

Trimestrial Newsletter

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FENS President Editorial



Marian Joëls

Around 7,000 neuroscientists are expected to meet in Milan on the occasion of the 9th FENS Forum, July 5-9, 2014. Registration has now opened and abstracts can be submitted. Reasons to join in?

First and foremost, the FENS Forum has grown into *the* European meeting highlighting the latest developments in neuroscience. Excellent plenary or special lectures by world leaders blend with stimulating symposia and two lively poster sessions each day. A quick update on the state of the art in every field, new technical developments and exciting details for the aficionados... it is all there, and at a very affordable price. FENS and IBRO offer no less than 160 travel grants to students from all over the world. Go to the [website](#) to check out the criteria.

For the thousands of neuroscientists - from PhD students to senior scientists - who present their most recent work, the FENS Forum offers an ideal platform for extensive feedback. The poster sessions can showcase your recent results to a broad audience. Take this opportunity and welcome the world's experts at your poster to find out their opinion.

In association with the FENS Forum, several educational events are arranged. The host society will organise an extensive Young Investigator Training program, to



allow young scientists to stay several weeks in an Italian lab to learn new techniques. FENS and IBRO, as well as local institutions, have made ample resources available for this program. Students can also enroll in workshops on, for instance, career opportunities outside of research or challenges met by female neuroscientists. Junior staff can participate in a workshop on how to write a successful scientific paper (run by the European Journal of Neuroscience).

The FENS Forum always offers an interesting social program too, managed by the host society. The 'Jump the FENS' event, which by now has become a tradition, is one of the highlights for students. Prior to and after the FENS Forum many tours or events are arranged to get a taste of northern Italy, sometimes most literally: How about wine-tasting in the dark, an event organised in Verona in collaboration with the Italian Union of the Blind and Partially Sighted. The FENS History Committee looks back at the rich background of Italian neuroscience with, amongst others, a trip to Pavia in Camillo Golgi's footsteps.

All in all, many good reasons to register before the end of January. Don't hesitate: come, and bring your colleagues along. Hope to see many of you in Milan!

Marian Joëls
FENS President

Editorial from The Communication Committee

Neuroscience Perspectives



Malgorzata Kossut

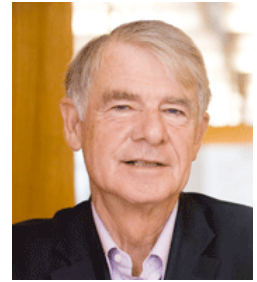
In a new editorial format, short interviews with prominent European scientists give the reader an understanding of their personal view of their life in neuroscience. Malgorzata Kossut of the Nencki Institute in Warsaw (Poland) asks questions on behalf of FENS. In this issue she talks to Karen Steel and Wolf Singer.



*Karen Steel **

Professor Karen Steel of the Wolfson Centre for Age Related Diseases at King's College London (UK), is the 2011 recipient (together with Professor Christine Petit) of The Brain Prize. Her primary interest is the genetics of deafness, using mouse mutants to gain access to the molecules involved in normal development and function. Professor Steel also initiated the Mouse Genetics Programme, funded by the Sanger Institute and Wellcome Trust.

** Photo acknowledgement: Wellcome Trust*



Wolf Singer

Professor Wolf Singer is emeritus professor at the Max Planck Institute for Brain Research, Department of Neurophysiology, Frankfurt (Germany). He also is a Senior Fellow at the Ernst Strüngmann Institute (former Dahlem Conferences) and the Founding Director of the Frankfurt Institute for Advanced Studies (FIAS in Frankfurt). His research mainly concerns information processing in the visual system, the rules of brain plasticity and the role of gamma oscillations.

Q: What made you interested in neuroscience?

Karen Steel: I liked the combination of many aspects of science involved in studying hearing and deafness: genetics, development, positional cloning, ultrastructural studies, gene expression analysis, physics, physiology, and particularly the amazing opportunity to study a model organism like the mouse that has so many similarities to humans.

Wolf Singer: A seminar on evolution which suggested that cultural evolution was a consequence of brain differentiation and a lecture series organised in tandem between the psychoanalyst Paul Matussek and the neurobiologist Otto Creutzfeldt on "The neuronal correlates of consciousness" which provided evidence

that mental phenomena emerge from neuronal interactions.

Q: What is the question that you most want to answer in your future research?

Karen Steel: Progressive hearing loss is very common in the human population, and the current approaches are useful prosthetic devices (hearing aids and cochlear implants) that provide some benefits but do not restore normal hearing. I want to understand the mechanisms underlying progressive hearing loss and develop good starting points for drug development to halt or reverse progression, and thus provide genuine treatments.

Wolf Singer: I want to understand better the principles of information processing that nature discovered when evolving the cerebral cortex.

Q: Your own favourite result?

Kareen Steel: That is difficult. There is always a thrill in discovery. I still remember my surprise in finding that the acellular tectorial membrane, a gel-like structure lying over the sensory hair cells, was not an inert lump of jelly but instead maintained its own electrochemical properties. Then there was the discovery of the first mouse mutants that were deaf because they had no endocochlear potential, a resting potential of around +100mV in the fluid bathing sensory hair cells of the cochlea that provides a driving force for ions to flow through the hair cells' transduction channels during sound stimulation. Finding the first gene underlying deafness, *Myo7a*, by positional cloning was another milestone.

Wolf Singer: In my first life: that experience dependent development of neuronal architectures follows Hebbian rules and is gated by central evaluation systems, resembling in these aspects adult learning.

In my second life: that neuronal networks tend to engage in synchronised oscillatory activity which provides the option to exploit phase and temporal coherence for the encoding of semantic relations and the configuration of functional networks.

Q: We are often held up by technical limitations. What is the major obstacle in your field?

Karen Steel: A complete set of mouse mutants, one for each known gene, would be useful, especially if they were all screened for hearing impairment.

Wolf Singer: The lack of technology to obtain targeted long-term recordings of single cell activity from a very large number of neurons distributed across both cortical and subcortical regions of animal brains. The lack of non-invasive imaging techniques applicable to human subjects that combine high temporal with high spatial resolution. The lack of canonical mathematical tools for the analysis of high dimensional, non-stationary time series.

Q: What is your biggest experimental disappointment?

Wolf Singer: The loss of an experimental animal due to reasons that could have been avoided with more foresight.

Q: Apart from your data, what discovery in neuroscience excited you most?

Wolf Singer: The cognitive effects of callosotomy (split brain).

Q: Any message for young researchers?

Karen Steel: Remember always that scientific research is a search for the truth.

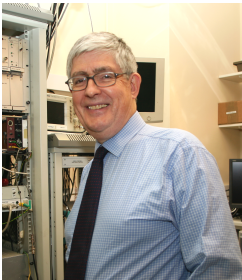
Wolf Singer: Follow your passion, do what fascinates you most and stick to it despite inevitable frustrations! Remember: the less predictable the outcome of a project is, the better the science (is not what granting agencies like to read). And finally: there is a life beyond the lab.

Interviewer: *Malgorzata Kossut*

Member, FENS Communication Committee

Opinion Corner Section

The future of animal neuroscience in Europe



Roger Lemon

Following the new EU Directive on the use of animals in biomedical research introduced in January this year, many EU member states are introducing new national legislation to align with these new set of regulations. In most countries this has progressed smoothly, although at least six countries have still not introduced new legislation in line with the Directive. It is important to remember that FENS and many other European research organisations fought hard to make sure that the new Directive [2010/63/EU](#) continued to allow important new research where the use of animals was essential.

From a welfare point of view, the goal of the Directive is to ensure a uniform standard of care for animals used for scientific purposes across Europe and to even out the wide variations in the legislative controls over animal research across different European member states. The Directive puts great emphasis on the use of the '3Rs' in improving welfare. Supporting this, the [UK National Centre for the 3Rs](#) and other EU centres encourage scientists and institutions to further develop new techniques and approaches that add refinement: improved welfare and better science. Some [labs are taking the lead](#), showing online all the details of their research procedures. Together with public confidence, scientific quality and animal welfare are the pillars of the concept of *regulatory balance*, which remain at the core of any modern regulatory environment.

However, over the past few months there have been disturbing but predictable developments in some countries against these positive steps. Governments in countries including Italy, Belgium and the Netherlands have been pressured by vocal minorities to use this opportunity of legislative control revision to introduce new and much more restrictive regulations.

For example, in Italy the government is considering legislation that would cripple biomedical research in that country. If approved and enacted, this legislation would ban the breeding or use of cats, dogs and non-human primates for experiments, except where a clear translational benefit results directly from the research. This ignores the fact that successful translational research builds on a large body of basic scientific knowledge acquired over a much longer period than a typical 3-year research project. The planned legislation also requires that anaesthesia or analgesic agents must be applied during any procedure in which the animal may experience some pain, with the only exception being cases where anaesthesia or analgesia are the subject of the study. The law would also prohibit the use of animals for research into xenotransplantation and drug addiction. Italy currently maintains its long and fine tradition of top-class neuroscience research; but this law would put a stop to much of this.

Given this uncertainty one can understand the note of alarm in a recent *Nature* editorial http://www.nature.com/neuro/journal/v16/n12/full/nn.3595.html?WT.ec_id=NEURO-201312. It is important to stress that the new Directive explicitly prohibits member states from introducing legislation, which is *more* restrictive than what was in place in 2010, before the new Directive was passed by the EU. Therefore, countries implementing more restrictive rules must expect to be challenged by the EU Commission for being in breach of EU law.

Although politicians in some countries, such as Belgium, seem to target arbitrarily non-human primate research, it is clear that these developments threaten all animal research and FENS members using rodents, for example, should be just as wary as primate researchers.

These developments are obviously a major worry as they would prevent any harmonisation of ethical and animal welfare standards across the EU. This is becoming essential for the conduct of multi-centre projects involving animal research and for the easy mobility of biomedical researchers between EU states.

Perhaps the biggest worry raised in the *Nature*

editorial is that support for these new laws in some states has come about because the general public just does not understand the benefit of the animal research that is carried out in their country. This should remind us all how important it is for us to continue to communicate, at every level and at every opportunity, the advances that [‘basic’ animal research has contributed greatly to our understanding of the human brain](#), as well as to human and veterinary medicine. [‘Applied’ research](#) (clinical and translational research) into therapies for complex mental health problems (such as depression and schizophrenia) and neurodegenerative brain disorders (such as Parkinson’s disease and Alzheimer’s disease) also requires animal models, including monkeys. This is because these disorders affect highly evolved behaviours and advanced brain systems that are simply not present in non-primates. Both [basic and applied research is needed](#) to discover how we can understand and treat these disorders, a fact acknowledged by the Directive’s clear endorsement of both types of research.

As Nature put it *“Only through a clear understanding by the public of the value and importance of animal research can such crises be avoided in the future.”*

Roger Lemon

Member of the CARE Committee of FENS

The Barcelona Brainlab (BBL) of University of Barcelona



Carles Escera

[The Barcelona Brainlab \(BBL\)](#) belongs to the [Institute for Brain, Cognition and Behaviour \(IR3C\)](#) of the University of Barcelona (Spain), and it is located at the Faculty of Psychology, Department of Psychiatry and Clinical Psychobiology. We are a small interdisciplinary group,

including psychologists, biologists, engineers, and physicists, from many different countries, such as Spain, Germany, Italy, Poland, Romania, Australia and Venezuela. At the BBL, we seek to unravel the brain mechanisms of cognitive functions, from attention and auditory perception to working memory and executive

control. Furthermore, we are interested in emotional processing and in cognitive dysfunction across a broad spectrum of neurological, neurodevelopment and psychiatric disorders. To achieve our goals, we combine the recording of the human electroencephalogram (EEG) to analyse evoked and event-related brain potentials (such as the complex Auditory Brainstem Response (cABR), the Middle Latency Response (MLR), or the Mismatch Negativity (MMN) and oscillatory brain activity (such as the gamma band response (GBR), with magnetoencephalography (MEG), functional magnetic resonance imaging (fMRI) and neurogenetic analysis. Part of our research is conducted in collaboration with labs from the League of European Research Universities (LERU) such as University of Helsinki (Finland) or University College London (UK), or with other internationally reputed centres such as Albert Einstein College of Medicine (New York, USA), University of Leipzig (Germany) or the University of Salamanca (Spain).



Drawing, Barcelona Brainlab Group

Our current research addresses the mechanisms by which the auditory system encodes the acoustic regularity that leads to conscious auditory perception, and more recently the role of timing regularity via entrainment of neural oscillations in regularity encoding. For instance, we recently found that unexpected rare auditory stimuli occurring in a series of otherwise repetitive sounds trigger a change detection process as early as 40 ms from acoustic change onset (Grimm et al. 2011, Psychophysiol), as shown by an enhancement of the Nb waveform of the Middle Latency auditory evoked potential. This process is based on the encoding of the acoustic regularity, on which temporal information plays a critical role (Costa-Faidella et al. 2011, J Neurosci), and it is distributed in recurrent regions of the auditory cortex (Recasens et al. 2012, Cereb Cortex). Moreover, we demonstrated the involvement of the human inferior colliculus in auditory deviance detection (Slabu et al. 2012, J Neurosci). These results,

together with further research from our lab and the existence of the so-called novelty neurons along the auditory pathway has led us to suggest that novelty detection, based on regularity encoding, is a pervasive property of the auditory system, expanding from lower levels in the auditory hierarchy to high-order areas of the auditory cortex (Escera & Malmierca 2013, Pscyhophysiol; Escera et al. 2013, Brain Topogr).

One of our current research projects aims at disentangling how early in the human auditory pathway fine violations in the rhythmic structure of simple acoustic stimulation can be detected and how breaking such temporal pattern affects brain oscillations. We will address this question by looking at the cABR and MLR starting as early as circa 9ms from stimulus onset. In a related account, we plan at dismantling the role of genetic polymorphisms (COMT val168met, 5-HTTLPR and MAOA) in affective and auditory processing from the brainstem to the entrainment of neuronal oscillations to a rhythmic pattern and tapping performance. We wonder how the brain's ability of basic auditory encoding relates to its capacity to entrain to rhythmic stimuli, extract rhythmic patterns and synchronize them with behaviour and whether there is any genetic bases of inter-individual variability. On a translational approach, we aim at examining the encoding of acoustic regularities along the auditory pathway in autism spectrum disorders (ASD). We are specifically interested in the modulation of cABRs to repetitive trains of sounds in children diagnosed with ASD, who often show deficits in language acquisition and aberrant perception of auditory stimuli. We expect that our findings will contribute to the understanding of the neural mechanisms underlying language processing in ASD and will help to improve the diagnosis of these disorders.

We are constantly seeking new young talent, as we can offer training in cognitive neuroscience, particularly in EEG approaches to human brain function at doctorate, graduate or undergraduate levels, for instance through the Erasmus exchange program. The BBL is located in Barcelona, the sunny capital of Catalonia, a dynamic, modern and cosmopolitan city by the Mediterranean shore, with a rich cultural heritage and fascinating history. Its temperate climate, Mediterranean gastronomy, modernist architecture, and the vast amount of events

held in the city make it a one of the top touristic destinations in Europe. Barcelona is the host city for a large international scientific community in the general field of biomedicine and in neuroscience in particular, providing an exciting and inspiring working environment.

Carles Escera

Principal Investigator

Barcelona Brainlab (BBL)

Geneva Neuroscience Center



Patrick Vuilleumier

The Geneva Neuroscience Center

brings together more than 50 research groups across a variety of departments, linked to three different faculties of the University (Medical Sciences, Psychology and Education Sciences, and Sciences including Biology, Biochemistry and Computer Sciences) as well as to the Geneva University Hospital (HUG). Cutting-edge research is conducted in various areas of neuroscience, from basic inquiries in both animal models and human beings to translational work and computational modelling. Collaborations between domains as diverse as psychology, biology, neurology, psychiatry, education sciences, radiology, genetics, computer sciences, mathematics, or even the humanities and economics, is one of the strength of our center. This multidisciplinary approach aims to characterize neural mechanisms across levels from neurogenetics and synapses to language and emotion.

Multidisciplinarity and excellence

In addition to understanding brain functions, active intervention methods are developed within the center to help brain repair and enhance education, promoting well-being and healthy societies. Understanding brain circuits underlying behaviour, cognition and motivation allows our researchers and clinicians to identify functional network that are altered in stroke, epilepsy or psychiatric patients and, in, turn devise new treatments. As we discover how the brain codes for emotions, psychologists and educational scientists can design and evaluate new

educational scientists can design and evaluate new approaches to promote emotion regulation and learning. Technological innovations go hand-in-hand with fundamental research and translational applications as when neurosurgeons, by recording directly from the human brain, not only break new ground in the operating room, but also pave the way for our basic scientists to decode the human mind and for our clinicians to treat degenerative diseases such as Parkinson's and Alzheimer's disease.

Neuroscientists in the Center are internationally renowned and produce highly influential work. They published more than 4000 papers in the last 10 years, which taken together are cited more than 100,000 times. In particular, neuroscientists from the Geneva Neuroscience Center have unravelled the neural mechanisms of addiction to benzodiazepines and cocaine, discovered how mice can sense illness in others, identified neurons in the brain that control sleep, shown how synapses change their shape during memory formation, demonstrated how video gaming can enhance attention abilities, identified brain regions responsible for decoding emotions in faces and voices, revealed brain pathways for unconscious perception, produced out-of-body experience with electrical stimulation of the human cortex, or created an algorithm to analyse and localize brain activity with great precision using EEG-among many other scientific contributions.

This research is clustered around 4 main domains of excellence:

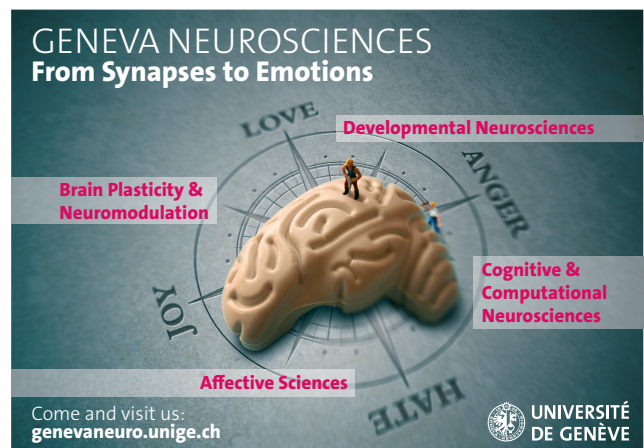
Brain Plasticity and Neuromodulation – understanding how changes in neural pathways and synapses alter behaviour but also how new experiences come to shape neural pathways and synapses, and in turn how to harness these mechanisms to remedy neurological and psychiatric diseases;

Affective Neurosciences – deciphering the mental and neural architecture of emotions, their impact on behaviour at individual and social levels, as well as their role in art and music;

Developmental Neurosciences – charting the mechanisms by which the nervous system and associated functions develop and change from embryo to old age;

Cognitive and Computational Neurosciences – mapping the cognitive and neural mechanisms that generate behaviour, from perception to motivation and decision-making.

The Geneva Neuroscience Center benefits from three National Centers of Competence in Research (NCCR) funded by the Swiss Government, namely Affective Sciences (emotions in individual behaviour and social processes), SynaPsy (synaptic bases of mental diseases), and Frontiers in Genetics (genes and development). NCCRs are very large interdisciplinary programs competitively awarded by the Swiss National Science Foundation, and have their own research and education programs independent of the Neuroscience Center but actively connected and contributing to it.



Presentation of activities, Geneva Neuroscience Center

Technological resources

Neuroscientists in the Center benefit from many advanced technological equipment to study the brain and the behaviour in the laboratory. In particular, the following platforms are available:

- The *Brain and Behaviour Laboratory* (BBL) is a unique complex that combines the most advanced technologies in neuroimaging for brain and human behaviour research, such as a 3T MRI scanner, high resolution electroencephalogram and transcranial magnetic stimulation systems, a highly sophisticated scent diffuser, a high-tech psycho-physiology laboratory, sound booth, optometric and eye-tracking systems, and a sleep research laboratory. The BBL also hosts a fully immersive virtual reality platform allowing multisensory stimulation from audiovisual to olfactory signals.

- The platform of the *Center for Biomedical Imaging* (CIBM) in the Lake Geneva region, which includes several high-field MRI for humans (up to 7T) and animals (up to 14T) as well as other brain imaging techniques.
- The *Cellular Imaging and Optogenetics Platforms* include several infrastructures for two-photon confocal imaging and optical stimulation of genetically modified neurons and facilities for the analysis of animal behaviour, allowing researchers to study the role of neural networks identified in various aspects of behaviour in the living animal.
- The *Integrated Mouse Behaviour Laboratory*, a technical core facility where a large variety of standard testing equipment is available to study animal behaviour and cognition in controlled and quantitative manner, including a surgery room with stereotaxic apparatus allowing implantation of deep brain electrodes or optic fibers in freely behaving mice.

Education and outreach activities

The Geneva Neuroscience Center coordinates the only specialized master degree programme in neuroscience in Switzerland. It also directly contributes to the doctoral schools in neuroscience and in affective sciences, as well as competitive postdoctoral programs and fellowships supported by European Marie-Curie Action schemes. These activities lead to a rich student community and research environment. Although the Center has no single physical location, its members have many occasions for common meetings in two weekly seminars, devoted to cognitive and cellular neuroscience topics, respectively, where PIs and students from various departments attend. The Center also organizes many public events (museum, TV or radio) including the Brain Awareness Week where our scientists give lectures or propose lab visits open to the public or schools.

For more information about the Geneva Neuroscience Center, its research, teaching programs and members, please visit the website: <http://neurocenter.unige.ch>.

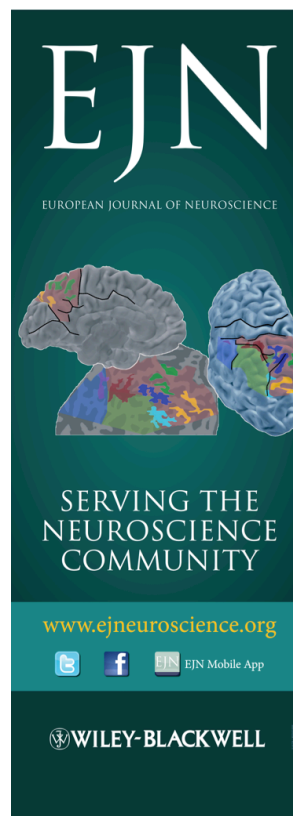
Patrick Vuilleumier

*Director
The Geneva Neuroscience Center*

EJN Section

EJN's Scientific Review Associates (SRAs)

The efficacy and validity of peer-review of scientific manuscripts has attracted considerable discussion. While there is a wide range of perspectives, critical voices have dominated the discussion in recent years. One extreme view, popularized primarily by open access journals and their underwriters, suggests that peer-review is inherently biased and should be abolished. Instead, the community of researchers, voting with their feet should, so to speak, determine the quality and impact of a particular paper.



As research fields become more and more specialized, it will be increasingly difficult for individual researchers to judge the quality and impact of papers covering subjects outside their own field of expertise. Therefore, researchers turn to journals with established records of high-quality and consistent peer-review to keep up with developments in the broader neurosciences. If we abolish peer-review, the role of peers will soon be replaced by institutionalized reviewing, to inform public and private funding agencies about the quality of a researcher's productivity.

Not many would predict that this would work better than peer-review.

For such reasons, we believe that high quality peer-review of journal manuscripts will be all the more important in the future and as more and more journals compete to publish a limited number of high-quality manuscripts. Polls of our readers have indicated that they greatly value the top-quality peer-review process by EJN (see [FENS Trimestrial Newsletter Fall 2012](#)).

Fair, balanced, timely, and rigorous peer-review has remained our top objective. In addition to our Associate Editors, we have formed a rather unusual board of "Scientific Review Associates" (SRAs) to support this objective. Most of our SRAs are nominated by our Associate Editors. SRAs are often "up-and coming", relatively junior scientists. Other SRAs are more senior and assist EJN by reviewing highly specialized work.

Serving as a SRA often is often the first opportunity for more junior scientists to become involved in the editorial process. It is our experience that SRAs strive to provide rigorous and balanced reviews, often within less than two weeks after receiving the manuscript. We have been delighted to note the commitment of our SRAs to EJN and thereby to FENS.

Our board of SRAs may serve as a model for other journals to integrate the best of our more junior scientists in the review process, thereby ensuring high quality and timely reviews, while fostering the development of relationships between the journal and the next generation of scientists. We are extremely grateful for their work. For a list of our current SRAs, as well as our Associate Editors, see: <http://onlinelibrary.wiley.com/journal/10.1111/%28ISSN%291460-9568/homepage/EditorialBoard.html>).



Jean-Marc Fritschy



Martin Sarter

Co-Editors in Chief, EJN

NENS Section

**A new FENS-IBRO sponsored initiative:
Financial support to training/education activities organised nationally by NENS member schools**



Ferdinando Rossi

Along the route leading to the creation of the new Committee for Higher Education and Training (CHET), the FENS Executive Committee, in collaboration with IBRO, has decided to launch a new initiative to support financially international training/education activities

activities organised locally by NENS Member Schools. The scope of this funding is to strengthen local teaching activities with international character, that will become integrated in the new system for high education and training in neuroscience that FENS will develop within the next few years.

The NENS committee is responsible for the implementation of this project and a specific procedure has been set up to select school courses organised by NENS member schools to receive support. Eligibility criteria of the school applicants are:

- the school should be a NENS member;
- the school courses should be held in English;
- all the courses at the school should be focused to a main topic that should be directly related to neuroscience;
- the duration of the course should be of a minimum of five days;
- only foreign students can apply for travel grants (non-resident in the country where the school is organised and takes place);
- the school should also advertise the NENS call for travel stipends for the international students on its website.

Following the first call launched during this summer

five applications were selected.

- [EEG in neurology and neuroscience](#), Lemanic Neuroscience Doctoral School, Geneva (Switzerland);
- [ELECTRAIN 2014 \(Extended Methods Course in Electrophysiology\)](#), Göttingen Graduate School for Neurosciences, Biophysics and Molecular Biosciences (GGNB), Göttingen (Germany);
- *Neural development and neurodevelopmental disorders*, Doctoral School in Life and Health Sciences, PhD Program in Neuroscience, Turin (Italy);
- [New Targets in Neurodegenerative diseases: Emphasis on new advances in Alzheimer's Disease research](#), European Graduate School of Neuroscience (EURON), Maastricht (The Netherlands);
- [Stem cells in neuroscience](#), Lemanic Neuroscience Doctoral School, Geneva (Switzerland).

Each of these will receive 2,250 EUR for organisational expenses and the acceptance of 3 international students selected by FENS to join the school course/training. Additionally, a call for travel grants (750 EUR per grant) for 3 foreign students per school (i.e.: a total of 9-15 travel grants will be available) will be launched in the next few weeks and administered by the NENS Committee. Another call will be open in the next few months to support training activities to be held in 2015.

Awarded NENS stipends for training stays

Following the last two Calls (15 June and 15 October 2013) for the *NENS stipends for training stays (NENS Exchange stipends)*, 5 applications were selected for funding. They have been awarded to:

- *Georgiana Maier* from the Faculty of Biology, University of Bucharest (Romania), for a training stay at the University of Barcelona (Spain);
- *Lucia Sacheli* from Department of Psychology, Sapienza University of Rome (Italy), for a training stay at Donders Institute for Brain, Cognition and Behaviour, Radboud University Nijmegen (The Netherlands);
- *Matias Pulópulos* from the Department of Psychobiology, University of Valencia (Spain), for a training stay at the Faculty of Psychology and Neuroscience, Maastricht University (The Netherlands);
- *Olivia Dobrica* from the Faculty of Biology, University of Bucharest (Romania), for a training stay at the Institute of Experimental Medicine, Charles University in Prague and the Academy of Sciences of the Czech Republic;

- *Dennis Hernaus* from the European Graduate School of Neuroscience (EURON), Maastricht University (The Netherlands), for a training stay at the Institute of Psychiatry, King's College London (UK).

A new call for both [NENS stipends for training stay](#) and [YREP stipends for job interviews](#) is now open with a deadline of **15 February 2014**.

Ferdinando Rossi

Chair, NENS Committee

Brain Awareness Week 2014: March 10-16

Funding available

Deadline for application is January 13, 2014



The Brain Awareness Week is a global campaign to celebrate progress in brain research and increase public awareness of these achievements.

Through a generous grant, [The Dana Foundation](#) has again for the **2014 BAW** enabled FENS as a privileged partner of Dana to offer financial support for selected European brain events taking place during the BAW-week in March.

FENS therefore invites applications for these 2014 BAW events. The application form is available for download on the [FENS website](#).

Please submit your application to the [FENS Office by email](#) by **January 13, 2014** at the latest.

As a new initiative, a few awardees will be invited to prepare a poster based on their awarded BAW grant for the FENS Forum 2014. The selected posters will then be featured throughout the FENS Forum in Milan.

Further, in 2014, a new prestigious award, **The Dana Foundation/EDAB Neuroscience Outreach Champion Award (The David and Hillie Mahoney Award for Individual Contribution to Outreach)**

will be inaugurated during an award ceremony preceding the EDAB / Max Cowan Special Lecture at the FENS Forum in Milan next year. The award will be conferred to an individual in appreciation of his/her significant contributions to promoting brain awareness.

Detailed information on **The Dana Foundation/EDAB Neuroscience Outreach Champion Award** and the awarding ceremony will be soon available on the [FENS Forum website](#).

History of European Neuroscience Section

Neuroscience by Caricature in Europe through the Ages

A history of neuroscience illustrated through the use of artistic caricature has cultural and scientific purposes. This artistic genre, unjustly considered minor, was part of the professional background of many significant artists such as Leonardo da Vinci, Michelangelo and Dürer. The caricature can provide a historical source description of events and records the cultural dissemination of scientific ideas in various periods. More specifically, it played an important role in the development of ideas about the mind and its theories over the centuries.

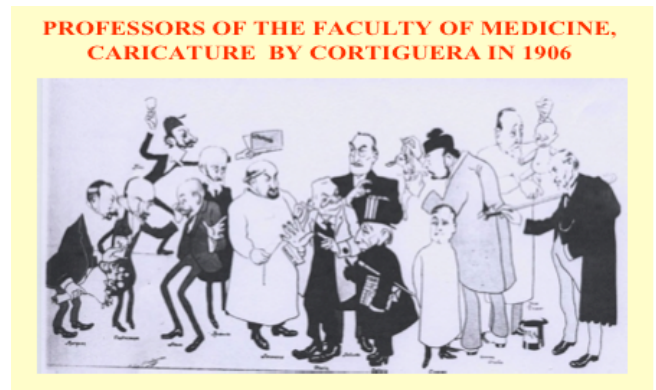
Caricatures and cartoons were used to illustrate and educate both professionals and laypersons about the perils of science and medicine. However, examination of these works of art also allows us to see how new scientific and medical knowledge was disseminated to a public eager to learn such innovations would benefit their lives.



*Le Phrenologiste (The Phrenologist)
by Honoré Daumier (1808-1879)*

From the scientific point of view the caricatured representation allows us to develop the ability to recognize characters and historical situations through their exaggerated details. The abnormal detail and the use of hyperbole in the characterisation is compelling; it

stimulates our attention and memory through casual experiences.



*Caricature of Santiago Ramon y Cajal (1852-1934)
and his "neuron" (right)*

[Neuroscience by Caricature project](#) examines the chronological development of European neuroscience through the representations portrayed by the caricaturists. We present a historical depiction of the most famous cartoons by known and unknown artists throughout the ages with a reflection on the history of the neuroscience.



*Caricatures of Jean-Martin Charcot (1825-1893)
who defined organic disturbance by
careful evaluation of symptoms and physical signs*

My deep acknowledgement to Marjorie Lorch and Nick Wade for their advice and suggestions; to the web designer Adrian Simmonds and last but not least to FENS for its support of this project.

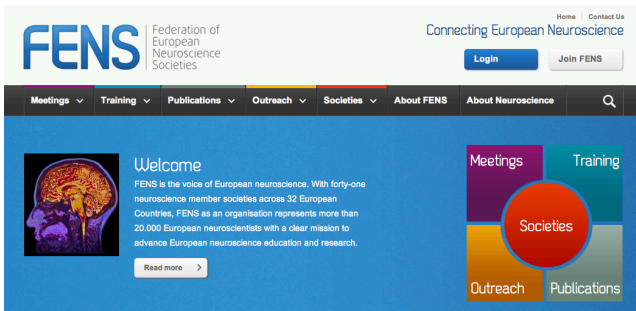
Lorenzo Lorusso

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Announcements Section

Updated FENS website

The online home of FENS, www.fens.org has changed both its look and feel.



On November 25 FENS launched its new website. Prominently featuring its five core domains: meetings, training, outreach, publications, and FENS member societies the website presents a multitude of activities ranging from FENS meetings including the Forum and Brain Conferences, to the programmes for FENS schools and training as well as the NENS network. The website provides an easy overview of EFN – FENS own scientific journal, as well as a comprehensive overview of all FENS member societies. The reason for this is simple: activities under these pillars, individually and as a whole are key to the successful implementation of FENS mission.

An updated resource

The website of FENS will hopefully continue to be a resource to the neuroscience community. The following features are dedicated to the entire community:

- News section: offers a variety of updates from FENS and its members about news items relevant for neuroscience.
- Event calendar: a possibility to advertise and find relevant neuroscience events. Easy filter options help you to scan events according to category of interest area – from activity type to country. The calendar can even be shown as an interactive map.
- Jobmarket: Continues to be one of the very popular tools on the FENS website. Open to the entire field of professionals that work in areas related to neuroscience, the jobmarket continuously features a long list of professional opportunities ranging from post-doctoral fellowships to positions as full professor. Filters help identify the jobs of interest.

- Award directory: promoting FENS awards such as the FENS-EFN Award, and FENS Research Award but also provides an open space for all neuroscience awards to be listed.
- EJN: Easy overview of publications and content in FENS scientific journal the EJN.

Member’s only services

Individual members of the 43 FENS member societies are automatically also full members of FENS. With a personal *FENS Member ID* and password, all FENS members can log in to the FENS website to view and edit their personal profile. If you lose your login details these can always be retrieved through the website. Members’ only features include:



- Personal profile: In addition to contact information, the personal profile for FENS members contains an overview of society affiliation as well as the past involvement of the member with FENS activities.
- Free EJN access: log in to the FENS website and gain instant full access to read and download full-length articles from EJN.
- Easy sign-up to participate: Application forms for all FENS activities, including the FENS Forum are available as an easy application form that, based on the member profile, is pre-filled. For the FENS Forum, registration using the FENS member ID ensures the member a significant reduction in the registration fee.
- Reserved SfN slots: Members of FENS can register at member rates when they attend the annual meeting of the American Society for Neuroscience (SfN). A FENS slot ensures FENS members the same advantages as SfN members, including as poster presenter. Slots are advertised through the FENS newsletter and members can sign up through the FENS website.

The revised FENS website aims to continue serving the neuroscience community in the future – hopefully even better than in the past. FENS is open to receive input and suggestions in order to improve this service. We invite you to visit the website and rediscover FENS!

Lars Kristiansen
FENS Executive Director

Announcements Section

**Judit Makara receives the Boehringer
Ingelheim FENS Research Award 2014**



Judit Makara

[The Boehringer Ingelheim FENS Research Award](#) is given in recognition of outstanding and innovative scientific contributions in any area of neuroscience research. The prize money is 25.000 Euro. The award is sponsored by [Boehringer Ingelheim](#) and is announced by the Federation of European Neurosciences Societies (FENS).

The Boehringer Ingelheim FENS Research Award 2014 is conferred to **Judit Makara**, Institute of Experimental Medicine of the Hungarian Academy of Sciences in Budapest for her findings on the mechanisms that determine interactions and integration of multiple activated synaptic inputs in neurons. The award is presented in Milan during the 9th Forum of European Neuroscience 2014 (July 5 – 9, 2014). The prize winner will give a plenary lecture at the meeting.

**11th Göttingen Meeting of the German
Neuroscience Society - Call for Symposia**

The call for symposia for the [11th Göttingen Meeting of the German Neuroscience Society](#) is open. Symposia dealing with all areas of neuroscience research are invited. The application must be submitted via the [German Society's website](#).

The applicant should submit a proposal containing the title of the planned symposium, the name(s) and address(es) of the organiser(s), a short description of the aims of the symposium and the names, addresses and topics of the four speakers to be invited. Each symposium must reserve two slots for short oral presentations from students. The NWG strives to increase the proportion of women as organisers and speakers of symposia. The gender distribution within each proposal will therefore be one selection criterion.

The deadline for submissions is **February 3, 2014**.

Registration is now open:



The Brain Conferences

Copenhagen, Denmark

**Controlling Neurons,
Circuits & Behaviour**



Spring Brain Conference: 20-24 April 2014

Co-chairs: Botond Roska (FMI, Basel)
Michael Häusser (UCL, London)
Helen Mayberg (Emory University, Atlanta)

The **Spring Brain Conference 2014** will address how novel technologies to monitor and control identified neurons, circuits and behaviour can further our understanding of the brain, and how they might be used to elucidate dysfunction mechanisms and treat patients.

Confirmed speakers:

Misha Ahrens (Janelia Farms, USA), David Anderson (Clatech, USA), Cori Bargmann (Rockefeller Univ., USA), Alim-Louis Benabid (Univ. of Grenoble, France), Axel Borst (MPI Neurobiology, Germany), Michael Brecht (Humboldt Univ., Berlin, Germany), Matteo Carandini (UCL, UK), Yang Dan (UC Berkeley, USA), Peter Dayan (UCL, UK), Karl Deisseroth (Stanford Univ., USA), Michale Fee (Harvard Univ., USA), Itzhak Fried (UCLA, USA), Anthony Grace (Univ. Pittsburgh., USA), Michael Häusser (UCL, UK), Leigh Hochberg (Brown Univ., USA), Vivek Jayaraman (Janelia Farms, USA), Tom Jessell (Columbia Univ., USA), Brian Litt (Univ. of Pennsylvania, USA), Andreas Lüthi (FMI Basel, Switzerland), Zach Mainen (Champalimaud, Portugal), Rob Malenka (Stanford Univ., USA), Helen Mayberg (Emory Univ., USA), Gero Miesenböck (Oxford Univ., UK), Edvard Moser (NTNU Trondheim, Norway), Tom Mrsic-Flogel (Univ. of Basel, Switzerland), Carl Petersen (EPFL, Switzerland), Botond Roska (FMI Basel, Switzerland), Bernardo Sabatini (Harvard Univ., USA), Jose Sahel (Institut de la Vision, Paris, France), Massimo Scanziani (UCSD, USA), Mike Shadlen (Columbia Univ., USA) Scott Sternson (Janelia Farms, USA).

The number of participants to this conference is limited to 150.

For further information and the **online registration**, please visit the [Spring Brain Conference page](#).

Announcements Section

FENS Summer School

(in partnership with the Society for Neuroscience SfN)

**Neurodevelopmental
Psychiatric Disorders**

Date: June 22–28, 2014

Organizers: Oscar Marin (Alicante, Spain)
and David A. Lewis (Pittsburgh, USA)

Venue: [University Residential Centre of Bertinoro](#)

This school will introduce students to how neuronal circuit assembly processes are thought to interface with the emergence of psychiatric disorders. The focus of the school will mainly be mechanistic. Developmental neuroscience aspects may include neuronal specification and migration, neuronal circuit assembly, and the ways in which early life events influence circuit development, including the fetal environment, critical periods and early life stress. The emphasis will be on those developmental processes that might be most relevant to the emergence of psychiatric disorders. Psychiatry aspects may include the genetics, development and psychopathology of autism, schizophrenia and bipolar disorders. With about 10 teachers and a week of courses, topic coverage cannot be comprehensive. Instead, the school will focus on selected areas thought to best illustrate the state of the art towards elucidating mechanisms of disease in psychiatry, and developing better treatments.

The school is meant for PhD students or early postdoctoral fellows working on aspects related to the field of neurodevelopmental psychiatric disorders. Basic knowledge will be briefly summarised but tutors will mostly discuss frontline insights in the field.

For online registration and further information, please check the [FENS-SfN Summer School 2014 page](#).

Confirmed speakers:

Susan Andersen (Harvard, USA), Stewart Anderson (Philadelphia, USA), Erika Forbes (Pittsburgh, USA), Jay Giedd (Bethesda, USA), Martien Kas (Utrecht, the Netherlands), Kevin Mitchell (Dublin, Ireland), Bita Moghaddam (Pittsburgh, USA), Michel Owen (Cardiff, UK), Beatriz Rico (Alicante, Spain), Brad Schlaggar (St. Louis, USA), Peter Uhlhaas (Glasgow USA).

**9th FENS
FORUM OF
NEUROSCIENCE**

July 5–9, 2014
Milan | Italy

The FENS Forum 2014 is rapidly approaching and registration and submission of abstracts are in full swing!

As well as an elaborate [scientific programme](#), participants will be able to join several exciting [social events](#) and informative [special interest events](#).

To say nothing, of course, about the attractions of the incredible city of Milan itself. Check out the [Destination Italy](#) page for many unique activities that are offered by the city of Milan and other partners.

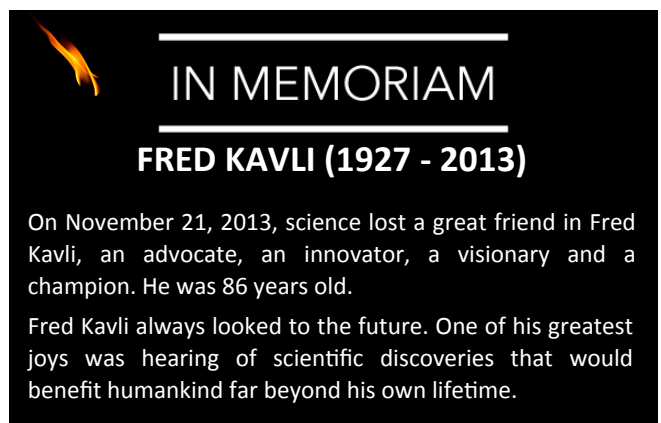
And, as always, our Students also have something special in store for you. The [“Jump the FENS”](#) party in Milan already promises to be one to remember.

So much to do, so much to cover!

So make sure to register in time and benefit from everything the FENS Forum has to offer at the reduced member rate.

The deadline for [registration](#), [abstract submission](#) and [travel grant](#) application is February 2nd, 2014.

Join us at yet another stimulating FENS Forum!



IN MEMORIAM

FRED KAVLI (1927 - 2013)

On November 21, 2013, science lost a great friend in Fred Kavli, an advocate, an innovator, a visionary and a champion. He was 86 years old.

Fred Kavli always looked to the future. One of his greatest joys was hearing of scientific discoveries that would benefit humankind far beyond his own lifetime.

Calendar

- 24-25 January 2014, Bern, Switzerland:
[Swiss Society for Neuroscience Annual Meeting 2014](#)
- 3rd February 2014 - Call for symposia deadline:
[11th Göttingen Meeting of the German Neuroscience Society](#)
- 10-16 March 2014: [Brain Awareness Week](#)
- 20-23 April 2014, Copenhagen, Denmark:
The Brain Conferences: [Controlling Neurons, Circuits and Behaviour](#)



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