EUFAR TRAINING COURSE

EASI

Exploring Air-Sea Interaction via Airborne Measurements

Shannon, Ireland
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TRAINEE PHOTOBOOK

Nancy ALVAN ROMERO
NALVANR@GMAIL.COM

NATIONALITY: Italian
INSTITUTE, CITY/TOWN, COUNTRY: ISAC-CNR, ROME, ITALY
EDUCATION: STAGE - RESEARCHER

RESEARCH EXPERIENCE: Environmental Pollution

Ana Álvarez Piedehierro
PIEDEHIERRO@UNEX.ES

NATIONALITY: Spanish
INSTITUTE, CITY/TOWN, COUNTRY: Universidad de Extremadura, Badajoz, Spain
EDUCATION: PhD Physics, MD Geophysics and Meteorology, Physics degree

RESEARCH EXPERIENCE:
"My research field has been ultraviolet (UV) radiation so far. I focused on multifilter UV radiometers such as NILU-UV or GUV instruments but I have also used broadband radiometers. I have covered the complete process regarding monitoring UV radiation: from calibration (laboratory and outdoors comparison campaigns) to installation and maintenance, collecting data, analyzing, development of calibration methodologies and implementation of procedures for retrieving derived variables such as UV dose rates and total ozone amount. I have performed radiative transfer modeling as well since it is needed for calibration purposes and for retrieving derived products. I am a bash and R user and Fortran gives me a hand from time to time.
I have experience managing and maintaining the Southwestern Spain solar radiation monitoring network. I also have knowledge on running a standard meteorological station, including broadband radiometric instruments: pyranometers (global and diffuse), pyrgeometers and pyrheliometers. In addition, I am familiar with the usage of an «all sky camera», CIMEL sunphotometer and a Jenoptik laser ceilometer.
I am currently working on CCD array spectrometers in order to measure high quality solar spectra in the UV and visible bands"

Bruna Amorim Holanda
B.HLANDA@MPIC.DE

NATIONALITY: Brazillian
INSTITUTE, CITY/TOWN, COUNTRY: Max Planck Institute for Chemistry, Mainz/Germany
EDUCATION: Physics

RESEARCH EXPERIENCE: Atmospheric Science, Aerosol, Amazon rainforest, black carbon, Aircraft and ground based in-situ measurements

Simone Brunamonti
SIMONE.BRUNAMONTI@ENV.ETHZ.CH

NATIONALITY: Italian
INSTITUTE, CITY/TOWN, COUNTRY: Institute for Atmospheric and Climate science (IAC), ETH Zürich, Switerland
EDUCATION: MSC in Atmospheric and Climate science at Institute for Atmospheric and Climate science (IAC), ETH Zürich, Switerland (2014), BSC in Physics at Università degli studi Roma Tre, Roma, Italy (2011)

RESEARCH EXPERIENCE:
"I am currently a PhD student, and I am working on the impact of the Asian summer monsoon on the composition of the upper troposphere - lower stratosphere, with focus on water vapor, aerosol and clouds. I am collaborating with the EU-StratoClim project, for which we are performing in-situ (balloon-borne) measurements of water vapor, ozone and aerosols from a high-altitude station in Northern India. Previously, I worked on the physical and optical properties of black carbon-containing aerosol particles, using Raman spectroscopy on micrometer-sized droplets containing organic/inorganic mixtures"

Damyan Barantiev
DAMYAN.BARANTIEV@METEO.BG

NATIONALITY: Bulgarian
INSTITUTE, CITY/TOWN, COUNTRY: National Institute of Meteorology and Hydrology - Bulgarian Academy of Sciences (NIMH – BAS), Sofia, Bulgaria
EDUCATION: Doctor of Philosophy (PhD) in Scientific field: "Remote Sensing of Earth and Planets", NIMH-BAS, Section of Applied Meteorology at the Department of Meteorology

RESEARCH EXPERIENCE:
> Maintain operating mode, backup and data processing of Scintec MFAST Sodar system for acoustic sounding of the atmosphere and an automatic weather station with three-dimensional acoustic anemometer located in Ahtopol (international project between Bulgaria and Russia).;
> Creating, processing and analysis of 2-D, 3-D and 4-D database of remote and ground measurements of meteorological elements in the atmosphere.
> Study the structure of the coastal boundary layer by acoustic remote measurements in Ahtopol - studying of wind and turbulent characteristics of Atmospheric Boundary Layer (ABL) and local circulations in coastal regions through surface and ground-based remote sensing measurements in the atmosphere.;
> Practical experience in the fields of acoustic waves in the turbulent atmosphere, vertical profiles of the wind and turbulent parameters, day and night atmospheric boundary layer.;
> Theoretical knowledge on surface layer, mixing height, internal boundary layer, vertical profiles of temperature, Ceilometers, Doppler lidars, Microwave radiometers and Sodar systems, SAR technology, Meteorological balloons and Radars

Philipp Gasch
PHILIPP.GASCH@KIT.EDU

NATIONALITY: German
INSTITUTE, CITY/TOWN, COUNTRY: IMK-TRO, Karlsruhe Institute of Technology, Karlsruhe, Germany
EDUCATION: Phd student, MSc in Meteorology, MA in Environmental Studies

RESEARCH EXPERIENCE: Airborne measurements of turbulent fluxes, Lidar measurements, Aerosol modelling, Aerosol radiative effect

Teresa Jorge
TERESA.JORGE@ENV.ETHZ.CH

NATIONALITY: Portuguese
INSTITUTE, CITY/TOWN, COUNTRY: IAC ETH Zürich, Zürich, Switzerland
EDUCATION:
IST - Instituto Superior Técnico de Lisboa, Lisbon, Portugal
KIT – Karlsruhe Institute of Technology, Karlsruhe, Germany
Grenoble INP, Grenoble, France

RESEARCH EXPERIENCE: Intern in Steam Turbines Research and Development in Alstom Switzerland –2014
Intern in Sensor Technologies in ABB Research Center in Switzerland – 2015
PHD Student in Atmospheric Chemistry in ETH Zürich for the development of a Balloon Borne Peltier Cooled Frost Point Hygrometer – since 2015
Participant/organizer of StratoClim Balloon Campaign in Nainital, India – 2016 and 2017

Jacek Kopeć
JKOPEC@ICM.EDU.PL

NATIONALITY: Polish
INSTITUTE, CITY/TOWN, COUNTRY: Interdisciplinary Centre for Mathematical and Numerical Modelling, University of Warsaw, Warsaw, Poland
EDUCATION: PhD student (M.Sc in physics)

RESEARCH EXPERIENCE:
> Participated/participate in few R&D projects (4 of them as project manager)
> Participated in two airborne campaigns but never handled on board activities
> Experience in lab work (hydrodynamics)
> Experience with NWP modeling
> Experience with airborne data processing

Hanna Lokys
HANNA.LOKYS@UNI-MUENSTER.DE

NATIONALITY: German
INSTITUTE, CITY/TOWN, COUNTRY: University of Münster, Institute of Landscape Ecology, Münster, Germany
EDUCATION: PhD in Landscape Ecology

RESEARCH EXPERIENCE: Eddy Covariance, Micrometeorology, Epidemiology, Ecology

Konstantinos Matthaios Doulgeris
KONSTANTINOS.DOULGERIS@FMI.FI

NATIONALITY: Greek
INSTITUTE, CITY/TOWN, COUNTRY: Finnish Meteorological Institute, Helsinki, Finland
EDUCATION: Phd student

RESEARCH EXPERIENCE: Junior Researcher

Jakub Nowak
JNOWAK@IGF.FUW.EDU.PL

NATIONALITY: Polish
INSTITUTE, CITY/TOWN, COUNTRY: Institute of Geophysics, University of Warsaw, Poland
EDUCATION:
2016 – now   PhD student
2014 – 2016   MSc. in Atmospheric Physics
2011 – 2014   BSc. in Physics

RESEARCH EXPERIENCE:
> High-frequency temperature measurements, influence of turbulence on droplet distribution
> MSc. thesis: Holographic measurements of cloud droplets at cloud edge in a laboratory chamber
> BSc. thesis: Fast optoelectronic hygrometer

Panagiotis Portalakis
PPORTAL@PHYS.UOA.GR

NATIONALITY: Greek
INSTITUTE, CITY/TOWN, COUNTRY: UOA, Athens, Greece
EDUCATION: Ph.D Candidate

RESEARCH EXPERIENCE: Scientific Partner in the Group of Numerical Applications in the Atmosphere University of Athens, Department of Physics

Maria Razi
MARIA.RAZI@MPIC.DE

NATIONALITY: Pakistani
INSTITUTE, CITY/TOWN, COUNTRY: Max Planck Institute for Chemistry, Mainz, Germany
EDUCATION: Phd student

RESEARCH EXPERIENCE: Car MAX-DOAS measurements / Tropospheric trace gas monitoring

Antonio Ricchi

ARICKY84@GMAIL.COM

NATIONALITY: Italian
INSTITUTE, CITY/TOWN, COUNTRY: Marche Polytechnic University, Italy
EDUCATION: Phd Student, Master's Degree Science and Technology of Navigation (Degree Course: Climate Science)

RESEARCH EXPERIENCE:
"My main field of study concerns the physical oceanography and meteorology and oceanographic modeling. The studies until now have dealt with heat and momentum fluxes at the air/sea interface and on the processes of interaction between wave/current and sediment transport induced by the interaction and coastal structures such as submerged barriers, piers and ports. The models used in my studies are predominantly 'community' at finite difference (WRF-ARW, WRF-NMM, ROMS, ROMS-Agrif, COAWST, MIKE-3D) and spectral wave numerical model SWAN. During my studies I have considerably deepened the IT aspects of numerical modelling (from building cluster HCP to optimizing the source code of the numerical models in order to get a better performance computing) and physical aspects (with great attention to all flux interface and the components that characterize them as waves, SST, and surface atmospheric fields) and the transport of suspended sediment, cohesive and non-cohesive and the evolution of the shoreline .The numerous oceanographic survey they made me to know in detail the datasets used by the models (such as the multibeam data, backscatter, CTD, turbulence, etc XBT in pre and post processing in various formats such as netcdf, grib, grib2, dat etc). The activities are principally focused on where I am: - Modeling of coastal processes and nearshore, as the effect of currents, wind and waves on the mobilization of sediments and the impact on transport. Modeling tools used are ROMS, the suite COAWST, The meteorological model WRF (Weather Research and Forecasting System) model SWAN. -For Personal knowledge of hydrostatic high-resolution numerical models have thorough knowledge and practical use of numerical model MIKE 3D with whom I performed numerical simulations of coastal sediment transport in evaluating the depending of circulation and wave with different configurations of coastal structures such as submerged barriers and, piers and ports. - For my thesis I studied the technical and scientific knowledge on how the numerical models that interest me. Specifically, I worked with the COAWST model. This model that comprises ROMS, WRF, SWAN and, coupled with MCT (Model Coupling Toolkit). - I studied the processes of interaction between atmosphere, ocean and waves, through a study of the heat and momentum fluxes and the various techniques of analysis and modeling of air fluxes at sea interface".

Guadalupe Sanchez Hernandez

GUADALUPESH@UNEX.ES

NATIONALITY: Spanish
INSTITUTE, CITY/TOWN, COUNTRY: University of Extremadura, Badajoz, Spain
EDUCATION:
> B. S. in Physics
> M. S. in Research in Physics
> PhD. In Physics (public defense 20/June/2017)

RESEARCH EXPERIENCE:
"I received my B.S. in Physics in 2009 from the University of Salamanca and my M.S. in Physics in 2010 from the University of Extremadura. From 2009-2012, I worked at the AIRE research group at the Physics Department of the University of Extremadura, being supervised by Dr. Antonio Serrano and Dr Mª Luisa Cancillo. In 2012, I got a fellowship (grant) from the Spanish government to develop my Doctoral Thesis as a PhD Student within the AIRE research group.
My Doctoral Thesis is focused on the improvement of total and ultraviolet diffuse solar irradiance estimation, both regarding experimental corrections to the measurements and its modelling. This study analyzes the most important sources of error affecting the process of measuring diffuse solar radiation, such as the thermal offset of the radiometer and the use of shadow rings to block the

direct component. Additionally, innovative models are proposed to estimate the diffuse ultraviolet irradiance in locations where experimental measurements are not available. The main results derived from these studies have been published in ten papers and seventeen conference contributions. In addition to the studies mentioned above, through these last years I have participated in several activities which also contributed to my development as a researcher. Among these activities I would highlight:
1) two short stays of three months each at Goddard Space Flight Center (NASA, USA) working with Dr. Tamas Varnai and Dr. Alexander Marshak on simulating solar radiation under different cloudiness conditions with 3D radiative transfer models. During my second stay I also worked on the analysis of the first EPIC camera images, installed in the DSCORV satellite.
2) four calibration campaigns of ultraviolet and total broadband radiometers held at the Atmospheric Sounding Station of the National Institute for Aerospace Techniques (ESAt/ INTA) located at "El Arenosillo," Huelva, Spain in 2009, 2011, 2013 and 2015".

Gintautas Stankūnavičius
GINTAS.STANKUNAVICIUS@GF.VU.LT

NATIONALITY: Lithuanian
INSTITUTE, CITY/TOWN, COUNTRY: Institute of Geosciences, Vilnius University, Vilnius, LITHUANIA
EDUCATION:
Ph.D. (2000) Vilnius university, Department of Hydrology and Climatology
M. S. (1990) Vilnius university, Physical Geography

RESEARCH EXPERIENCE:
> Associated professor. 2002 – Present. Vilnius university, Department of Hydrology and Climatology
> Lecturer. 2000 – 2002. Vilnius university, Department of Hydrology and Climatology.
> Visiting researcher. 2004/5. Warsaw university (Poland), Institute of Geophysics.
> Visiting researcher. 2009. Lodz university (Poland), Faculty of Geography.
> Visiting researcher. 2011. Daugavpils university (Latvia), Institute of Ecology

Krisna Trismono Candra
TRISMONO_CANDRA.KRISNA@UNI-LEIPZIG.DE

NATIONALITY: Indonesian
INSTITUTE, CITY/TOWN, COUNTRY: Leipziger Institut für Meteorologie, Universität Leipzig, Deutschland
EDUCATION: PhD

RESEARCH EXPERIENCE: Airborne and Satellite Remote Sensing for Clouds

Pamela Trisolino
PAMELA.TRISOLINO@ENEA.IT

NATIONALITY: Italian
INSTITUTE, CITY/TOWN, COUNTRY: Tuscia University and ENEA, Rome, Italy
EDUCATION: Graduated in Conservation of Nature (Degree class: Sciences and Technology for the Environment and the Territory)

RESEARCH EXPERIENCE:
> 11/2014 – now : doctoral course in Ecology and Sustainable Management of Environmental Resources at Laboratory for Observations and Analyses of Earth and Climate, ENEA (Rome, Italy)
> 02/2013 – 04/2013 : fellowship holder at Ichthyogenic Experimental Marine Centre (CISMAR), Tarquinia (Viterbo, Italy)
> 09/2012 – 01/2013: Department for Innovation in Biological, Agro-food and Forest systems (DIBAF), Viterbo, Italy
> 08/2012 – 12/2014: Cetacen observer (Accademia del Leviatano Onlus, Mediterranean Sea)

Tobias, Wolf-Grosse
TOBIAS.WOLF@NERSC.NO

NATIONALITY: German
INSTITUTE, CITY/TOWN, COUNTRY: Nansen Environmental and Remote Sensing Center (NERSC), Bergen, Norway
EDUCATION:
> BSc Physics, TU Darmstadt, Germany
> MSc Geosciences/Meteorology, University of Oslo, Norway
> PhD Meteorology, University of Bergen, Norway

RESEARCH EXPERIENCE:
> Large Eddy Simulations
> Ground Based Microwave Remote Sensing
> Urban air pollution
> FLEXPART
> WRF-Chem

Lichuan Wu

TOBIAS.WOLF@NERSC.NO

NATIONALITY: Chinese
INSTITUTE, CITY/TOWN, COUNTRY: Uppsala University, Uppsala, Sweden
EDUCATION: Ph.D

RESEARCH EXPERIENCE: Surface wave impact on air-sea interaction