Waiting for the Theory of Everything
By Hubert Filser

String theory provides a way to reconcile relativity with quantum mechanics, but practical tests of its validity have yet to be proposed. LMU physicist Dieter Lüst pleads for more time to develop a well-founded version of the theory. For the complete article, see www.en.lmu.de/news/insightlmu/2017/03_01.pdf

In spite of its huge size, the Large Hadron Collider (LHC) has found no signs of the novel particles predicted by string theorists, perhaps because it is not large enough!

What’s inside

Academics
“Germany is more than pork and cars!” 2
Magical moments among the staves 3

Research
Waiting for the Theory of Everything 1
Persuasions and perceptions 4
Early Bronze Age: Mobile women were key to cultural exchange 4
Dishonesty shift 4

People
Object lessons 5

In Short
LMU is the top-ranking German university 6
Five new ERC-funded projects at LMU 6
Research Training Group in Medical Physics 6

Magical moments among the staves
by Nicola Holzapfel
LMU musicologist Hartmut Schick is leading the effort to produce a modern edition of the works of Richard Strauss. The first volumes afford unique insights, and will inspire new interpretations. continued on page 3

Object lessons
by Nicola Holzapfel
Art historian Philippe Cordez teases out the hidden connotations of objects that have come down to us from pre-modern times. continued on page 5

“Germany is more than pork and cars!”
by Kerstin Meierhöfer
New insights, new contacts: Over 1000 students attended this year’s MISU Summer Schools, one of which was designed specifically for students from partnering universities of the LMU – China Academic Network. For participants and for LMU, the program as a whole helps to initiate new networks. continued on page 2

More news on LMU Munich at www.en.lmu.de/news
“Germany is more than pork and cars!”

by Kerstin Maierhöfer

New insights, new contacts: Over 1000 students attended this year’s MISU Summer Schools, one of which was designed specifically for students from partnering universities of the LMU-China Academic Network. For participants and for LMU, the program as a whole helps to initiate new networks.

When Yu Tuoying, Jin Chennan and Lin Younun applied for places in the European Studies Summer Program, one of the 12 Summer Academies held this year under the auspices of LMU’s Munich International Summer University (MISU), their goal was not only to visit Europe, but to learn as much about its history, politics and culture as they could. And after three weeks at LMU, guided excursions to Vienna, Salzburg and Neuschwanstein, individual trips to Berlin, Heidelberg and Prague, and a whirlwind tour of Northern Italy (which took them to Pisa, Florence and Venice in the course of a single weekend) and night-long discussions, their verdict is unanimous: It was all worthwhile.

New encounters, new perceptions

The Summer Academy in European Studies is specifically addressed to students from seven of China’s best universities: Peking, Tsinghua and Renmin in the country’s capital, Fudan, Jiao Tong and Tongji in Shanghai and Zhejiang University in Hangzhou. “The Program gave me the chance to engage with European issues on a scholarly level and, at the same time, to make new contacts – not only with students from other Chinese universities, but also with European students and researchers,” says Jin Chennan, who is studying International Politics at Peking University. “We normally have few opportunities to get to know students from other universities. It was wonderful to make so many new acquaintances in Munich.”

Of course, the partner programs also serve to stimulate new interactions between the universities involved. For Dr. Stefan Lauterbach, Head of LMU’s International Office, the success of the existing network of collaboration between Munich University and the top third-level institutions in China is the best argument for further intensifying their academic contacts. “The courses given during the MISU season are all of high quality,” he says. “And many of the gifted students who have become acquainted with the university – thanks to MISU – return to LMU to do a Master’s or a doctoral degree. In the long term, this will strengthen connections within the network, on both the personal and the institutional level. In this way, the Summer Academies can form the basis for future joint study programs with our partner universities in China.”

At all events, Jin Chennan, Lin Younun and Yu Tuoying have decided that this will not be their last trip to Europe, and all are agreed that what they have learned about Europe this summer will have an important influence on their further academic careers: “European integration may well be the focus of my future fields of study,” said Jin Chennan, reflecting on the program. Her friend Lin Younun has just completed his presentation (on Gaullism), and is feeling rather exhausted – having worked all night on his talk. But he is relieved and pleased that it went so well. Modern Western European History is the focus of his own course of study at home. “So I was curious to know more about the political dimensions of the EU,” he says. “And Germany turned out to be a great country to study this field.” Yu Tuoying nods enthusiastically. “Germany is fantastic,” she says. “It’s so much more than pork and cars!” Such approbation suggests that student exchanges between Munich and China are set fair to diversify Bavaria’s international image too.

More than 1000 students attended the Munich International Summer University in Munich. What were their impressions, and what were their most memorable moments?

Translation: Paul Hardy

www.lmu.de/misu
Magical moments among the staves
by Nicola Holzapfel

LMU musicologist Hartmut Schick is leading the effort to produce a modern edition of the works of Richard Strauss. The first volumes afford unique insights, and will inspire new interpretations.

Richard Strauss had composed nearly 500 works. Until now, the majority of his compositions have been available only in largely uncorrected reprints of older publications. Now all compositions in major genres are newly edited.

Macbeth, the first of Richard Strauss’ symphonic poems, was a work that the composer struggled with for years. He began it in 1886 and completed the first version in 1888. He subsequently revised the score several times, and the final version saw the light of day in 1891. Comparison of the second and third versions provides an object lesson in how a great composer can turn a well-made work into an extraordinary piece. “The genesis of this work reveals how, at a decisive point in his career, Richard Strauss metamorphoses into a genius,” says Professor Hartmut Schick, who holds the Chair of Musicology at LMU and is the Coordinator of the first Critical Edition of the Works of Richard Strauss. The mammoth project, which began in 2011, will for the first time collect and collate all available versions of the compositions written and authorized by Strauss during his lifetime. It is receiving long-term funding from the Bavarian Academy of Sciences over a period of 25 years.

The scores used in modern performances are all based on the first printed editions, which have simply been reprinted over the years and thus retain the errors introduced during the initial process of production. “Our aim is to present the works in precisely the form the composer intended – a task that was never satisfactorily accomplished in his lifetime,” Schick explains.

This endeavor will undoubtedly have an impact on their future performance and interpretation. For instance, one of the upcoming volumes in the series will include a version of the opera Salome, which has never before appeared in print, and was last performed in 1940. Strauss originally undertook the so-called Dresden Revisions for a production at the Semperoper in that city in October 1930. “He thinned out the orchestration and reduced the dynamics to enable a lighter and more flexible voice to penetrate the orchestral texture,” Schick says. In doing so, Strauss also opened up the role for a different type of voice – lyrical, more agile and lighter than the highly dramatic and voluminous voices that had been required up to that time – because he saw his protagonist as a much younger, less mature and more child-like figure. “That is a quality that will certainly come into play in future productions of the opera,” says Schick.

Richard Strauss was born in Munich in 1864, and enjoyed early success as a composer. By the time of his death in 1949 at the age of 85, he had composed nearly 500 works. But his compositions were not unanimously admired by his peers and contemporaries in the music world. “Many were offended by Strauss’ continued allegiance to the long established tonal system of composition at a time when the barrier to atonality had already been decisively breached,” Schick explains. But this negative assessment has undergone significant revision over the last few decades: “When Strauss is seen in the light of post-modern music, which is quite happy to draw on older styles and ‘renovate’ them by distorting them in certain ways – without being decried as old-fashioned or reactionary – one can argue that he was already a postmodern composer before the term had been invented. For many of today’s composers he has become a point of reference.”

Minor changes, striking impact

The editors’ arduous task of painstakingly comparing scores and checking markings relating to dynamics, articulation and expression receives its rewards in the insights it yields into the workings of the composer’s mind – as in the case of the different versions of Macbeth. The first volumes of the new Strauss Edition also contain previously unpublished compositions. When reminded of the magnitude of the task that confronts Hartmut Schick and his colleagues in the coming years, he replies: “It is a matter of basic musicological research, and it is something we are happy to do, provided that the volumes we produce don’t just gather dust on bookshelves, but are brought to life in performance.”

Translation: Paul Hardy

www.richard-strauss-ausgabe.de
Economic History

Persuasions and Perceptions
By Nikolaus Nützel

Economic historian Davide Cantoni’s research aims to understand how economic and political upheavals alter attitudes and behavior. To do so, he makes use of natural experiments drawn from different historical periods.

For the complete article, see www.en.lmu.de/news/insightlmu/2017/03_02.pdf

Management Studies

Dishonesty shift

Honesty is generally lauded as a vital moral value. But recent years have shown numerous instances of unethical behavior. Corporate entities and organizations have engaged in unethical practices, including covert breaches of regulatory norms, questionable accounting practices and corruption. In a new study, Martin G. Kocher, Simeon Schudy and Lisa Spantig at LMU, have used an experimental setting to investigate the circumstances that facilitate such dishonesty. In particular, they asked whether disregard for moral norms is a matter of individual choice or a product of structural factors within groups. “Our findings are unequivocal: People are less likely to lie if they decide on their own,” says Martin Kocher, who holds the Chair of Behavioral Economics at LMU and is Director of the Institute of Advanced Studies in Vienna. Even groups composed of participants who reported truthfully when being asked individually frequently decided to misreport. The researchers refer to this phenomenon as a ‘dishonesty shift’. Their experiments suggest that the exchange of arguments over the validity of the honesty norm is the main driver of this effect. The results of the study suggest that companies may benefit from monitoring such team-based decision-making processes more closely. “It is striking that many of the most prominent instances of corporate cheating in recent years have involved groups,” says Lisa Spantig, PhD student and manager of the experimental laboratory for economic and social sciences at LMU. To combat such behavior “…firms have to establish strong ethical norms with the help of codes of conduct but also monitor group decision making processes and sanction norm violations,” says Assistant Professor Simeon Schudy.

Archaeology

Early Bronze Age: Mobile women were key to cultural exchange

At the end of the Stone Age and in the early Bronze Age, families were established in a surprising manner in the Lechtal, south of Augsburg, Germany. The majority of women came from outside the area, probably from Bohemia or Central Germany, while men usually remained in the region of their birth. This so-called patrilocal pattern combined with individual female mobility was not a temporary phenomenon, but persisted over a period of 800 years during the transition from the Neolithic to the Early Bronze Age. The findings result from a research collaboration headed by Philipp Stockhammer of the Institute of Pre- and Protohistoric Archaeology and Archaeology of the Roman Provinces of LMU Munich. In addition to archaeological examinations of the remains of 84 individuals, the team conducted stable isotope and ancient DNA analyses. Corina Knipper of the Curt-Engelhorn-Centre for Archaeometry, as well as Alissa Mittnik and Johannes Krause of the Max Planck Institute for the Science of Human History in Jena and the University of Tübingen jointly directed these scientific investigations. “Individual mobility was a major feature characterizing the lives of people in Central Europe even in the 3rd and early 2nd millennium,” states Philipp Stockhammer. The researchers suspect that it played a significant role in the exchange of cultural objects and ideas, which increased considerably in the Bronze Age, in turn promoting the development of new technologies. From an archaeological point of view, the new insights prove the importance of female mobility for cultural exchange in the Bronze Age. They also allow us to view the immense extent of early human mobility in a new light. “It appears that at least part of what was previously believed to be migration by groups is based on an institutionalized form of individual mobility,” declares Stockhammer.
Object lessons
by Nicola Holzapfel

Art historian Philippe Cordez teases out the hidden connotations of objects that have come down to us from premodern times.

Philippe Cordez studies objects originating from the Pre-Modern Era, both precious and (ostensibly) banal. He has analyzed objects that have traditionally been associated with Charlemagne himself and combs made of ivory from the Middle Ages. To us, the function of a comb appears obvious, but in the past it could also be used in ritual or religious contexts. “The concept of an ‘object’, in the sense of something tangible that has a clearly delineated form and a specific function, is only two centuries old,” says Cordez. The objects that interest him are much older, and raise an apparently paradoxical question: “What are objects when they are not regarded as objects? When it first dawned on me that something as apparently evident as our everyday objects could provoke such a question, I was quite astonished. For the question itself implies that people can have highly diverse relationships with what we now call objects.”

His research is devoted to uncovering these relationships. Cordez came to LMU as a Research Fellow in 2013, but within a few months – with funding from the Elite Network of Bavaria – he was able to set up a Junior Research Group devoted to the study of “Premodern Objects”. In his project “Objects in the Form of Books” he studies book-shaped items dating from the Late Middle Ages up to the present. “We keep coming across things that are interesting and complex”. Cordez picks up a volume bound in leather which is embossed with a fine Victorian design that bears the title ‘lady’s companion’– and proceeds to take the upper part off to reveal the contents of a sewing set. “The choice of the book form proclaims that its owner is a gentlewoman, who can sew and read with equal facility. This sewing kit was used not to make items of clothing, but for fancy sewing with friends. The term ‘lady’s companion’ was also used for women’s magazines in the Victorian period. The makers and users of such objects focused on specific connotations of the book. Here, it is the notion of refinement and education, which was projected from the object onto its owner, even though this book is a container for a sewing kit.”

Cordez’s interest in objects studies was aroused early on. “Among other things, I studied Museum Sciences at the École du Louvre in Paris, and that made a deep impression on me. I am interested in why we collect and conserve objects for centuries in museums. It is not a self-explanatory activity, as witnessed by the fact that many cultures around the world feel no need to engage in it.” Cordez has also studied objects that were traditionally thought to have belonged to Charlemagne. In many cases, it was easy to prove that these attributions were erroneous. However, Cordez was the first to reconstruct why these objects had come to be associated with the Frankish king. “Charlemagne’s reign as Emperor of the Christian West left its mark on the political systems that developed in the centuries that followed. Many later institutions wished to boost their own legitimacy by demonstrating a direct relationship with the emperor. Art historians simply corrected the false attributions, but the invented narratives themselves are now part of the history of these objects. Indeed, they very often explain why the objects have survived in the first place.” Thus, Cordez’s work on objects not only revises the often Eurocentric perspectives of art historians’ concept of art, it also brings connections to light that have been forgotten or ignored. In doing so, he seeks out overlooked but informative items from the distant and more recent past – and reveals the historical significance of objects that began as more than mere objects.

LMU Research Fellowships: Call for applications
As part of the “LMU Academic Career Program”, LMU Munich will award 10 Incoming LMU Research Fellowships to international early-stage postdoctoral researchers from all fields of research and 5 Outgoing LMU Research Fellowships to excellent doctoral graduates from LMU Munich. Fellows will receive an attractive salary and a substantial research budget. Closing date for applications is 1 December 2017. www.lmu.de/excellent/research-fellowships
In Short

LMU is the top-ranking German university

In the World University Ranking 2018 compiled by the Times Higher Education magazine LMU is once again rated as the best university in Germany. The latest THE Ranking is led by the University of Oxford, followed by its near neighbor and old rival Cambridge University. The California Institute of Technology and Stanford University share 3rd place in the list. The Times Higher Education World University Ranking first appeared in its present form in 2010. The current version lists a total of 1102 institutions in 77 countries. LMU once again occupies the top spot among German universities, sharing the 34th slot with the University of British Columbia in Canada. For more information, see https://www.timeshighereducation.com/news/world-university-rankings-2018-results-announced

Five new ERC-funded projects at LMU

Five early-career researchers at LMU have received Starting Grants from the European Research Council (ERC) for projects in various disciplines. These much sought-after, 5-year grants are each worth approximately 1.5 million euros in all, and are among the most prestigious of all European research awards. Submissions are evaluated solely on the basis of the applicant’s previous scientific record and the quality of the proposed project. Moreover, LMU offers the option of appointment to a Tenure Track Professorship to successful grantees, which can be converted into a permanent faculty position, subject to a positive assessment of performance. Among the LMU-based awardees in the latest round is Dr. Caroline Gutjahr (Faculty of Biology). In her ERC project, entitled RECEIVE, Gutjahr will investigate the molecular regulation of arbuscular mycorrhiza symbiosis, which is among the most widespread inter-organismal partnerships found in the plant world. Dr. Sebastian Kobold’s project, entitled ARMOR-T (Faculty of Medicine), intends to equip T cells for the fight against tumors with the aim at enhancing the specificity and efficacy of immune responses directed against tumor cells. Professor Kai Papenfort (Faculty of Biology) plans to study the workings of a particular signaling pathway that permits members of bacterial populations to coordinate their behavior. Dr. Alexander Urban’s ERC project, entitled PINNACLE (Faculty of Physics), focuses on lead halide-based perovskites, with a view to opening up new optoelectronic applications for this intriguing class of materials, such as eventually finding use in LEDs and lasers. In addition, a proposal submitted by Dr. Johannes Stigler (TU München) with LMU as host institution also won a Starting Grant. For the duration of the project, Dr. Stigler will be affiliated with Professor Karl-Peter Hopfner’s group at the LMU Gene Center (Faculty of Chemistry and Pharmacy). www.en.lmu.de/news/newsarchiv/2017/erc_starting_grants.html

Research Training Group in Medical Physics

Imaging techniques play a crucial role in the development and application of precision cancer therapies. A new Research Training Group in Advanced Medical Physics for Image-Guided Cancer Therapy has recently be launched at LMU, aiming to attract candidates from around the world who hold an excellent Master’s degree (MSc) in Physics, Biomedical Engineering or Informatics. LMU Professor Katia Parodi, who serves as the Group’s Speaker, holds a Chair in Medical Physics at LMU. Her research focuses on image-based high-precision radiation therapy using photons, protons and heavy ions. The interdisciplinary Research Training Group is a joint venture, which involves members of the Faculties of Medicine and Physics at LMU and the Technical University of Munich (TUM), as well as the Helmholtz-Zentrum München. Professor Franz Pfeiffer of the TUM acts as Vice-Speaker for the program. The Research Training Group will develop innovative strategies in imaging, computing and therapy with the goal of early translation into the clinical treatment of cancer. It provides a wide-ranging training program for young researchers, which will equip them with the up-to-date interdisciplinary knowledge, international connections and practical skills necessary for a successful career. The new Group is funded by the Deutsche Forschungsgemeinschaft (DFG) for a period of four-and-a-half years in the first instance.

For more information and application details, see: www.qrk2274.de

Any questions or comments? insight@lmu.de

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6