



ISOCS Winter School

1-6 February 2009 - Alpbach, Austria

Multivariate data analysis for chemical sensing



Develop your knowledge of multivariate data analysis in the field of chemical sensing and artificial olfaction at the ISOCS Winter School in Alpbach

The Winter School 2009 will cover topics including:

- Introduction to chemical sensors and data handling
- Exploratory data analysis and linear multivariate techniques
- Non-linear multivariate analysis of chemical sensor data
- Time series analysis of data from chemical sensors
- Handling large datasets
- Bio-inspired signal processing

Speakers

The School will be run by international experts including:

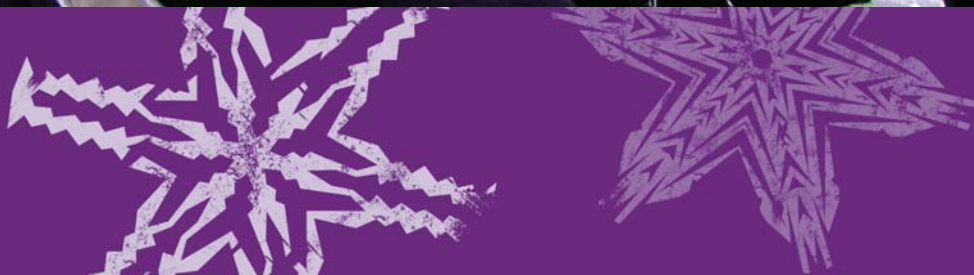
- Dr Udo Weimar, University of Tübingen, Germany
- Prof Julian Gardner, University of Warwick, UK
- Prof Agustin Gutiérrez-Gálvez, University of Barcelona, Spain
- Prof Krishna Persaud, University of Manchester, UK
- Dr Jan Mitrovics, JLM Innovation, Germany

Who should attend?

This School will be of interest to researchers from industry, research institutes and universities. The aim is to give participants theoretical and practical knowledge of the principles and tools which allow us to extract useful information from data. The School focuses on the data which can be extracted from chemical sensors operating individually or in arrays. No prior knowledge of multivariate statistics is required. For more Information please visit: www.olfactionsociety.org/winterschool.html

isoocs

International Society for
Olfaction and Chemical Sensing



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The ISOCS Winter School is delivered by active researchers with international reputations.

Julian Gardner is Professor of Electronic Engineering in the School of Engineering at Warwick University. He is a Fellow of the IEE and has worked with over 20 companies in the past 15 years developing commercial e-nose instruments. His research interests include the modelling of silicon microsensors, chemical sensor array devices, biomimetic MEMS devices and electronic noses.

Agustin Gutiérrez-Gálvez holds a Marie Curie fellowship at the University of Barcelona. His research interests are neural networks, pattern recognition, computational models of the olfactory system, and quartz crystal microbalance sensor fabrication. This work is being applied in the European-wide NEUROChem project which will develop novel computing paradigms and biomimetic artefacts for chemical sensing taking inspiration from the biological olfactory pathway.

Jan Mitrovitcs co-founded a spin-off company to commercialize electronic nose technology, which later merged to form Applied Sensor, a company now at the forefront of gas sensor technology. In 2004 he started JLM Innovation where he develops sensor systems, sensor networks and data analysis tools. Jan has been involved in the development of many different sensor array platforms employing QCM, MOS, EC, FE and other gas sensing technologies that are used in a broad range of industrial, consumer, safety and research applications.

Krishna Persaud is Professor of Chemoreception at the University of Manchester. His interests range from fundamental research into biological transduction mechanisms in olfaction through to the practical application of chemical sensors. Krishna has developed two successful spin-out companies targeting odour measurement and water quality and is also investigating healthcare applications.

Udo Weimar is head of the Gas Sensors Group at the University of Tübingen. He is responsible for two major European projects applying gas sensing technology and was co-ordinator of the Networks of Excellence NOSE and GOSPEL which led to the formation of ISOCS. He is working on the fundamental properties of sensors, and uses multivariate techniques in combination with modelling and measurements 'in operando' to understand their operation and hence improve their performance.



Topics will be delivered by lectures, discussion sessions and laboratory demonstration sessions. Participants will need to bring their own laptops, but will be supplied with sample data sets and evaluation software.

The School is residential and the programme allows plenty of scope for networking with lecturers and other delegates. The daily schedule allows time to enjoy the amenities of the beautiful village of Alpbach. Lectures take place in the morning, with the afternoon free for participants to network, consolidate their knowledge or enjoy the outdoors. The local area has facilities for skiing, snowboarding, snow shoe hiking, cross country skiing etc. Discussion sessions and labs resume in the evening.

The venue is the Hotel Böglhof, and the price includes all accommodation and meals. Participants may choose either a **single room (1,175€)**, or to share with another participant at a **reduced fee (875€ for each participant)**. Accompanying persons are also welcome. For full programme and conditions visit: www.olfactionsociety.org/winterschool.html

ISOCS

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ISOCS is a non-profit organisation which aims to promote the development and application of knowledge in the fields of biological and artificial olfaction, and chemical sensing. Company registered in England, number 6607277