

## Architects of doom

by Martin Thurau

Accused of being a major driving force behind the wars in Yugoslavia, Ratko Mladic eluded capture for 15 years. He now awaits trial before a UN tribunal in Den Haag. How did figures like the former military leader of the Bosnian Serbs come to wield such power? How could multiethnic Yugoslavia collapse within a single generation? According to Marie-Janine Calic, an expert on Southeastern Europe, the state was brought down not by ethnic hatreds, but by a deliberate policy of self-serving egoism.



◀ *Evidence of genocide: a hall full of coffins – a dozen years after the massacre at Srebrenica. On 11 July 1995, Bosnian Serbs occupied the Bosnian enclave and went on to murder up to 8,000 people.*

## “Experiment” Earth

by Clemens Grosse

Geoscientists at LMU are involved in a worldwide effort to enhance our understanding of seismic activity. The aim is to improve our ability to forecast massive earthquakes like the recent event in Japan.

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## When fiction goes experimental

by Elizabeth Willoughby

Experimental fiction has been around for centuries, but not the way Mark Z Danielewski writes it. In May, LMU’s Junior Year in Munich students presented the first conference ever devoted to MZD’s works, aiming to provide a deep literary assessment.

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## A need for speed

by Julia Wunderlich

Hard disks and roller skates – Martin Lux is fascinated by both. As a member of LMU’s administration, he helps keep the computer systems up to speed. When not working, he dons wheeled shoes and sets his own pace – as an inline speed skater.

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For the complete article, see

[www.en.lmu.de/news/insightlmu/2011/02\\_01.pdf](http://www.en.lmu.de/news/insightlmu/2011/02_01.pdf)

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## “Experiment” Earth

by Clemens Grosse

The severe earth tremor that struck Japan on 11 March has underlined how difficult it is to quantify earthquake risk, even in a country that devotes so many resources to the task as Japan. Geoscientists at LMU are working to understand Earth’s seismic activity and make earthquake forecasting a reality.

The great Tōhoku-Oki earthquake in March of this year also made its mark in Bavaria. Seismic waves were picked up by several local observatories, which recorded surface displacements of around 2 cm. In an experimental borehole in Austria the groundwater table oscillated with an amplitude of up to half a meter. “That was absolutely astounding, even for us,” says LMU seismologist Professor Heiner Igel – and it provides a graphic demonstration of the amounts of energy released by a quake of this size. As Igel points out, “Large earthquakes can set off remote tremors thousands of kilometers away.” The latter are triggered by surface waves which take longer to arrive than the P-waves that travel through the Earth, but lose less energy on the way.

The world’s most extensive seismic early warning system and the strict building codes that are in place in Japan helped to minimize the direct effects of the earthquake – even though it released 1,500 times as much seismic energy as the 1995 Kobe quake. It was the subsequent tidal wave (tsunami) that caused the greatest damage including the failure of the nuclear power plants and claimed most victims. In a lecture she gave at the Department of Earth and Environmental Sciences, seismologist Fumiko Tajima, formerly of Hiroshima University and at LMU since 2009, provided her colleagues with an initial report on the situation back home. The disaster struck a region that has a special significance for Professor Tajima personally. As a schoolgirl, she regularly attended summer camps near Sendai, an area where the tsunami caused severe damage.

Why was the quake so enormous? East of Japan the Pacific Plate dives at a relatively shallow angle under the Eurasian Plate. The upper part of the subducting plate is “cold” and brittle, and stress can build up in the rocks. Deeper down, temperature and pressure are higher and rocks flow, preventing any significant stress accumulation, as LMU geologist Professor Anke Friedrich explains. The shallower the angle of subduction, the larger the area of the plate boundary in the “cold” and brittle zone. The area of the fault plane that ruptured on 11 March was 500 × 200 km. The larger such an area, the more energy is released when it ruptures



▲ It was not the earthquake itself, but the subsequent tidal wave (tsunami) that caused the greatest damage.

suddenly. This elastically stored but suddenly released energy was felt as the giant earthquake. The rupture area was so large that it broke and displaced the seafloor, dislodging a large mass of seawater and generating the huge tsunami.

### Further massive earthquakes in the near term

As LMU geophysicist Professor Hans-Peter Bunge explains, the size of the tidal wave to be expected is the most difficult parameter to calculate. “You have to know the magnitude of the earthquake before you can work out what sort of a tsunami will form. This takes time, so that a rapid reaction is virtually impossible.” He believes that the Earth is going through a cycle of very powerful earthquakes at present, which will alter the strain pattern of the whole planet. “There will certainly be further massive earthquakes in the near term,” he says, but where and when they will occur remains impossible to predict. “The problem is that we are dealing with an experiment that we can neither control nor repeat – the Earth itself. We are therefore forced to rely either on geological records from the Earth’s past, or on modeling studies using modern supercomputers, to estimate the balance of forces.”

The catastrophic tremor in March could, however, provide new insights to guide modeling studies. “Japan’s exemplary network of seismological and geodetic observatories has collected unprecedented amounts of data,” says Anke Friedrich. They may supply the key that will allow us to understand geodynamic processes in greater detail, and ultimately to improve the quality of earthquake forecasting.

For more information, see:

[www.geophysik.lmu.de](http://www.geophysik.lmu.de);

[www.en.geologie.geowissenschaften.lmu.de](http://www.en.geologie.geowissenschaften.lmu.de)





## When fiction goes experimental

by Elizabeth Willoughby

In Mark Z Danielewski's experimental fiction, things like typography and colour are employed to carry meaning, aiding in the creation of a fictional world that would otherwise be carried out through words alone. In May, LMU's Junior Year in Munich (JYM) students presented the first conference ever devoted to MZD's works, aiming to provide a deep literary assessment.

The cult following that began after MZD wrote *House of Leaves* saw the author take the old experimental fiction techniques and make them bigger and better. In HoL he applied such methods as using different typefaces for different characters, arranging text densely and upside down to make it as arduous for the reader as for the character working through a labyrinth, and putting only a few lines per page forcing the reader to fly through an action sequence.

"It would not be an exaggeration to say that MZD's work is considered the most exciting development in American fiction in the new millennium," says Dr Sascha Pöhlmann, a postdoc at the Amerika-Institut, which collaborated with LMU's JYM students to put together a conference devoted to the assessment of MZD's major works.

The two-day conference focused on two of Danielewski's books: *House of Leaves*, published in 2000, a horror story about a space that appears in a house making the inside larger than the outside, and how its growth influences those who learn about it; and *Only Revolutions*, a love story and road novel divided into two narratives read eight pages at a time alternately from front to back and back to front. At the free conference open to the public, professors and doctoral students came in from various countries to speak about the books' text construction, issues of genre and the reading process, offering new and varied viewpoints and ideas.

### Exciting and challenging

*Only Revolutions* was translated by writer and poet Gerhard Falkner and artist Nora Matocza, a husband and wife team. Due to its strict and unique format, *Revolutions* took the couple 1.5 years to translate. "Danielewski is the most difficult thing we ever translated," says Matocza. "He uses words that have so many different meanings and so many allusions; they don't have a German translation. We had to have 90 words per page, but German needs more words to say the same thing. Danielewski himself combines

## Revolutionary Leaves

The Fiction of Mark Z. Danielewski



### About the "Junior Year in Munich" Program

JYM is Germany's oldest study-abroad program. Organized by Wayne State University in Detroit, Michigan, it is open to all third (junior) year students at US universities and has been held at LMU Munich since 1952. Up to 80 students take part in the program every year.

For further information see: [www.jym.wayne.edu](http://www.jym.wayne.edu)

several words into one; we had to do this too. Sometimes we had to leave words out because it was important to keep to these 90 words, otherwise the sense is gone."

### JYM Meets MZD

The success of the conference was greatly due to the enthusiasm of the students involved. Lisa Terrio, a highly motivated JYM student, is one of them. "As a member of the undergraduate research team, I helped with many of the organizational details of the conference," says Lisa. "I was also in charge of compiling the JYM database on experimental literature. I really enjoyed being able to work with so many different people and couldn't wait for the actual conference. It was very rewarding to finally meet people face-to-face." She stresses that being in JYM is to be a regular LMU student attending the university's curriculum, not simply a guest.

Now she's looking forward to the anthology in the making with pieces from the conference speakers, and JYM student papers on MZD will also be considered for inclusion. It's invaluable, she says, "to see literature being made every day. One does not need to wait 20 years before reading about it."

 RESEARCH


◀ *Leitgeb is one of the leaders of a worldwide group of scholars who are using mathematical logic to tackle problems in analytical philosophy and cognitive sciences. He holds the Chair of Logic and Philosophy of Language at LMU.*

## PHILOSOPHY

## The calculator of truth

by Maximilian G. Burkhart and Martin Thureau

Hannes Leitgeb aims to push mathematics deep into the domain of philosophy. His goal is to uncover the logical rules governing the workings of the brain. This makes him a valued partner for neuroscientists. The internationally renowned expert was recently awarded one of the prestigious Alexander von Humboldt Professorships. He is setting up the first university-based Center for Mathematical Philosophy in Europe – which will explore the interface between logic, mathematics and cognitive sciences.

 For the complete article, see [www.en.lmu.de/news/insightlmu/2011/02\\_02.pdf](http://www.en.lmu.de/news/insightlmu/2011/02_02.pdf)



◀ *Christian Haass and his team also use the zebrafish as a model system to determine what goes wrong in nerve cells and facilitates formation of the characteristic protein aggregates.*

## BIOCHEMISTRY

## The fragile scaffold of the self

by Martin Thureau

In Germany alone, 800,000 people currently suffer from Alzheimer's disease. LMU biochemist Christian Haass has been studying the causes of the dementia for years. Great progress has been made, but an effective therapy that can halt nerve cell loss is not yet in sight. The quest for the origins of dementia has become a race against the relentless course of demography.

 For the complete article, see [www.en.lmu.de/news/insightlmu/2011/02\\_03.pdf](http://www.en.lmu.de/news/insightlmu/2011/02_03.pdf)



◀ *About 130 million years ago, upwelling magma began to force Africa and South America apart, and gave rise to the dolerite rock that dominates the relief in the mountains near Swakopmund in Namibia.*

## GEOPHYSICS

## The play of forces between core and crust

by Angelika Jung-Hüttl

Geophysicist Hans-Peter Bunge studies the dynamic interactions between the interior of the Earth and its surface. As part of a large-scale project he is now investigating the formation of the South Atlantic over the past 200 million years. The plan is to collect and analyze rock samples, survey the topography of the land surface and the seafloor, probe below the seafloor, and investigate the planet's innermost structures using seismic waves that pass through or around the whole of the globe.

 For the complete article, see [www.en.lmu.de/news/insightlmu/2011/02\\_04.pdf](http://www.en.lmu.de/news/insightlmu/2011/02_04.pdf)



◀ *General Election 2009: Angela Merkel or Frank-Walter Steinmeier? About half of those who voted made their choice only late in the day. In the end, the outgoing Chancellor won the contest.*

## COMMUNICATION SCIENCE

## The impulsive voter

by Ortrun Huber

The unknown voter is a difficult creature to pin down. What are his personal, social and political priorities? What kinds of information guide his voting intentions? Who gets his vote – and why? The unattached voter gives campaign managers sleepless nights and poses a real dilemma for pollsters. The number of German voters who remain undecided until late in the campaign is on the rise. Communication scientists would like to know why – and what factors finally tip the scale.

 For the complete article, see [www.en.lmu.de/news/insightlmu/2011/02\\_05.pdf](http://www.en.lmu.de/news/insightlmu/2011/02_05.pdf)



## A need for speed

by Julia Wunderlich

**Martin Lux works at the Procurement Unit for Information Systems. LMU staff members who need PCs, notebooks or monitors turn to him and his colleagues for help. During his working day, he mulls over specifications in gigabytes und gigahertz. Outside the office, his focus is on his customized boots, ball-bearings and wheels.**

He has already won more than 30 medals at the German Inline Speedskating Masters Championships – and this year’s meeting is just around the corner. “I train long and hard and I keep an eye on my diet in the months leading up to the Championships,” says Martin Lux, who is well-known among his team-mates for his exacting training routines. “I do all I can to keep fit. In the evenings, my team-mates and I sometimes use the stairs at the subway station to try out all sorts of jumps that mimic patterns of movement in skating, taking the stairs five steps at once. Doing that a few times is enough to make a beginner’s thigh muscles protest.”

“I first came across inline skates quite by chance in early 1990. As a student, I took a part-time job in a shop that sold sports goods. This meant that I was always up-to-date on the latest developments on the inline scene, and I was able to try out new equipment as soon as it appeared on the market,” says Lux, who joined the Allgäu Skating Club in 2004. As his professional and family commitments have claimed more of his time, he has focused his skating activities on the shorter distances in recent years, so as to stay competitive.

### Technique and strength

The 42-year-old LMU staff member studied Sport and English in Göttingen, with the intention of becoming a teacher. “But by the time I graduated I was no longer sure that I really wanted to be a teacher.” However, his passion for sports and English has remained undiminished. In his free time he trains team-mates or other speed skaters, and he converses with his 5- and 6-year-old sons only in English. “My wife and I wanted to make sure that our children learned a second language at an early age, so they have grown up in a bilingual household.” A third language pupil is on the way, and is expected in June, only a week before the German Championships in Bayreuth. Martin Lux is unperturbed. “My wife fully supports my skating activities, and we will have the help of the children’s grandparents when the time comes, so I’m sure I will be able to take part in the Championships.”



Although it has a long history and an established calendar of events, inline speed skating is not an Olympic discipline. The skates are four-wheeled and, depending on the type of race, events are held on tracks surfaced with concrete, asphalt or synthetic material or on closed sections of road. Races for individual competitors or teams are held over distances ranging from 300 m to 42.2 km or more.

Lux says it’s a pity that there aren’t any European or World Championships for older inline racers. He would be delighted to have the opportunity of pitting himself against opponents from France, Italy or the USA, where the sport is well established. In the German Championships Lux has an enviable record. Since 1999 he has been on the podium 32 times, taking 12 gold, 9 silver and 11 bronze medals. His major strengths are tactical experience and a highly developed technique. For instance, he has brought the sudden final lunge to the finish line to perfection. “It can make the crucial wheel’s worth of difference.”

In spite of his commitment to skating as a competitive sport, he has no problems skating “for fun” on weekends with the family. At their own request, his sons took part in their first races (over the 100-meter distance) when they were only 3 and 4 years old – with Papa taking the younger boy by the hand. “That was really cute, but I don’t demand of the kids that they become speed skaters. I just want them to enjoy the sense of movement,” he says.



## LMU to participate in three new DFG research projects

LMU Munich will be involved in three new Collaborative Research Centers (SFB) set up by the German Research Foundation, and will coordinate one of them, SFB 914 (“Trafficking of Immune Cells in Inflammation, Development and Disease”). This will investigate the molecular and cellular determinants that control and orchestrate the migration patterns of immune cells under steady-state conditions as well as during inflammation. SFB 914 will receive 9.6 million euros over the next four years, and LMU physiologist Professor Barbara Walzog of the Walter Brendel Center for Experimental Medicine will act as the project’s speaker. LMU is also a partner in SFB 924 (“Molecular Mechanisms of Yield Formation and Yield Assurance in Plants”), centered at TU Munich, and SFB 960 (“Formation of Ribosomes: Principles of RNP Biogenesis and the Control of their Function”), based at the University of Regensburg.

## LMU President Huber re-elected Chairman of LERU

The League of European Research Universities (LERU), a network of 21 research-intensive universities, has reappointed LMU President Bernd Huber as its Chairman. At a meeting of the LERU Rectors’ Assembly held at the Université Pierre et Marie Curie in Paris on 20 and 21 May, Professor Huber was chosen by the Rectors and Presidents of the universities represented in the network to serve for a second three-year term. The aim of LERU is to influence the shaping of policies that impinge on European universities and their research activities. In his second term as LERU Chairman, Huber intends, among other things, to present the case for extensive long-term investment in basic research. LERU is currently engaged in intensive discussions on the design of the 8th EU Framework Program, and in early May submitted to the EU Commission an Advice Paper containing concrete recommendations for action.



[www.leru.org](http://www.leru.org)

## Illustrated history of LMU: New edition just out

The English edition of LMU’s illustrated history entitled “Ludwig-Maximilians-Universität München – Past and Present” has just been published. This latest third version has been completely revised, extended and updated. Combining specially written essays, original documents and portraits, the richly illustrated work outlines the history of the institution from its beginnings as a late medieval educational establishment to the internationally recognized research university it has since become. The volume also discusses the political and social developments that have contributed to LMU’s current structure and status, and offers insights into the diversity of student life on campus. The volume is the result of the cooperative efforts of acknowledged experts in the history of the university. The book is now available from the LMU-Shop.



[www.lmu-shop.de](http://www.lmu-shop.de)

## LMU optimizes podcast portal on iTunes U

Some two years after “LMU on iTunes U” went online, LMU has reconfigured its podcast portal in the Apple iTunes Store. The new design makes it easier for users to find the information they need, and new applications simplify podcast management and forwarding. Since its inception in 2009, the podcast portal has posted audio and video files, as well as digital print publications, dealing with research, teaching programs and topics of general interest to students and staff at LMU. The site has recorded more than 10 million downloads. This figure not only underlines the popularity of its multimedia content, it also means that LMU is one of the most successful providers among the European universities that contribute content to iTunes University. LMU makes all 18,000 digital files available free of charge and in various formats adapted for multiple applications.



[www.itunes.lmu.de](http://www.itunes.lmu.de)

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