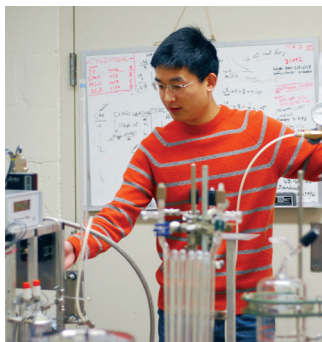


Why study Atmospheric Sciences at SoMAS?



Atmospheric Sciences use mathematics, physics, chemistry, and computer science to study the behavior of the earth's atmosphere. Atmospheric Sciences encompass a wide variety of topics such as weather forecasting, climate change, air pollution and chemistry, radiative transfer, air-sea interactions, remote sensing, and boundary layer

processes.

SoMAS provides a very attractive and stimulating academic environment to all of our graduate students. This includes a special seminar series in which distinguished scientists around the world are invited every week to present their latest work and to have discussions with the students.

All faculty members of the Institute have very active research projects. These projects are funded by the National Science Foundation (NSF), the U.S. Department of Energy (DOE), the National Aeronautics and Space Administration (NASA), the National Oceanic and Atmospheric Administration (NOAA), the U.S. Navy, and other sources. Almost all graduate students in the Institute are supported by these research projects while working toward a M.S. or a Ph.D. Degree.

In addition to in-house computing facilities, our graduate students have access to Stony Brook's Blue Gene supercomputer



Graduate Advisors

Edmund K.M. Chang

Atmospheric dynamics and diagnoses, climate dynamics, synoptic meteorology
kmchang@notes.cc.sunysb.edu

Brian A. Colle

Synoptic meteorology, mesoscale numerical modeling and forecasting, coastal meteorology
colle@cyclone.msrc.sunysb.edu

Marvin A. Geller

Atmosphere dynamics; stratosphere/mesosphere; climate
mgeller@notes.cc.sunysb.edu

Sultan Hameed

Climate change: analysis, impacts, and predictability
shameed@notes.cc.sunysb.edu

Marat Khairoutdinov

Climate modeling, high-resolution cloud modeling, cloud microphysics, super-parameterization, massively parallel super-computing, cloud parameterization
mkhairoutdin@ms.cc.sunysb.edu

Daniel A. Knopf

Atmospheric chemistry, microphysics and chemistry of atmospheric aerosols, heterogeneous atmospheric chemistry and kinetics
Daniel.Knopf@stonybrook.edu

John E. Mak

Stable and radioisotopes as tracers of chemistry, origin, and transport in marine and atmospheric environments
jemak@notes.cc.sunysb.edu

Ping Liu

Climate Modelling, Climate Dynamics
ping.liu@stonybrook.edu

Minghua Zhang

Climate modelling, atmospheric dynamics
mzhang@notes.cc.sunysb.edu

Research Topics

While all SoMAS students are strongly encouraged to develop their own thesis projects, they are also welcome to choose topics that are close to faculty research interests, which include:

Global Warming and Human Impact on Climate

Climate Modeling

Weather Analysis and Forecasting

Atmospheric Chemistry

Atmospheric Dynamics

Atmospheric Radiation

Cloud Climate Interactions

Ozone Depletion

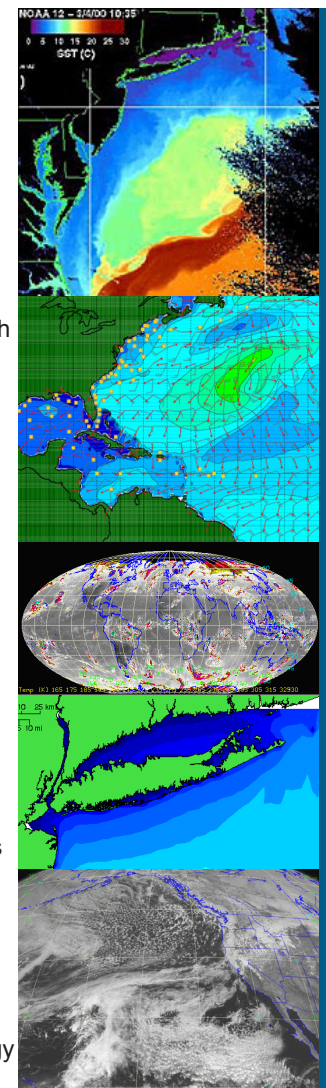
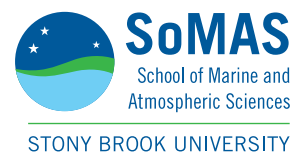
Planetary Atmospheres

The Interaction Between Climate and Marine Biology

Isotope Analysis

Remote Sensing

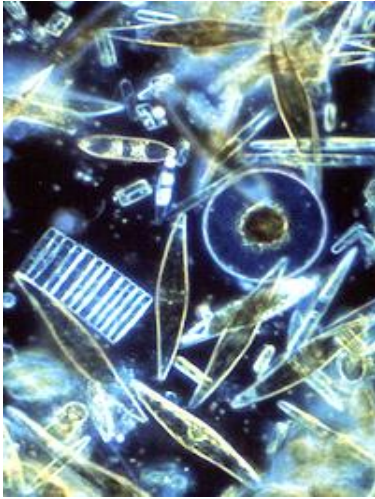
Data Assimilation



From top to bottom:
Sea-surface temperatures of the Gulf Stream and coastal ocean from the USB-BNL polar orbiting satellite receiving station. Wave height, wind speed, and peak direction in the Western North Atlantic from the WW3 forecast. Enhanced composite global infrared satellite imagery. Wave heights from the SWAN forecast. GOES-West enhanced visible satellite imagery.

School of Marine & Atmospheric Sciences

The School of Marine & Atmospheric Sciences (SoMAS) offers an M.A. in Marine Conservation and Policy and M.S. and Ph.D. degrees in Marine and Atmospheric Sciences. Our graduate programs emphasize interdisciplinary approaches to solving problems and understanding basic processes at local to global scales. Ranked 6th out of 50 programs reviewed in the recently released NRC assessment of research doctorate programs in the U.S., SoMAS offers excellence in graduate training in Marine and Atmospheric Sciences.



M.A. in Marine Conservation and Policy

This new program provides students with an understanding of contemporary marine conservation and policy issues and helps them develop the necessary skills to apply this knowledge in marine conservation positions that require advanced training and a broad skill-set, but are not research-based. Students take courses in 6 skill areas: 1) marine science, 2) marine conservation biology, 3) marine management, economics, policy or law, 4) communications, 5) quantitative data analysis, and 6) field biology, and then complete either an internship or capstone project. Designed to be completed in 1 calendar year, students are expected to cover their own tuition and living costs.

M.S. or Ph.D. in Marine and Atmospheric Sciences

These research based programs offer students the opportunity to conduct research in the diverse environments contiguous to Long Island and at locations around the world. Students enter either the Marine or Atmospheric Sciences tracks, and in addition to a rigorous set of coursework complete an independent research thesis (M.S. students) or dissertation (Ph.D. students). Most students receive full tuition scholarships and teaching or research assistantships. Interdisciplinary areas of research focus include: 1) environmental modeling and prediction, 2) patterns and impacts of climate change, 3) environmental health and contaminants, 4) conservation and management of marine resources, and 5) biogeochemical transformation of energy and elements. Students may also choose to concentrate on research in the traditional disciplines of atmospheric sciences, biological oceanography and marine biology, chemical oceanography, geological oceanography, and physical oceanography. Students are encouraged to contact prospective advisors before submitting their applications. It is not necessary to have a M.S. to apply directly to the Ph.D. program.

Graduates of SoMAS embark on rewarding careers in government, industry, academia, consulting, and not for profit groups. With 50 faculty and 125 graduate students, SoMAS is a thriving place. For more information, visit our web site

<http://www.somas.stonybrook.edu/>

Or contact Dr. Anne McElroy, Graduate Program Director
School of Marine & Atmospheric Sciences, Stony Brook University,
Stony Brook, NY 11794-5000. 631-632-8488..

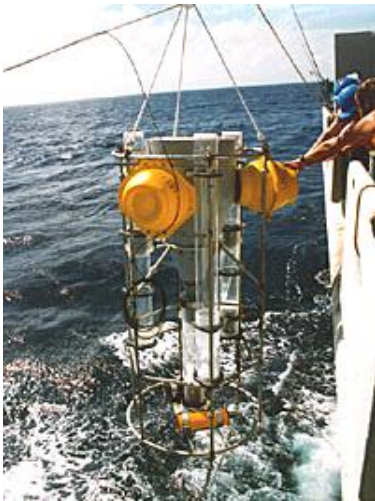


Photo: Ian Stupakoff