lect., 2 lab. hr./wk.; 4 cr.

EAS 30000: Earth and Environmental Science Seminar
Presentations and discussions by faculty and guest speakers on current topics in the area of earth and environmental science. Prerequisite: EAS:10600 or ENGR 10610, or permission of instructor; can be taken twice for credit. 1 hr./wk.; 1 cr.

EAS 301**: 304**: Honors I-V
Research and studies in Earth Systems Science. Approval from the Department required. Apply in MR-106, no later than December 10 in the Fall term or May 1 in the Spring term. Variable cr., usually 3 cr./sem.

EAS 30800: ESS Modeling/Databases
Applications of the principles of ESS to the diagnosis and modeling of global and local environmental problems. Introduction to remote sensing techniques, processing, and analyses of global data sets, and computer models of Earth Systems. Prereq.: EAS 21700, or permission of instructor. (W) 3 lect., 1 lab. hr./wk.; 3 cr.

EAS 30900: Fundamentals of Atmospheric Science
This course is an introductory survey of the field of atmospheric science, with special attention given to atmospheric thermodynamics, dynamics, and weather systems. Atmospheric science is a complex field of study that builds on physics, chemistry and math, hence the prerequisites. This course is intended to provide a solid foundation for students studying earth science and/or environmental remote sensing. Prereq.: MATH 20300 or MATH 20900 (or equivalent) and PHYS 20700 or PHYSICS 20400 (or equivalent), or instructor’s permission. 3 lect hr./wk.; 3 cr

EAS 310**: Independent Study
Individual laboratory, field or library investigation of a problem in Earth Systems Science. Approval of instructor required. 1-4 cr./sem.

EAS 311**-315**: Selected Topics in Earth Systems Science
Current topics and problems with emphasis on aspects not treated in regular courses. Department permission required. 3-4 lect. or rec. hr./wk.; 3-4 cr./sem.

EAS 32800: Global Environmental Hazards
Study of important, naturally-occurring, destructive phenomena, such as earthquakes, volcanic eruptions, landslides and coastal flooding. Long-term causes and remediation of these problems. Topics will focus on consequenc es to urban environments. 3 lect. hr./wk.; 3 cr.

EAS 33000: Phase I Environmental Site Assessments
The purpose of this course is to introduce students to good commercial and customary practices in the US for conducting Phase I environmental site assessments (ESA) of commercial or residential properties with respect to hazardous substances and petroleum products. A Phase I ESA is the process for determining the presence of an existing release, a past release, or a mater ial threat of a release of any hazardous substances or petroleum products into the ground, ground water, surface water of the property, or into structures on the property. 3 hr./wk.; 3 cr.

EAS 33400: Phase II Environmental Site Assessments
The purpose of this course is to introduce students to good commercial and customary practices in the United States of America for conducting Phase II environmental site assessments (ESA). A Phase II ESA is an evaluation process for confirming and quantifying the presence of hazardous substances or petroleum products in environmental media (i.e., soil, rock, groundwater, surface water, air, soil gas, sediment) throughout a contaminated site. A Phase II ESA typically includes a determination through field screening and chemical testing of the geological, hydrogeological, hydrological, and engineered aspects of the site that influence the presence of hazardous substances or petroleum products (e.g., migration pathways, exposure points) and the existence of receptors and mechanisms of exposure. Students are automatically enrolled in the 40-hour OSHA HAZWOPER (Hazardous Waste Operations and Emergency Response Standard) certification program which applies to employees who are engaged in clean-up operations that are conducted at uncontrolled hazardous waste sites. Prerequisite: EAS 33300 or permission of instructor. 3 hr./wk.; 3 cr.

EAS 33450: Hydrology
Introduction to hydrological data, the hydrologic cycle. Precipitation, streamflow, evaporation, and runoff. Emphasis is on their interactions and processes. Prereq.: MATH 20300 or MATH 20900, PHYS 20800 or PHYS 20400, and EAS 10600 or ENG 10610, or permission of instructor. 3 lect. hr./wk.; 3 cr.

EAS 33500: Coast and Ocean Processes
Principles governing the atmosphere-land-ocean-biosphere interactions in coastal environments. Topics include: coastal dynamics, bathymetric features, sea-level change, wave formation, physicochemical properties of the ocean; coastal biogeochemical processes; remote sensing observations (land-atmosphere-ocean); coastal urbanization; atmospheric pollution and impacts on coastal ecosystems; coastal acidification; eutrophication; coastal hazards; human impacts & management of coastal zones. Prereq.: EAS 10600 or BIO 10200, or permission of instructor. 3 lect. hr./wk.; 3 cr.

EAS 41300: Environmental Geochemistry
A traditional geochemistry survey course that emphasizes earth science considerations. The survey includes groundwater systems, the ocean system, carbon-silicon cycle relative to these systems, stable and radioiso tope geochemistry, trace metal distribution theory and applications, and an introduction to igneous and metamorphic petrology. Prereq.: EAS 21700, or permission of instructor; pre- or co-req. CHEM 10401. (W) 3 lect. hr./wk.; 3 cr.

EAS 41700 Satellite Meteorology
Satellites have become an increasingly important tool for studying and mon itoring the Earth’s weather and climate. Topics include orbits of meteorolo gical satellites, instruments they carry, fundamentals of atmospheric radia tion and remote sensing, meteorological parameters that can be retrieved from satellites, and applications. Matlab is used to analyze satellite data. Prereq.: MATH 20300, and PHYS 20800, or permission of instructor. 3 hr./wk.; 3 cr.

EAS 42600: Environmental Remote Sensing and Image Analysis
Remote sensing of the environment is a course devoted to the study of earth system interactions through downloading and manipulating satellite data. The course reviews the historical creation of satellite platforms, current us ages of satellite data in the earth sciences, and emphasizes image analytical techniques used to highlight important data sets. Lecture and laboratory work emphasizes the use of Interactive Data Language (IDL) programming to perform image manipulations. Prereq.: undergraduate course in computer science or permission of instructor. 3 lect. hr./wk.; 3 cr.

EAS 43000: Sedimentology
Composition, texture, classification, depositional setting, provenance and correlation of sediments and sedimentary rocks; identification of common environments of deposition. Study of global and local formations to explore stratigraphic nomenclature, facies relationships and correlation of sedimen tary sequences. Course includes a field trip to local outcrops to observe sed imentary rocks and facies and identify depositional paleoenvironments. Prerequisite: EAS 10600, 3 hr./wk.; 3 cr.

EAS 44600: Groundwater Hydrology
Occurrence of groundwater. Basic equations and concepts of groundwater flow. Flow nets. Methods of groundwater investigation. Prereq.: MATH 20300 or MATH 20900, and PHYS 20800 or PHYS 20400, and EAS 10600 or ENG 10610, or permission of instructor. 3 lect. hr./wk.; 3 cr.

EAS 44800: Terrestrial, Aquatic and Atmospheric Systems
Overview of critical Earth systems and their interrelationships; Lecture comp onent places environmental issues in an ecological framework; Hands-on laboratory component introduces concepts and methods used in Earth syst em analysis with emphasizes in sustainable management of aquatic, terres trial atmospheric systems. Data set analysis tasks are assigned and student presentations are given throughout this class. Prerequisite: EAS 10600 or ENGR 10610 or permission of instructor. 6 hr./wk.; 4 cr.

EAS 45000: Environmental Field Methods
This course introduces basic field concepts and applications related to the environmental evaluation of water, soil, and sediment quality. It focuses on various environmental sampling and monitoring techniques, laboratory chemical analyses, and data reporting. Topics will include surface/ground water sampling, soil sampling, sediment sampling, stream gauging, groundwater level monitoring, monitoring well installation, etc. The class consists...
of lectures, field trips, and labs. Each student will prepare field reports, and carry out a small project of his/her choice. Prereq.: CHEM 10401, PHYS 20800, and EAS 44600, or permission of instructor. 3 hrs./wk; 3 cr.

EAS 472**: Environmental Project
Senior-level capstone research project utilizing laboratory, remote sensing, and/or field data, in combination with associated measurement techniques and analysis tools to address a problem in the geosciences selected with a faculty mentor. Upon completion, students are required to write an in-depth scientific report and make an oral presentation of their work to the faculty. Course may be taken over two semesters. Prereq.: EAS 21700 and EAS 22700; Coreq.: EAS 30800, and permission of instructor. 4-6 credits (minimum 4 credits in total).

EAS 48800: Climate Change
This course links processes and interactions of the atmosphere, ocean, and solid earth and their impact on climate and climate change. Topics include the physical principles of climate; climates of the past and present; Ice Age theories; the Greenhouse Effect; and human impact on climate. Prereq.: EAS 10100 or EAS 10600; one semester of college math. 3 lect. hr./wk; 3 cr.

EAS 52800: Plate Tectonics/Geodynamics
This course treats the processes that change the face of the earth. It includes the concepts of mantle convection, continental drift, and ocean/continental plate theory. The plate tectonic model explains global distributions of earthquakes, volcanoes, and mineral deposits, and long-term climate patterns. Prereq.: EAS 10600 and EAS 22700. 3 lect. hr./wk; 3 cr.

EAS 56100: Geophysics
This course covers the physical principles that govern the behavior and techniques used to infer the earth's internal structure, composition, and mineral resources. It provides earth scientists and engineers with the techniques to determine earth structures, locate environmental pollutants, and prospect for natural resources from remote locations. Topics include: seismology, geodesy, gravity, magnetics, and thermal properties of the earth. Prereq.: EAS 10600 and PHYS 20800. 3 lect. hr./wk; 3 cr.

EAS 56500: Environmental Geophysics
The application of geophysics to environmental and engineering problems. Hands-on work and demonstrations on seismic, electrical, electromagnetic and magnetic instruments and techniques. Survey design and execution. Computer analysis of survey results. Prereq.: MATH 20100 or MATH 20500. 3 lect., hr./wk; 3 cr.

EAS 56600: Solid Earth Geochemistry
Deep earth involvement in Earth Systems Science: plutonism and volcanism; isotopic age dating; non-radiogenic isotope systematics; and trace metal characteristics of evolving earth systems. Course introduces petrography and x-ray fluorescence. 3 lect. hr./wk; 3 cr.

Graduate Courses Open to Undergraduates
Qualified undergraduate students may take, with permission of department, courses available in the Master's Program in Earth Systems Science (see Graduate catalogue) or at Lehman College or other CUNY campuses.

Faculty
Karin Block, Assistant Professor
A.B., Univ. of Michigan; M.Phil., CUNY; Ph.D.

James Booth, Assistant Professor
B.S., Univ. of North Carolina, Chapel Hill; M.S., Univ. of Kentucky; Ph.D., Univ. of Washington

Patricia Kenyon, Associate Professor
B.S., Rensselaer Polytechnic Inst.; Ph.D., Cornell Univ.

Steven Kidder, Assistant Professor
B.S., Univ. of Minnesota; M.S., Univ. of Arizona; Ph.D., California Inst. of Technology

Zhengzhao Johnny Luo, Associate Professor
B.S., Peking Univ. (China); M.Phil., Columbia Univ., Ph.D.

Kyle McDonald, Professor
B.E.E., Georgia Inst. of Technology; M.S., Johns Hopkins Univ.; M.S., Univ. of Michigan, Ph.D.

Marco Tedesco, Associate Professor
M.E., University of Napoli ‘Federico II’; Ph.D., Institute of Applied Physics ‘Carrara’ and The Univ. of Potenza.

Maria Tzortziou, Associate Professor
B.S., Aristotle Univ. (Greece), M.Sc.; M.S., Univ. of Maryland, Ph.D.

Zhengrong Wang, Associate Professor
B.S., Univ. of Science and Technology of China, M.S.; Ph.D., California Inst. of Technology

Pengfei Zhang, Professor and Chair
B.S. Univ. of Science & Technology of China; M.S., Montana Tech of the Univ. of Montana; Ph.D., Univ. of Utah

Professor Emeritus
Stanley Gedzelman
Edward Hindman
Margaret Anne Winslow