ETHzürich

Infozine No. 14

The Magazine for Users of Scientific Information

Does Google searching impact the climate?

Energy efficiency and limiting factors that have an impact on climate are a hot topic in many countries. While mobility, and even cows, just to name two, are considered to be responsible for global warming, using the internet is usually not considered a factor. Everyone does hundreds of Google searches a day, believing that this has no impact. In a Sueddeutsche Zeitung article of May 17, 2010 there was a discussion about the CO_2 equivalents of a Google search, ranging from 7 g to 0.2 mg. Of course, this depends on the efficiency of the Google server farms, which are getting greener every year, and claimed to be carbon neutral since 2007. 500 daily (0.2 mg) searches would equal about driving 1 km with an energy efficient car. However, running your PC in your office 24/7 also consumes energy: a 27" iMac consumes 63 W (and up to 240 W), equal to 169 kg CO_2 equivalents annually (559 g CO_2 /kWh). This is about the same as a flight from Zurich to London. Thus, utilizing the full power of scientific information can not only save time but also energy.

Enjoy reading.
Your Chemistry | Biology | Pharmacy Information Center

2400+ TED-Talks for the curious

Architect and graphic designer Richard S. Wurman founded TED as a conference in 1984, when he realized that technology, entertainment and design are going to overlap. TED is, therefore, the acronym for technology, entertainment and design. The first TED conference in 1984 was not successful, but from 1990 onward there were annual conferences, since 2015 in Vancouver, before in Long Beach. Speakers have to restrict themselves to 18 minutes at max to present their ideas, and are supposed to do this as entertaining and innovative as possible. Beside the TED Conference there are also other events such as the TED Prize, the TEDx Events, the TEDMED Conference on health and medicine and much more. TEDx events are TED-like events that are independently organized and take place overall in the world – so far there were more than 10,000 events in 164 countries with more than 50,000 talks. Some of those talks are also published on TED.com.

No wonder that more than 2400 talks are now available as video. You can search based on your field of interest but also for the duration of the talk. Those with a tight time budget select 0 to 6 min. TED.com is the ideal platform for all who want to learn about innovative ideas, aim to understand new research areas or simply want to know which techniques are used by others for when presenting. This year's TED Conference in April 2017 in Vancouver attracted not only many scientists as speakers (especially AI experts and neuroscientists were present) but also photographers, musicians, athletes such as Serena Williams and also the pope Benedict. In April 2018 the next TED Conference will take place in Vancouver and the theme will be „The Age of Amazement". The registration fee is 10,000 U$ – and a successful application is a pre-requisite. The next TEDMed Conference will take place in November 2017 – the talks from the 2016 conference can be found on the website of TEDMED.

The Infozine Interview

A road map for learning

6 questions, today to Victoria Kunesch (20), studying chemistry in the 4. semester

1. Which are the areas scientists should focus on more in depth?

That's a difficult question. On the one hand I think that scientific disciplines such as pharmaceutical sciences and environmental sciences deserve more research as they have a direct impact on us. On the other hand I think that also smaller disciplines have their justification and can be exciting. For example, how to charge an iPhone without cable.

2. Where is your favorite place at ETH?

The Polyterrasse with the beautiful view over the lake and to the mountains.

3. When do you consider a lecture fascinating?

When a professor is able to motivate and is very enthusiastic about the subject. Lecturers should not bring too many slides at once but take some time, thus giving students the time to understand what is taught. Thus, it is more likely that you actually had learned something when the lecture is done.

3. What tricks can you share for when your motivation hits the bottom or you are tired of learning?

For me it is very important to have a plan for learning that gives me the necessary guidance. During the semester, I try to keep Sundays and Saturdays free. During the "Basisprüfung" I took a weekend off and went to the mountains, to clear my head. The learning material I divide into small chunks that I am constantly repeating. This learning method grants me a lot of positive feelings, as it allows me to easily call up what I have already memorized.

4. If you were granted a wish, what would it be?

That my family and I would stay healthy.

6. Which book would you like to recommend?

A book by Philippe Grimbert: A Secret (Original: un secret). The book is about a Jewish boy who investigates how his family suffered during the Second World War.

Jan Wyler conducted the interview. Would you like to answer our questionnaire and receive an original Information Center memory stick? Please contact Jan Wyler (wyler@chem.ethz.ch)!

iGod

We would like to draw your attention to the recently published book "iGod" by Willemijn Dicke and the ETH Professor Dirk Helbing, which is now also part of the collection of the Chemistry | Biology | Pharmacy Information center. The book describes how we (may) live in the age of big data, in a dark age, referring to "Brave new World" and "1984". In this age and society, the SocialCitizenScore plays a crucial role (see SSI, p. 5 and an article on a Chinese Index published in the German newspaper Süddeutsche Zeitung). Dirk Helbing explains in the foreword that they decided on a novel as the format, as neither a scientific study nor a investigational report would have allowed them to describes what needs to be thought and talked about.
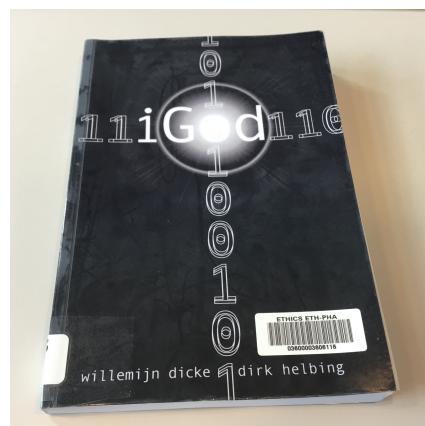
Explanation in brief

Diamond Open Access

We assume that most readers can now tell the difference between Green and Golden Open Access. But what is Diamond Open Access? Most likely something more valuable than gold, and indeed, diamond open access journals do not charge money, neither from readers (classical model) nor from authors (golden OA). Those journals depend on individuals and/or institutions that are willing to take the burden of publishing, either through the use of existing infrastructure and/or by self-exploitation. Right now you are reading a Diamond Open Access journal.

News from the ETH Library

■ Broader range of digital textbooks from all subject areas

The latest editions of important and popular textbooks published by Pearson are now available as e-books, including the following titles:

For mathematics students:
- Analysis 1
- Probability and Statistics
- Topology

For people interested in biology:
- Brock Biology of Microorganisms
- Campbell Biology

For students of the economics sciences e.g. the following are now available online:
- Principles of Marketing

Other essential textbooks include:
- Political Science: An Introduction
- Intellectual Property

Writing Research Papers: A Complete Guide

You can find more digital textbooks via the website Digital textbook collection.

Access is possible online within ETH Zurich's network.

■ Interrupted service in ETH E-Citations and ETH E-Collection, 15 May 15, to June 12, 2017

The ETH Library will launch the Research Collection in the middle of June 2017, a new platform for academic publications and research data from ETH Zurich.

The two applications, namely ETH E-Citations and ETH E-Collection, will be merged into the new publication platform.

To ensure that the migration goes smoothly, it will not be possible to enter new publications in ETH E-Citations or publish via ETH E-Collection from 15 May to 12 June. Nonetheless, both platforms will remain fully functional for searches and access to documents already published.

■ oaFindr – the easy way to find Open Access publications on the Knowledge Portal

oaFindr is an extensive collection of over 20 million academic articles published Open Access via the golden, green and hybrid path. All the articles are peer-reviewed.

This collection is now available on the ETH Library's Knowledge Portal and enables specific searches for Open Access publications.

Users outside the ETH Zurich's IP range need to log into the Knowledge Portal.

oaFindr is a tool made by the company 1science and is currently being tested by the ETH Library for a year.

Search for the desired article in the tab "Articles and more". Then select oaFindr in the right-hand column under "Collection". Your hits are restricted to freely accessible online articles. An alternative tool is desribed on page 5.

■ Journal of Visualized Experiments (JoVE) – videos demonstrate lab methods

The video journal JoVE (Journal of Visualized Experiments) publishes papers and academic experiments in the form of video recordings. There are now three new modules in genetics, cancer research and biochemistry:

- JoVE Genetics provides videos on different sequencing technologies and methods from the fields of gene expression, evolutionary genetics and epigenetics.
- JoVE Cancer Resarch comprises videos on topics such as cellular oncology, tumour development, mutagenesis or cancer biomarkers.
- JoVE Biochemistry makes it easier to reproduce methods that affect bioseparation, protein purification or even protein folding, for instance.

The journal can be accessed online from ETH Zurich's network.

Fake News and Fake Papers (1): Fake Peer-Review

The number of articles dealing with fake news is increasing exponentially, and also courses that have the buzzword fake news in the title are increasing. More serious than those courses is the report that the publication *Journal of Tumor Biology* (Springer Nature) had to retract 107 papers – all from China. The articles were submitted with reviewer suggestions, which had real researcher names but fabricated e-mail addresses.

ICSD (Inorganic Crystal Structure Database)

ICSD, the world's largest database for completely identified inorganic crystal structures, has been complemented with two important content features. Firstly, many author abstracts were added to the documents. These texts offer more than just mere information on structures and provide a global overview of the related scientific articles. The documents were also assigned a DOI (Digital Object Identifier) so that the full-text document can be accessed online by a simple mouse click. Secondly, FIZ Karlsruhe has established its own base of scientific keywords to index the documents. The link-up with these keywords that are selected from a defined thesaurus enables a deeper content indexing. Thus it is possible, for example, to precisely search for physical characteristics of the crystal structures or for information on their spectroscopic analysis.

Is the Twitter feed reliable – true?

It is very easy to set up a Twitter feed, even easier when you use bots. But how likely is it that the message is trustworthy? Scientists based at the Georgia Institute of Technology tried to find a evaluation system that judges the credibility of twitter messages based on the vocabulary used. The conference paper can be found here.

PubMed with conflict-of-interest statements

PubMed now includes authors' conflict-of-interest statements and links them to abstracts so they are accessible on search pages. PubMed's new policy comes more than a year after a group of scientists, physicians, organizations, and a handful of US senators sent a letter to the NLM and the National Institutes of Health asking them to publish the disclosures. More information can be found in a NLM Technical Bulletin.

Paper Tip

We do not only recommend new books but sometimes also new articles. Here is one that we would like to recommend today and, next to it, also an entire Special Issue:

- Larissa Shamseer, et al. **Potential predatory and legitimate biomedical journals: can you tell the difference?** A cross-sectional comparison. BMC Medicine 2017 15:28, DOI: 10.1186/s12916-017-0785-9
- **JAMA** (Journal of the American Medical Association): Themenheft 17 (317) 2017: **"Conflict of Interest"**. Click here for more information.

Springer Publisher celebrates its 175th anniversary

May 10, 2015 was the 175th anniversary day of Springer Publishers. After many changes and sales during the last 25 years, it is now Springer Nature. In 2019 the other part – Nature – can also celebrate an anniversary: The famous journal *Nature* started publishing 150 years ago.

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Please use the subscription box on our website at www.infozentrum.ethz.ch!

A Linked Open Data platform for the scholarly domain

The platform will collate information from across the research landscape. This high quality data from trusted and reliable sources provides a rich semantic description of how information is related, as well as enabling innovative visualizations of the scholarly domain. The data in Springer Nature SciGraph is projected to contain between 1.5 to 2 billion triples. It will comprise metadata from journals and articles, books and chapters, organizations, institutions, funders, research grants, patents, clinical trials, substances, conference series, events, citations and reference networks, altmetrics, links to research datasets and much more. A presentation is available for download.
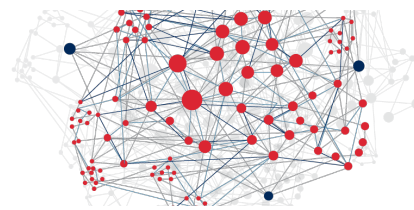
Fake News and Fake Papers (2): *Bats are really cool animals*!

More entertaining is the story of a scientific paper which is based on a school work of a seven-year old boy writing about his favorite animals, which got accepted as a scientific article by a – most likely – predatory publisher. His father, Alexandre Martin, then decided to publish the whole story with the title "*A not-so-harmless experiment in predatory open-access publishing*" in *Learned Publishing*.

A. Martin   T. Martin

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Elsevier acquires ELN Hivebench

Electronic lab notebooks (ELNs) are receiving growing interest and now Elsevier went back into business. Veterans of information management might remember the time when Elsevier owned MDL, and thus an ELN. Now Elsevier has announced the acquisition of Hivebench. This tool will be integrated into Elsevier's existing Research Data Management portfolio.

The journal tip (10):

Negative & irreproducible

Today we are presenting not just one journal but rather journals that focus on negative results, or results that cannot be reproduced. The following are known to us:

Journal of Negative Results in BioMedicine

An open access, peer-reviewed journal that provides a platform for the publication and discussion of non-confirmatory and "negative" data

Journal of Negative Results

Peer-reviewed, sound scientific work in ecology and evolutionary biology that is scientifically rigorous but does not rely upon arbitrary significance thresholds to support conclusions.

Journal of Pharmaceutical Negative Results

A peer-reviewed journal developed to publish original and novel research articles resulting in negative results.

New Negatives in Plant Science

This journal existed only from 2015 to 2016 due to lack of articles.

The Journal of Irreproducible Results

In six funny issues a year, JIR offers spoofs, parodies, whimsies, burlesques, lampoons, and satires.

Peer Review Week 2017

The theme of Peer Review Week 2017 is "Transparency in Review", see also page 5.

PEER REVIEW WEEK 2017 / TRANSPARENCY

11-17 SEPTEMBER 2017

## Publons launches the Publons Academy

Publons, the online network of peer reviewers, has launched the Publons Academy: a free, practical peer review training.

How might peer review look like in 2030?

Open access publisher BioMed Central and Digital Science have recently published a report "What might peer review look like in 2030?", based on the lively and progressive sessions at the SpotOn London conference held at Wellcome Collection Conference Centre in November 2016. The report can be found on Figshare.
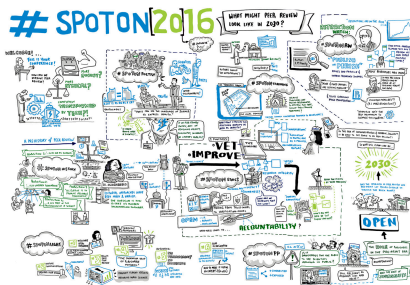
You are working more focused when in the cold

A recently published Israeli study concludes that expressions, especially in German, such as "hot tempered", "chillen", "heated discussion", and "cold blood" may indeed indicate that one can better concentrate at lower temperatures. And this may be achieved by just looking at winter landscapes. However, the author has not evaluated if the desktop image on his Mac (fig.) results in better concentration. The study has been published in *Psychological Research*. We are happy to make test photos and paintings available.
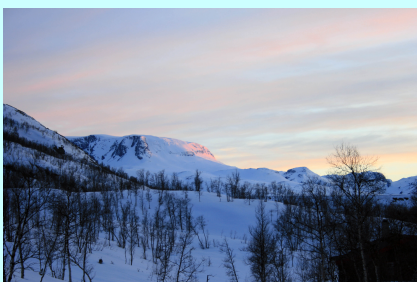
Social Selling Index (SSI)

It is common knowledge that not only do researchers generate data, but increasingly also data about researchers are generated, e.g. altmetrics – as discussed in the latest issue of the Infozine Special Issue. As a result of the increasing number of communication tools there are not only data about researchers but also data about those who are engaged in professional social networks. Those who are active on ResearchGate will have a higher RG score than those who only use the tool occasionally. LinkedIn, the world largest professional network (owned by Microsoft since 2016) had no score until recently. Quite silently, also LinkedIn has now introduced scores, the Social Selling Index (SSI). Your SSI tells how effective you are at establishing your professional brand. It provides you with an **industry rank SSI** (comparing people in your industry) and **network rank SSI** (comparing people in your network). If you want to see your SSI, click **here.** Your SSI is visible only to you but can – naturally – be shared with others.
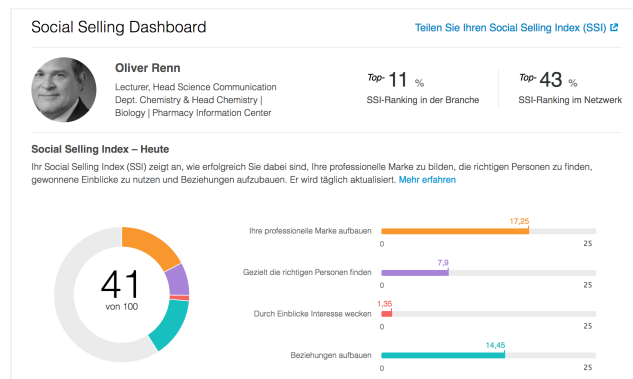
Finding Open Access versions of articles

Due to the broad range of subscribed content you might not need this tool at ETH Zurich. The obviously legal plug-in, available for Chrome and Firefox, reveals if there are open access versions of a certain paper. The tool has been developed by the start-up Unpaywall – with ImpactStory behind. An open, green locker on the right frame of the browser indicates that an Open Access (OA) version is available – if not, the locker is grey and closed. Unpaywall states that for 50 to 85% of the articles OA versions are available. Clicking on the green lockers starts the PDF article download (Example).
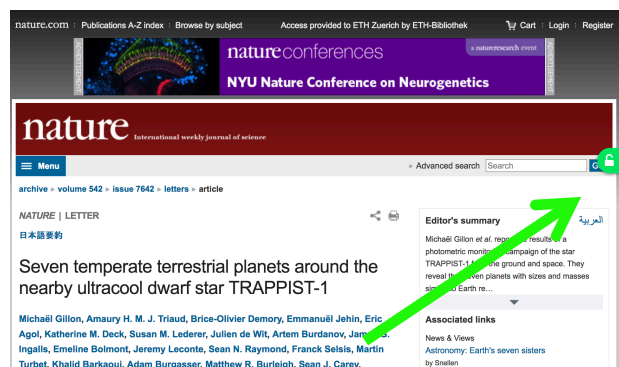
App Tip (1)

Reminders

Everyone knows to-do lists and if you don't want to have them on paper there are many apps you can use. If you want a clean and simple tool and you use iOS there is no need to buy one from the App Store.

The App "Reminders", standard on all Apple iOS devices, allows you to use and manage to-do lists, schedule reminders and synchronize with e.g. with Outlook and your ETH Zurich desktop.

The function in Outlook is a bit hidden and you can find it in the bottom left corner of the window, the third icon, the clipboard.

If you cannot see the icon, click on the three dots.

Searching for key opinion leaders in Scopus

Occasionally one wants to know who the experts in a particular research field are, e.g. those who publish most. Pharmaceutical companies are always searching for the key opinion leaders (KOL) and are willing to pay a lot for that kind of information. However, you can search for KOLs also in Scopus. In case you want to know who are the leading experts in fluorination, follow the following steps:

1. Open Scopus and perform a "Document Search" on "fluorination".
2. Select the years 2013 to 2017 and click on "Limit to" to ensure you get the most recent research on this area.
3. Click on "Analyze search results" and ensure date fields are set to 2013 to 2017.
4. The "Authors" tab in the overview reveals who is publishing most articles. By clicking into the colored Author bar you will be directed to the author's publications.
5. If you click on the author's name on the left, an overview page opens that displays useful information on the author.
6. If you want to find KOLs in a certain country, you should add another search field by clicking on the "+" in the Document search, selecting "Affiliation country" and entering e.g. "Switzerland". Now you will see only Swiss scientists or those who publish with Swiss scientists.

Fake News and Papers (3): Conference Invitations

You can automatically generate texts not only with software (see Infozine No. 12, p. 1) but also with iOS. The author of this news item has already received messages that were generated using the autocomplete version of iOS – for entertainment only. However, he never thought that those texts could be submitted.

> Ja das stimmt so ein bisschen zu spät und fuhr und ich habe die Kinder sind wir in den nächsten Wochen in den nächsten Monaten nicht so viel zu viel für mich nicht so viel zu viel für mich nicht so gut und dir auch ein paar Minuten vor Schluss machen wir uns in den letzten Wochen in den letzten Monaten nicht so viel wie geht das auch noch nicht mal so ein bisschen zu spät.

😂😂😂😂😂😂

> Ich habe ein neues Auto kaufen und dann noch mal ein paar Tage nach dem ersten Weltkrieg bezahlt werden muss und die anderen beiden Seiten der Regierung in der Stadt und Land der Welt der kontinuierlichen Spracherkennung ist ein Test.

Christoph Bartneck, a researcher from New Zealand, is obviously also receiving many invitations to talk at conferences in subjects he is not familiar with. So he submitted such an iOS generated proposal and three hours later his talk was accepted. You can read the whole story in the British Guardian.

Library Connect Switzerland

On June 8, 2017, the Chemistry | Biology | Pharmacy Information Center is, once again, host and co-organizer of the Elsevier Libary Connect Event Switzerland 2017. The program for 2017: An update on Elsevier's pipeline on new and old databases and tools, and two workshops, which take place in the Alumni Lounge. One with Jenny DeLasalle, Freelancer, on „Research Metrics" and one with Charon Duermeijer on „Librarians as in-betweeners: Find your roles in academic publishing". Registration **asap (!)** online.

apoc social: the app for organic chemistry

As spring lectures end, an inevitable fate looms over campus: exams. Students have two months to review a full year of lectures, solve problem sets and practice with peers.
Organic chemistry persists as a challenging subject for generations of undergraduates.
Cascading cycloadditions and cycloreversions, Felkin-Anh and Cram models, carefully orchestrated syntheses of unusual scaffolds, and Myers' and Evans' auxiliaries are all expected topics in your upcoming organic chemistry exams.
apoc social Problems in Organic Chemistry is a mobile learning environment designed for organic chemistry. The social app was developed over the past years to engage students on the go.
As part of an educational initiative in Prof. Carreira's research group, this app is entirely free and currently has a library of 850 questions. Each problem includes selected literature, difficulty rankings, and suggested solutions. A global feed and discussion boards enable students to share, vote and debate ideas for challenging mechanisms. Based on a user's activity and preferences, apoc social personalizes a dynamic curriculum.
In the classroom, lecturers and teaching assistants can use apoc social to easily demonstrate individual problems to their students and oversee several metrics to measure students' success.
The final version of apoc social is scheduled for release this summer for iOS and Android devices.
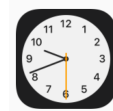
"Clock" and "Bedtime"
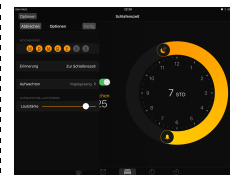Another app that might be useful for iOS users is an app that is also part of the suite of pre-installed standard apps. You can use the app "Clock" to get an alarm in the morning. What many do not realize is that there is also a tab below called "Bedtime".

Bedtime displays a message once it is time to go to bed in order to get the desired hours of sleep. However, you can also use the app to get up in the morning by singing birds instead by a nasty alarm clock. The birds get louder and louder and ensure, at least for the author, that you really wake up in a good mood. Of course, there are also other sounds available that all start with a low volume level. Check Instagram to see and hear the alarm.

New D-CHAB publication list

The **D-CHAB publication** list is now based on a new technical framework and can additionally display the so-called alternative metrics, i.e. data from research metrics provider Altmetric.

The new list can be found – as earlier – at www.chab.ethz.ch/publications. The new publication list has several advantages:

- Bibliographic data are now retrieved directly from Scopus, the world's largest literature database, and updated daily. It is unlikely that the journal you published in is not covered by Scopus.

- Additionally, there are filter options for research groups, authors, and year of publication. Articles back to 2009 are covered.

- Data from Altmetric, a provider of altmetrics (alternative research metrics), are now also fed into the publication list. This allows you to see whether your paper has been mentioned in the media – by whom and when – or if your article has e.g. been referenced in Wikipedia or in a policy document. In order to see such additional metrics, you need to click on the term "Show Altmetric data". More or less colorful Altmetric donuts are then displayed on the right – provided there are mentions to your article. By clicking on the donut, you are referred to a page from Altmetric where all relevant information on your article is compiled. Please note that also with alternative metrics it can take a while until first mentions show up. In addition, publications that date five years back are more likely to have only classical citations in journals.

The new system now also allows correction of any errors in bibliographic data. For corrections – and any other requests – please contact **Joachim Schnabl.**

Coffee Lectures: The 12. series

*There is no easier way to stay tuned to new tools and learn about tips and tricks*

The 12th series of our Coffee Lectures starts on June 13, 2017. Once again, for three weeks, there is free coffee (or tea) and knowledge every Tuesday, Wednesday and Thursday in the seminar room HCI G2. The 12th series has, once again, some new topics. So don't miss the opportunity to grow your compilation of Coffee Lecture Collectors Cards, which are not available online. The lectures – 10 minutes at max – will be given either in English or German (depending on the audience) and will present databases and tools that help you work with scientific information and knowledge. The dates of the nine Coffee Lectures can be found on our website. Using our Event Calendar you can import any lecture into your personal calendar with one click regardless of whether you are using a PC, Mac, smartphone or tablet.

Students are more effective at late hours

New research by the University of Nevada und der Open University UK prove that students can learn better between 11:00 am and 9:30 pm. The article has been published in *Frontiers in Human Neuroscience* (2017; DOI: 10.3389/fnhum.2017.00188).
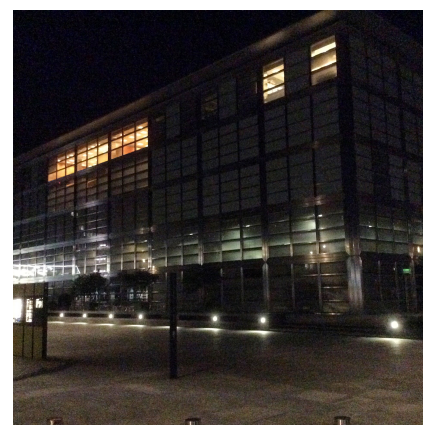
Extended Opening hours of the Information Center

Starting in June and until September the Information Center is open until 10 pm, also on Saturdays as well as on some Sundays. Details and PDF can be found on our website.