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Newsletter 2010-2 of the European Severe Storms Laboratory e. V. (ESSL)

In Memoriam Nikolai Dotzek

The ESSL is bemoaning its highly respected colleague, friend and director who suddenly and unexpectedly passed away on May 29 2010 after a cardiac arrest. He is survived by his wife and two sons. Here, we want to draw attention to his great professional achievements.

Nikolai Dotzek, born in 1966 in Bad Hersfeld, Germany, studied meteorology at the University of Karlsruhe where he graduated (diploma) in 1993 with a thesis on direct numeric simulation of turbulent Rayleigh-Bénard convection in 2D and 3D. From 1994 to 1999 he worked as a researcher at the Institute of Meteorology and Climate Research in Karlsruhe, first on wind energy assessment using mesoscale models (in the group of Prof. Fiedler) and later in Prof. Beheng's group on mesoscale modelling of convective clouds over complex terrain for which he received a Ph. D. degree in natural sciences.



In 1999 he moved to the Institute of Atmospheric Physics of the DLR (German Aerospace Center) in Oberpfaffenhofen working on cloud physics, polarimetric radar, lightning, severe storms, satellite and tropical meteorology. As a scientist and member of the management team of the international research projects QUANTIFY and ATTICA, Nikolai Dotzek rapidly became a well-known and highly valued colleague within the community working on transport impacts on atmosphere and climate. Later, he became the project coordinator of the BMBF klimazwei project RegioExAKT and a contributing author to Working Group I of the 4th IPCC Assessment Report 2007.

Lead by his vivid interest in local severe storms, Nikolai Dotzek has made a name above all on his research work on convective storms and extreme weather events, and on tornadoes in particular. In 1997 he founded the network TorDACH which collected information on local severe weather events in Germany (D), Austria (A), and Switzerland (CH). The data set collected by this network - the first in Central Europe after the pioneering but not continued work of Alfred Wegener and Johannes Letzmann in the first half of the 20th century - was a precursor of today's pan-European ESWD (European Severe Weather Database). Supported by a DLR fellowship Nikolai Dotzek visited the Storm Prediction Center (SPC), Norman, Oklahoma in 2002 to work on the proposal for a European Severe Storms Laboratory (ESSL). Upon his initiative, this vision became reality in 2006 when the ESSL was founded as a legal body with him as its first director. Since, the ESWD has been developed further within the ESSL and now comprises more than 26000 entries of severe weather events. In 2007, he was invited by the German Committee for Disaster Reduction to give a talk on a proposed concept of a European Storms Prediction Center.

During his scientific career Nikolai Dotzek published 29 papers in peer-reviewed journals, about 2/3 of them lead-authored; 5 more have been recently submitted. Additionally, he has presented his work at numerous conferences and contributed to several books, reports and monographs. He was one of the most important promoters of the series of European Conferences on Severe Storms (ECSS). Under his direction, the last and very successful ECSS conference was organized in October 2009 in Landshut. Since 2007, he has given lectures at Freie Universität Berlin on radar meteorology and extreme convective phenomena in preparation of his habilitation.

At the time of his unexpected death, Nikolai was in the midst of several exciting projects. His contribution to severe storms research in Europe and beyond is invaluable. As a person gifted with an exceptional skill to inspire people he will be missed by all those whom he inspired and who were looking forward to so much more to come from him. His memory will undoubtedly serve as a model and encouragement for many in the future.

Bernold Feuerstein, Pieter Groenemeijer and Alois Holzer.

Because the ESSL was Nikolai's life work, it is the wish of his family that you make a donation to the ESSL rather than bringing funeral flowers. Payment details can be found here: <http://www.essl.org/contact.htm>

ESSL General Assembly 2010

This year's ESSL General Assembly (GA) is going to be held during the 2010 Annual Meeting of the European Meteorological Society on 14 September 2010, 8 p.m. at the ETH main building in Zürich, Switzerland. The preceding afternoon session on Atmospheric hazards on Tuesday, 14 September will be dedicated to Nikolai Dotzek. We cordially invite the ESSL members present at the EMS meeting to attend this memorial session which will be chaired by Pieter Groenemeijer and Alois M. Holzer. The invitation including the agenda will be sent out this week. Besides formal topics, the assembly will focus on the future perspectives of the ESSL including some amendments to the Articles of Association, the election of a new extended Executive Board and of a new Advisory Council member. More details will be attached to the invitation letter. The Advisory Council meeting will be held at 7 p.m. prior to the GA. General information on the 10th EMS Annual Meeting and the 8th European Conference on Applied Climatology (ECAC) can be found here:

<http://meetings.copernicus.org/ems2010/>



European Conference on Applied Climatology
EMS Annual Meeting
13 - 17 September 2010
Zurich, Switzerland

EMS
European Meteorological Society

ESSL Executive Board (EB)

The growing number of tasks requires a broader Executive Board which should concentrate on science and management. The proposed new constitution of the Executive Board is the following:

EB Member

Director
Deputy Director
Deputy Director
Deputy Director
Treasurer

Prospective Candidate

Dr. Pieter Groenemeijer*
Dr. Aurora Bell
Dr. Bernold Feuerstein*
Dr. Victor Homar Santaner
Mr. Alois M. Holzer*

*) Member of the present Executive Board

According to the Articles of Association the EB members shall be elected by the General Assembly upon recommendation of the Advisory Council.

The exact allocation of tasks is carried out among the members of the Executive Board. Omitting the technical Director as an Executive Board member creates the opportunity to assign technical tasks to any ESSL full member, or to hire a professional technician who may not necessarily be an ESSL member. The same holds for secretarial tasks.

In the following we like to introduce the new candidates for the Executive Board:

Dr. Aurora Bell is a physicist engineer, scientist and principal forecaster and since 2010 the Executive-Scientific Deputy for Operational Meteorology at the National Meteorological Administration of Romania. From 1989 to 2009 she was the leader of the Laboratory for Nowcasting Techniques. Currently, she is responsible for the management of 112 scientific and meteorologist staff, research and development for short-term forecasting, nowcasting and severe thunderstorm warning including training programmes for Southeast Europe forecasters as well as relations with government, ministry and mass media on severe weather. Her research addresses atmospheric deep convection and related phenomena, orographic effects on moist tropospheric flows and Doppler radar observations of storms.



Aurora Bell serves as a lecturer at the National School of Meteorology, coordinates student dissertations on MS in physics and was also active in several WMO international courses and workshops. She has been involved in a number of international projects and conferences such as EUFAR and HYDRATE (FP6), ERAD-2008 (Finland), WSN09 (Canada) and is designated chair of ERAD-2010 to be held in Romania. In addition, she is member of several WMO working groups, organized curricula for lecturing with invited professors in Romania and is also active in organizing and teaching courses for civil defence and mass media.

Dr. Víctor Homar Santaner is a staff researcher and lecturer at the Physics Department of the University of the Balearic Islands. His main field of expertise is the Meteorology and Climatology of the western Mediterranean region with special focus on extreme weather events. He developed and applied diagnosis and simulation techniques to analyze and forecast the synoptic and mesoscale scenarios responsible for the genesis of flash-flood producing convective systems or severe weather outbreaks using numerical high-resolution mesoscale models. He also investigated fundamental aspects of predictability and the use of ensemble prediction systems for the forecast of extreme weather events. More recently, Víctor Homar has been involved in the assessment of the regional climate change impacts using statistical downscaling techniques. He has published more than 30 papers in international journals and numerous technical documents on these subjects.



Víctor Homar has been involved in international research projects such as MEDEX, THORPEX, EUCOS and various INTERREG calls. Currently, he is involved in HyMeX as an active researcher, task-team leader and member of the International Science Steering Committee. In addition, he is associate editor of Journal of Atmospheric Research. In the past he worked at the National Severe Storms Laboratory (NSSL) for more than two and a half years and has been determinedly involved in the European severe weather community, as shown by his participation in all ESSC editions since the year 2000 in Toulouse and his firm support for the consolidation of the ESSL.

ESSL Advisory Council (AC)

Gerhard Steinhorst (German Weather Service, DWD) left the ESSL Advisory council due to his retirement. He was the first AC member (elected 2007) and representative of the national meteorological and hydrological service / EUMETNET group in the AC. We are grateful to Gerhard Steinhorst's contribution to the fruitful cooperation of ESSL and DWD.

Proposed candidate for the Advisory Council is Hans-Joachim Koppert (DWD):

Hans-Joachim Koppert is the head of the department "Meteorological Analysis and Modelling" at the German Weather Service (DWD) since 2006 where he is responsible for the assimilation systems and the entire model chain including GME, COSMO-EU und COSMO-DE. He is also chairman of the COSMO Steering Committee. He studied mesoscale meteorology at Darmstadt Technical University and joined the DWD in 1980 where he started as a meteorologist at the analysis and forecast centre. In the unit "Fundamental Questions of Synoptic Meteorology" he developed automatic significant weather charts as well as the visualization system TriVis for media (used by German public TV channels) and worked on sounding analysis and calculation of parameters for diagnosis like IPV. Later, he moved to the IT division and became the head of the application development unit where he initiated the development of the meteorological workstation "NinJo" as an international project. From 2002 to 2006 he managed the central development unit of the research and development division.



Hans-Joachim Koppert's basic interest was and still is the process of weather forecasting including modelling, algorithms and visualization. Since the quality of input data and processing is crucial for forecasts and warnings he is looking for an optimal integration of them in combination with a profound knowledge of the meteorological background. Forecast skills are often measured against local severe weather events – thus, he expects a substantial impact from an active role of the DWD in the ESSL on the improvement of weather forecast processing.

Dr. Michael Staudinger was appointed new Director of the Central Institute for Meteorology and Geodynamics (ZAMG), Austria by Beatrix Karl, Federal Minister of Science and Research. Since 2002 he managed the international EU Alpine Space IIIB-Project METEORISK and since 2006 he is responsible for METEOALARM as a Program Manager in the framework of EUMETNET. He is member of the ESSL Advisory Council since 2008. We congratulate Michael Staudinger to his new position and wish him all the best for his future activities and for the new cooperation of ZAMG and ESSL.



ESSL Scientific Projects

Evolution of Hail Storms over Europe in a Changing Climate

The objective of this project, carried out by a consortium consisting of the U.K. Met Office and the ESSL on behalf of AXA insurance, is to understand how hail storm characteristics over Europe may change between the present day and the 2050s. A regional climate model will be used with a well established model of hail formation to understand how the frequency and severity of hail storms and the size of hail stones will evolve under a changing climate. The primary tool used in this project is a hail model developed by the U.K. Met Office. Ground-truth observations from ESSL's European Severe Weather Database will be used to assess the quality of the existing hail model, identify its deficits and develop the strategy to improve it.

New institutional members

Central Institute for Meteorology and Geodynamics (ZAMG)

On June 18 2010 Bernold Feuerstein and Pieter Groenemeijer visited the ZAMG in Vienna. They gave an overview seminar talk about the ESSL/ESWD and signed the contract with ZAMG for full institutional membership in the ESSL with quality control task.



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Bernold Feuerstein
(Deputy Director and Press Officer)

Pieter Groenemeijer
(Technical Director)