

Editorial

Dear NCP staff and students,

This is the first release of the NCP Newsletter. The Newsletter is intended to regularly provide everyone involved and interested in NCP with current events and news. This includes academic and professional career opportunities, course developments, interviews or announcements of optional courses, colloquia, and talks offered within the Munich Research Network (i.e., Munich Center for Neurosciences, Bernstein Centre for Computational Neurosciences, Excellence Cluster 'CoTeSys', and the Elite Network Bavaria). The Newsletter is designed and managed by an editorial committee comprising of one staff member, Thomas Geyer, and two student members, Devika Narain (1st semester) and Martin Hebart (3rd semester). We invite any ideas, suggestions, and features for future editions. Please direct your responses to your representative on the editorial

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The Brainstorm

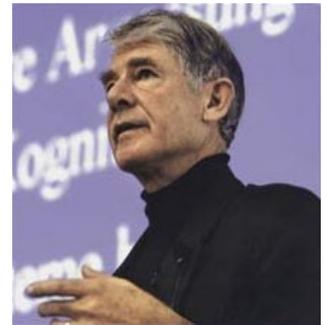
ISSUE 1, WINTER 2007

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Munich Center for Neurosciences Opens

The newly established Munich Center for Neurosciences - Brain and Mind (MCN) has been officially opened on November 22nd by the president of the Ludwig Maximilian University, Prof. Bernd Huber. The coordinator of the project, Prof. Benedikt Grothe, pointed out in his address that one of the main reasons for founding the MCN - apart from the generally increased importance of the growing field of neuroscience - is the opportunity for bridging the gap between the different languages of the brain and mind sciences. The areas involved in the MCN include

Neurobiology, Neurology, Computational Neuroscience, Philosophy, and Psychology. The ultimate goal, in the words of Prof. Grothe, is to gain a holistic understanding of the functioning of the brain and mind, which can only be achieved using a multidisciplinary approach. NCP as well as the recently established Elite Masters program "Neuroscience" and the Graduate School of Systemic Neurosciences are part of the MCN. The highlight of the opening ceremony a talk by Prof. Wolf Singer (see picture), director of the Max-Planck Institute of Brain Research in Frankfurt



and a former student of the LMU. In his presentation, he highlighted the importance of synchronous firing of neurons for mechanisms of feature binding, attention, and consciousness, as well as their functional deficits in psychiatric disorders and adolescents.



NCP Welcomes a new Cohort

For the winter semester 2007/2008, thirteen new students were admitted to the NCP course, most of whom come from different parts of Germany. There are also a number of foreign students from diverse countries, including Poland, India, USA, and Bulgaria. The average age of the students at the time of

registration was 24.3 years. Prior to being admitted to the NCP program, most students were enrolled in Psychology courses (62%). However, several students come from diverse backgrounds, including Cognitive Science, Neuroscience and Behavior, Engineering, Philosophy, and Information Technology.

Content summary

- ★ Interview with Prof. Torsten Schubert
- ★ Student Representatives
- ★ Photo Collage of Ammersee Symposium
- ★ Recent Scientific News
- ★ Examination News
- ★ New Grading and Project Schemes
- ★ Information on Masters Thesis
- ★ Academic Events in Munich
- ★ Upcoming Conferences

Letter from the Director of the NCP Program

Dear Editors,
Ever since I heard of the proposal of an NCP Newsletter, I have been looking forward to its appearance. Now that "The Brainstorm" is out: congratulations on the first issue, which includes an impressive mixture of news and serious and lighter contributions! It provides an excellent forum, bringing together students and staff, past and present.

It comes out at a very good time in NCP's short life – a time of consolidation of our strengths as well as the opening-up of new opportunities for integrated post-graduate studies in the neurosciences in Munich. We have just been very positively assessed by a panel of international experts for the Elite Network Bavaria, who "strongly recommended" the continued funding of the NCP program for another five-year period (2009-2013). Also, NCP has become one of the main access courses to the new Excellence Graduate School of Systemic Neurosciences (GSN Munich), which is run under the umbrella of the newly established Munich Center for Neurosciences: Brain and Mind (MCN Munich). We are proud that we are founding members of both these institutions.

Within this context of consolidation and development, "The Brainstorm" plays a very useful role in fostering an exchange of news and ideas and in helping to promote our identity.

So, let me congratulate you again on a well thought-out and presented first issue and wish "The Brainstorm" many happy returns. A Merry Christmas and a Happy New Year to you and all your readers,

Hermann Müller

Extension of NCP Website

The official NCP website will soon be extended. One of the major new features is the inclusion of an Alumni section. We hope this will enable NCP Alumni to maintain ties amongst themselves as well as with NCP. NCP Alumni are invited to forward information such as their current contact and email addresses to Donatas Jonikaitis (djonikaitis@yahoo.com) who will be responsible for

the NCP Alumni section. In addition, the (html-based) NCP website will be relaunched as a content management system, for example, to enable the use of Wikis or other interactive forums.

Interview with Prof. Schubert

This winter semester, Torsten Schubert was awarded a teaching professorship at the Psychology Department of the LMU, unit of General and Experimental Psychology. Prof. Schubert was formerly with the Humboldt University of Berlin and currently, here at LMU, teaches courses in the NCP as well as the psychology diploma program. Prof. Schubert's research interests primarily concern executive control and its neuroanatomical implementation through a variety of neuro-cognitive methods such as reaction time measurements and functional imaging.

Here are some excerpts from our interview with Prof. Schubert.



Schubert: "Enthusiasm and perseverance are crucial for success in science"

The Brainstorm: Your thoughts on the cultural and academic disparities between Berlin and Munich?

Prof. Schubert: The atmosphere here in Munich is quite vibrant and lively. This is a strong department where a lot of excellent research is being conducted. We have a tremendous advantage with many collaborations and networks with many outstanding researchers. In my opinion, much of the research being carried out here is directed to areas that seem to have important future implications such as the integration of Cognitive Neuroscience and Neuropsychology.

The Brainstorm: What factors and people sparked and subsequently, shaped your academic journey?

Prof. Schubert: Initially, when I began my research I was most influenced by the professors who guided me and taught me to think in a scientific manner. Then, I changed my career focus to cognitive sciences. In due course I learned an important trait from the people I worked with at the time: Perseverance.

Especially at the beginning of my career, I always admired people with a mission to spread their knowledge and share their work with others. However, I would like to believe that even now there is much to learn and much to draw inspiration from. It is important to be enthusiastic about your work, else it becomes very difficult to remain focused and to persevere with your work.

The Brainstorm: If you were advising us aspiring academics, what, in your opinion, are the three most important things that an academic would need to lead a sane and successful life?

Prof. Schubert: Excellence in research. Perhaps it is also desirable to have excellence in teaching but the two may not always coexist. Secondly, for success of any kind perseverance is extremely important. And the third most important thing for a rising academic is luck! Sometimes you might have excellent ideas but no resources or interested collaborators.

Student Evaluation

Just as every semester, students were given the chance to provide feedback to their instructors about the quality of their teaching by filling in evaluation questionnaires provided by NCP. In addition to this, the NCP Cohort 2006 collected answers to additional questions on another questionnaire. The results for the most important items relating to both form and impact, plus an overall grade based on all selected items, are displayed for the top

three teachers in Semester 2 of NCP Cohort 2006. Congratulations to Prof. Deubel, Dr. Finke, and Prof. Schneider, who were voted the top teachers of Semester 2 in 2007! Special congratulations should be given to Tillmann Vierkant who taught Neurophilosophy. No teacher received as many positive grades as he did. In fact, most students voted for him as an excellent lecturer. Congratulations, Dr. Vierkant!

Item	Prof. Deubel	Dr. Finke	Dr. Schneider
Amount of new information	++	+	+
Information up-to-date	++	++	++
Information delivery	++	++	++
Expectations met	+	+	++
Recommendation of course	++	++	+++
Coherent lecture structure	++	+++	++
Interest generated for subject	+	o	o
Knowledge acquired in course	++	+	++
Overall quality of lecture	o	+	+
Overall Grade of Instructor	1.90 (good)	1.97 (good)	2.04 (good)

Student Representatives

Re-elected student representatives from NCP Cohort 2006

Adam Christiansen

Adam studied Psychology and English in New York. He worked as an editor, record label magazine, New Yorker magazine suit, and sleep research EEG technician/coordinator. He enjoys rock and roll, unusual circumstances, and clinically-focused research.



Cordula Vesper

Once upon a time, a young woman named Cordula set off to understand the brain. She began her quest with Cognitive Science in Osnabrück and is interested in action understanding. In her free time, she plays the piano, sings, and loves to travel.



Reforms in Project Evaluation

Due to suggestions raised in the student-staff exchange committee and the NCP feedback meeting, there will be changes in the organization and grading of NCP research projects starting in the winter semester 2007-08. (1) The project supervisor is encouraged to define his or her expectations explicitly, and also state the requirements for successful course completion. As in previous semesters, each student and supervisor will sign a contract stating the title and place of the project. However, in addition to previous semesters, the new contract will also specify what is considered to be important in the supervision and fulfillment of the project requirements. (2) A new project grading scheme will be introduced (i.e., a supervisor questionnaire) to support a more precise evaluation of the work done in the research projects.

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Newly elected Student Representatives from the NCP Cohort 2007

Marco Schmidt

Marco studied Engineering in Information Technology in Stuttgart and Psychology in Leipzig and worked at the Max-Planck Institute for Human Cognitive and Brain Sciences in Leipzig. He often enjoys pondering over the mysteries of action perception, attention, philosophy, and probability theory. In his free time, he likes to play sport and travel.



Kathi Seidl

Kathi has a history of psychology at Konstanz University. She also studied at Umass. She enjoys snowboarding, reading, and playing soccer.



LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

Neuro-Cognitive Psychology
Ludwig-Maximilians-University of Munich

NCP Research Project Proposal

First Supervisor's Name: _____

Email Address: _____

Telephone Number: _____ Academic Title: _____

Neuro-Cognitive Psychology
Ludwig-Maximilians-University of Munich

Martinsstraße 4
March 8, 6050
Germany
Phone: +49 (0) 89 21 10-4020
Fax: +49 (0) 89 21 10-4066
<http://www.psy.uni-muenchen.de/ncp/>

Second Supervisor's Name: _____

Email Address: _____

Telephone Number: _____ Academic Title: _____

Working Lab Address: _____
(where the student works)

Research Project Title: _____

IMPORTANT: Each research project to be submitted must be a minimum of 2-3 weeks period during the semester break, consist of a supervisor and student agreement on a contract proposal form, completed by a project report to the NCP office, and a student report. Students should meet regularly on their own initiative to discuss progress. The NCP office will provide a list of potential supervisors. The NCP office will provide a list of potential supervisors. The NCP office will provide a list of potential supervisors. The NCP office will provide a list of potential supervisors.

Short Description of the Research Project (~250 words):

Project Aim with Respect to the NCP program (learning/training goal of the project work):

Specific Requirements / skills that students should bring along:

Further reading suggestions:

Submit Electronically to the NCP Office by Email ... OF ... Print this Form and Fax it to the NCP Office

Is the Brain the Site of the Mind?

A well accepted and widely used concept employed by neuropsychologists is that of functional dissociations. If a brain area is damaged, but the investigated mental function is preserved, then clearly that brain area is not involved in the task.

On the other hand, if an aspect of cognition is affected by an injury, then it is supposed that that brain area is indeed necessary for the task. Indeed, most researchers *even* believe that the functional architecture of the brain is *identical* to the representation and processing of information in the mind.

However, this seeming general agreement is not shared by everyone. Starting at the dawn of the mind sciences, it was a matter of debate what the site of the mind is, or whether it is materialized in the body at all. Although most researchers agree on the idea that the brain represents the mind, most recently researchers from the group "New Challenges to Paradigms" (NCP) have rediscovered an alternative, starting in the groundbreaking work of Aristotle. In his original experiment, the philosopher opened the heads of several sheep and felt that their brains were cold. Compared to the normally warm environment in the body, this led Aristotle to conclude that the brain was a cooling device, needed for the site of a mind at a different location in the body.

"This hypothesis has received far too little interest in today's mind sciences", explains Prof. Animus, leader of the research group. "Actually, this could even explain why selective brain injuries affect selective aspects of the mind, simply because the involved aspects of the mind receive less cooling and are in turn affected." According to Prof. Animus, there is no reason to assume that the brain is the site of the mind.

However, there is one open question the research group is unable to answer: What is the site of the mind? Within the group, several hypothetical areas of the body circulate, including the skull, the heart, and the stomach. "Did anyone ever remove the skull of a person and observe whether his mind was still functioning?", asks Prof. Animus. Others, again, believe that the four humors, black bile, yellow bile, phlegm, and blood, are representative for the mind, an idea actually originating in the work of Hippocrates and further established by Galen.

The controversy remains. Hopefully, the question whether the brain is the site of the mind or not, will soon be answered. If it turns out that Prof. Animus' group was right, this would allow the mind sciences, with many competing hypotheses, to start from scratch to find a unified theory of the function of the mind.

Exam Registration Advice

So YOU love NCP so much that you want to continue studying for an extra year? Here's the plan:

- ❶ Do not check whether you are enrolled in NCP at all. In case something goes wrong, they can't blame you.
- ❷ Do not get an LMU ID at campus.lmu.de, might be too much useful information to handle.
- ❸ Most importantly, do not go to the registration office or even dare to use the convenient registration form at <https://lsf.verwaltung.uni-muenchen.de>. Registration is between the 2nd and 14th December between 08:00 and 18:00.
- ❹ Do not hand in the registration form until 20th December. Instead, join people at the Christmas Market at Marienplatz, have some mulled wine and feel cozy. It's Christmas time!

Seriously, don't forget to register or you're in trouble!

Registering your Master Thesis

At the end of your third semester, you are required to submit a Master thesis in order to complete the NCP degree. To do so, you are supposed to register your thesis by the 15th of March and officially start your Master Thesis project by the 31st of March (at the latest!) of the year you intend to graduate. You can find the (new) registration form at the following website:

<http://www.psy.uni-muenchen.de/ncp/reg/gui.html>
Submit your completed thesis at the latest by the 30th of September (three bound copies) to Mrs. Göppel at the Examination Office ('Prüfungsamt').



"Creepy, yes. But on the other hand, he's never missed a deadline."



The Seven Deadly Sins of Writing your Master Thesis

- (1) The single most important thing to do before writing your master's thesis is to buy a coffee machine, especially if your organization skills can easily be compared to a lamp post.
- (2) A successful thesis has two main qualities: first, it identifies a good question; and second, it provides a satisfactory answer to that question. And yes, the latter is important.
- (3) Never ponder too long over the fact that no one will ever read your master's thesis after you have received your grade, not even you yourself!
- (4) It is advised that you should write your masters thesis formally, but it should be easy to understand
- (5) Ideally, instead of turning in a traditional Master thesis, you could write a paper for a journal. You can

then extend this paper to a Master thesis by adding an extensive set of appendices. This works out quite well since you avoid writing tremendous amounts of pointless text. Also the fact that more than two respectable researchers will read it must count for something.

(6) If you would like to write as the greatest scientists in the world do, you could just cut, copy, and paste. However, there will be many who will see right through the artifice. Be advised to use the Thesaurus.

(7) If you do not have enough time to devote to your text towards the end, spend sufficient time on beautifying the graphs and pictures so that they may serve as excellent distractors and may reflect favorably on the unread written material.

Ammersee Symposium 2007



Symposium

Pictures from the International Symposium on the Dynamics of Attentional Control, that took place at the Ammersee near Munich from Jun 15-17th, 2007.

The symposium was divided into five thematic sessions, each addressing a set of different issues in attention research, including attention and motor control, attention and memory, attention in time, and brain mechanisms of attention. The aim was to foster a dialogue amongst leading experts in these fields.

SCHOLARPEDIA

Most of us are quite familiar with Wikipedia and, while it provides a fairly good initial estimate of a subject, it does not reflect expert opinion. Scholarpedia is maintained and edited by scholars, and experts are chosen to explain theories and hypotheses that other scholars are free to review.

Overall, it makes interesting reading. Even more so if one skips to the controversial discussion sections.

<http://www.scholarpedia.org>

Annual Evaluation

Each winter semester, the Elite Network Bavaria (ENB) evaluates all ENB programs which span more than 30 courses (including NCP). The process involves student participation in an online questionnaire, available for download at the ENB website (<http://www.elitenetzwerk-bayern.de/>). For the year 2006-07, 89.2 percent of the second and third cohort students participated in the evaluation. According to the survey, 84.8 percent of these students were very content with the program. Similar ratings were obtained for more specific aspects of the course, such as availability of introductory courses, initial student expectations, and how these were met.

Monkey Beats Human in Memory Task



“We underestimate chimpanzee intelligence”

Chimpanzees are faster and more accurate in remembering digit sequences, as recently revealed by Japanese scientists.

Sana Inoue und Tetsuro Matsuzawa from the University of Kyoto taught six monkeys to recognize the Arabic digits 1 to 9 and to sort them in an ascending order by touching them consecutively on a touch screen where they were presented at random positions. The digits were replaced by a white square as soon as they touched the screen. In the direct comparison, the chimpanzees outperformed the human participants - student volunteers - both in accuracy and in speed.

<http://www.youtube.com/watch?v=nTgeLEWr614>

But also in a second task, monkeys performed fair better than humans: here, five digits were presented and disappeared after 650, 430 or even 210 ms. While human performance decreased rapidly, it remained largely constant for the chimpanzees.

This is taken as evidence that chimpanzees have an eidetic or photographic memory. Matsuzawa who lead the study says that in rare cases, similar findings can be observed in human toddlers who normally lose this ability when growing up. Probably, early humans lost the skill as we acquired

other memory-related skills such as representation, hierarchical organization, and language.

In the wild, this memory skill might be useful for memorizing fruit locations at a glance or making a quick map of all the branches and routes in a tree. „This finding is incredible“, says Frans de Waal, at the Yerkes Primate Center at Emory University, Atlanta, Georgia, US. “We underestimate chimpanzee intelligence,” Matsuzawa says. “We are 98.77% chimpanzee. We are their evolutionary neighbors.”

Current Biology, vol 17, p. 1004

Brain Development is Delayed in ADHD



In children with attention deficit hyperactivity disorder (ADHD), the brain matures in a normal pattern, but development is delayed around three years in some regions of the brain. This was revealed in an imaging study across a large number of children participants.

Researchers at the National Institutes of Health’s (NIH) National Institute of Mental Health (NIMH) scanned 223 children diagnosed as having ADHD and the same amount of children without this diagnosis and com-

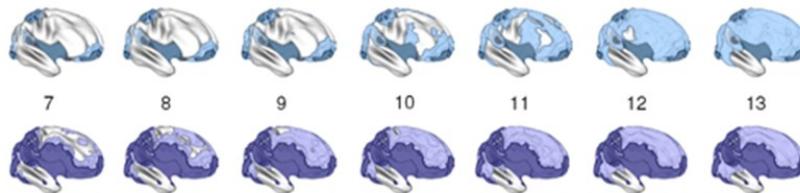
pared structural images across different points in development. The participants – ranging from preschoolers to young adolescents – were tested at least twice at about three-year intervals. The investigators placed their focus on the age when cortex thickening during childhood gives way to thinning following puberty, as it is supposed that unused neural connections are pruned for optimal efficiency during the teen years. “Finding a normal pattern of cortex maturation, albeit delayed, in children with

ADHD should be reassuring to families and could help to explain why many youth eventually seem to grow out the disorder,” explained Philip Shaw, M.D., NIMH Child Psychiatry Branch, who led the research.

These findings are strong support for the theory that ADHD is a result of delayed cortex maturation. In the future, the researchers hope to detect genetic underpinnings of the delay in order to find ways to aid recovery from the disorder.

PNAS, Dezember 2007

ADHD



Typically developing controls

Morphological brain growth with age is colored. Growth is only delayed in ADHD children.

Gödel, Escher, & Bach

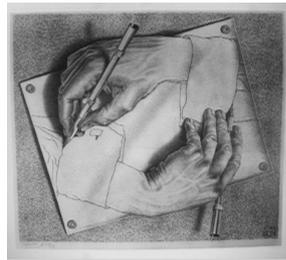
Since consciousness seems to be the most recent and widespread subject for coffee talk at NCP, here is more caffeine for thought. Douglas Hofstadter released a new book 'I am a Strange Loop' earlier this year. It builds upon his theories and propositions stated in his critically acclaimed earlier work 'Gödel, Escher, and Bach' (GEB). GEB subtly exposes a mysterious logical concept embedded in the works of the mathematician Kurt Gödel, the artist M.C. Escher, and the composer Johann Sebastian Bach.

Essentially, GEB talks about the nature of self-reference, i.e. the phenomenon of an object being contained or accessed within itself. It suggests that the use of formal rules in systems made of inanimate objects may cause the emergence of an organization beyond the boundaries of the system itself. In other words, it puts forth the notion that something meaningful can be conjured from a collection of elements that make no sense in isolation.

In *I am a strange loop*, Hofstadter explains an intriguing consequence of self-reference: the strange loop. The illustrated lithograph by Escher depicting two hands drawing each other into existence is a famous example of the strange

loop paradox. This is the common logical foundation found in Escher's paintings, Gödel's incompleteness theorem and Bach's Crab canon. A strange loop is more correctly defined as follows:

...when by moving up or down in an hierarchical system one finds itself back where it started...



Strange loop painting by artist M.C. Escher

Gradually, the theme does a little self-reference on itself and ends up implying that the emergence of the self can be described from the logical foundations of the Strange loop. The new book develops these ideas into a more focused picture of consciousness.

"You make decisions, take actions, affect the world, receive feedback from the world, incorporate it into yourself, then the updated 'you'

makes more decisions, and so forth, round and round," Hofstadter writes. "What blossoms from the Gödelian vortex, this symbol system with the capacity to represent itself, is the "anatomically invisible, terribly murky thing called I." This entity 'I', according to the book, need know nothing of neurons. Isolated from the biological substrate, the real effectors of our consciousness may not be things like "serotonin" or "synapse" or even "cerebrum," "hippocampus" or "cerebellum" but abstractions with names like "love," "jealousy," "hope" and "regret."

Hofstadter calls this paradox the grand illusion. "In the soft, ethereal, neurology-free world of these players," the author writes, "the typical human brain perceives its very own 'I' as a pusher and a mover, never entertaining for a moment the idea that its star player might merely be a useful shorthand standing for a myriad infinitesimal entities and the invisible chemical transactions taking place among them."

The questions that you may have about consciousness may still persist after you read these two books, but in all likelihood, they may increase as we try to quench our curiosity about ourselves. What a strange loop!

Get elected in a flash!

Ever wonder why hordes and hordes of apparently intelligent people make the most inconceivable choices in political leadership? A recent study published in the *Scientific American* reveals some interesting facts in support of many earlier theories on first impressions.

Princeton University researchers asked student volunteers to select two candidates in past American political races. They were asked to judge which candidates appeared more competent. Interestingly, their selections turned out to be the voters' choices. In the study participants were shown pictures of the winners and losers in 89 political races that took place in the United States. The subjects were given either 100 milliseconds, 250 milliseconds or an unlimited amount of time to choose candidates that they perceived as more competent; in all cases they were instructed to respond instinctively. The students' selections were also the election winners in most cases.

"All of the action goes on in the first 250 milliseconds of exposure, and then there's not much going on," says Alexander Todorov, an assistant professor

"To protect ourselves, we stick to our first impressions."

of psychology and co-author of the study. He also adds "If they deliberate, they get slightly worse. Though, they are still above chance in picking the winner."

In a recent interview, Moshe Bar, principal investigator of Harvard Medical School's Visual Neurocognition Lab, says that extremely fast impressions are often more relevant to judgments that affect survival, such as whether something we are looking at poses a threat. "I think there is a repertoire of characteristics that could be inferred from facial features," he says. Although not critical to survival, we often make pre-

dictions—for example about a person's intelligence and ability to govern from the appearance of their face. "Just to protect ourselves, we often stick to these first impressions," he continues. "We tend to err on not changing our mind too quickly and then realize that our first impression was correct."

It would be worth debating if mere dental surgery and good camera work is enough to merit some of the most powerful political offices in the world. From an evolutionary point of view, many of our judgments lie in the realms of the superficial, probably because our survival-based goals in the past were shallow. However, do we continue to rely of the remnants of ancestral behaviors even in today's world of social complexity and liberal thinking?

If this theory puts forth the notion that 'looks matter' in the first 250ms of viewing a political candidate, it fails on at least one major account...

Elite Network
of Bavaria



LMU

LUDWIG-
MAXIMILIANS-
UNIVERSITÄT
MÜNCHEN

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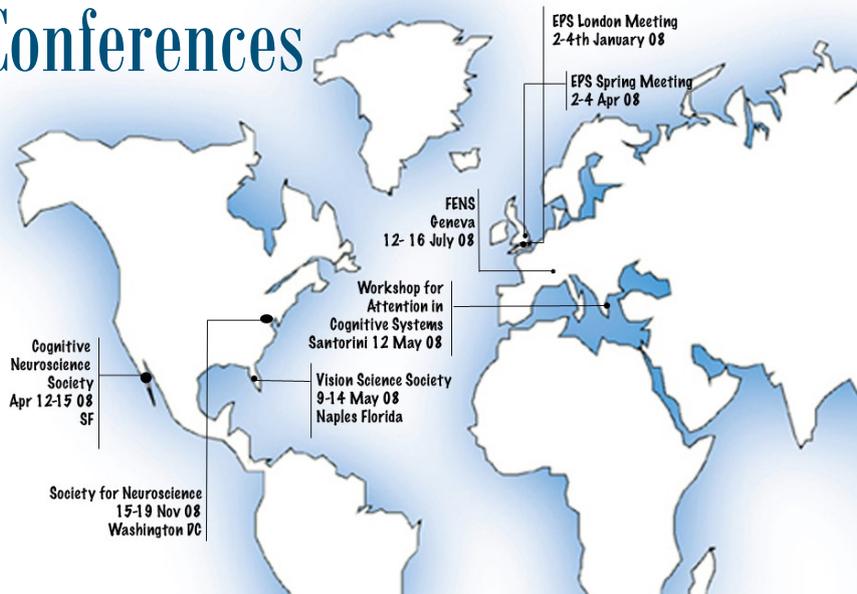
Web: <http://www.psy.lmu.de/ncp/>

Tel.: +49-(0)89-2180-4829 (Petra Redel)

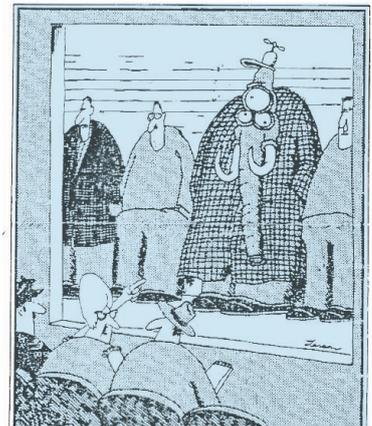
Fax: +49-(0)89-2180-4866

The 'M.Sc. in Neuro-cognitive Psychology (NCP)' was established in 2004 by the *Elite Network Bavaria*. The aim of the four-semester program is to educate a select group of students per annum (recruited worldwide) in *Neuro-cognitive Psychology*, an emerging field at the intersection of *Psychology* and the *Cognitive Neurosciences*. The course focuses on the fundamental concepts and methods of this field (psychophysics, EEG, fMRI, patient studies) as well as their application in selected fields, such as 'Neuro-cognitive Ergonomics'. Students undertake two years of course work in small groups, comprising lectures, methodology, and independent research projects. Most graduates of the initial cohorts successfully applied for prestigious international PhD programs such as the 'Graduate School for Systemic Neurosciences'.

Conferences



The Effect of Visual Pop-Out on Memory Recall



"That's him! That's the one! ... I'd recognize that silly little hat anywhere!"

Timetable on Neuroscience Talks in Munich

<p>Mo., 17.Dec. 2007 18.00 - 19.00h</p>	<p>MCN Lecture Thomas Brandt (Department of Neurology, LMU Munich) "Vestibular Ocular Reflex: Biology, Modelling, Technical Inspiration" Location: Bibliothek Münchner Kompetenzzentrum Ethik, M 210 (2nd floor), Geschwister-Scholl-Platz 1, 80539 München</p>
<p>Mo., 14. Jan 2008 17.30 - 19.00h</p>	<p>DFG Graduiertenkolleg "Orientation & Motion in Space" Markus Lappe (Psychologisches Institut II, Universität Münster) "Travel distance estimation from visual motion by leaky path integration" Location: Univ. Hospital Munich Grosshadern, Neurologisches Forschungshaus, Marchioninistrasse 23, Seminar Room</p>
<p>Mo., 21. Jan 2008 18.00 - 19.00h</p>	<p>MCN Lecture Mark Hübener (Max-Planck-Institute of Neurobiology) "How Sensory Input Shapes the Visual Cortex" Location: Bibliothek Münchner Kompetenzzentrum Ethik, M 210 (2nd floor), Geschwister-Scholl-Platz 1, 80539 München</p>
<p>Mo., 28. Jan 2008 17.30 - 19.00h</p>	<p>BCCN Lecture Thorsten Dau (Centre for Applied Hearing Research, Acoustic Technology, Ørsted-DTU, Technical University of Denmark) Location: LMU-Biocenter, Martinsried, Hörsaal B01019</p>