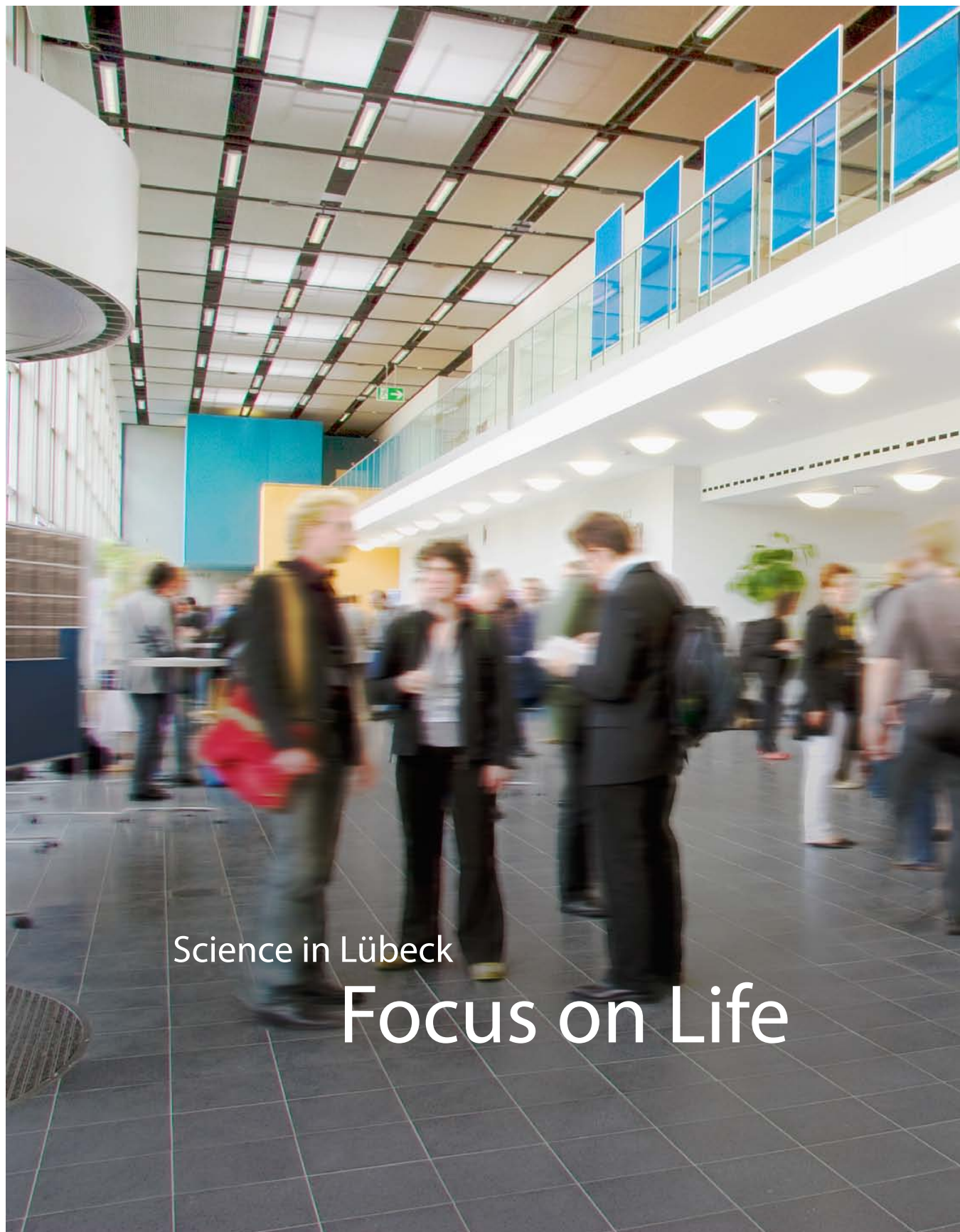




UNIVERSITÄT ZU LÜBECK



Science in Lübeck

Focus on Life



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## Foreword

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What distinguishes us from others is that although we are the smallest German University, we have emerged as a giant imbued with incredible inner strength. This brochure presents an image of our university, to impart an idea of the real essence of research, teaching, studying and life on the campus and in the University City of Lübeck. A commission of experts on development of universities in the state of Schleswig-Holstein drew the conclusion that, *"The future belongs to small, specialist universities."* This statement is both a corroboration of our viewpoint and a stimulus.

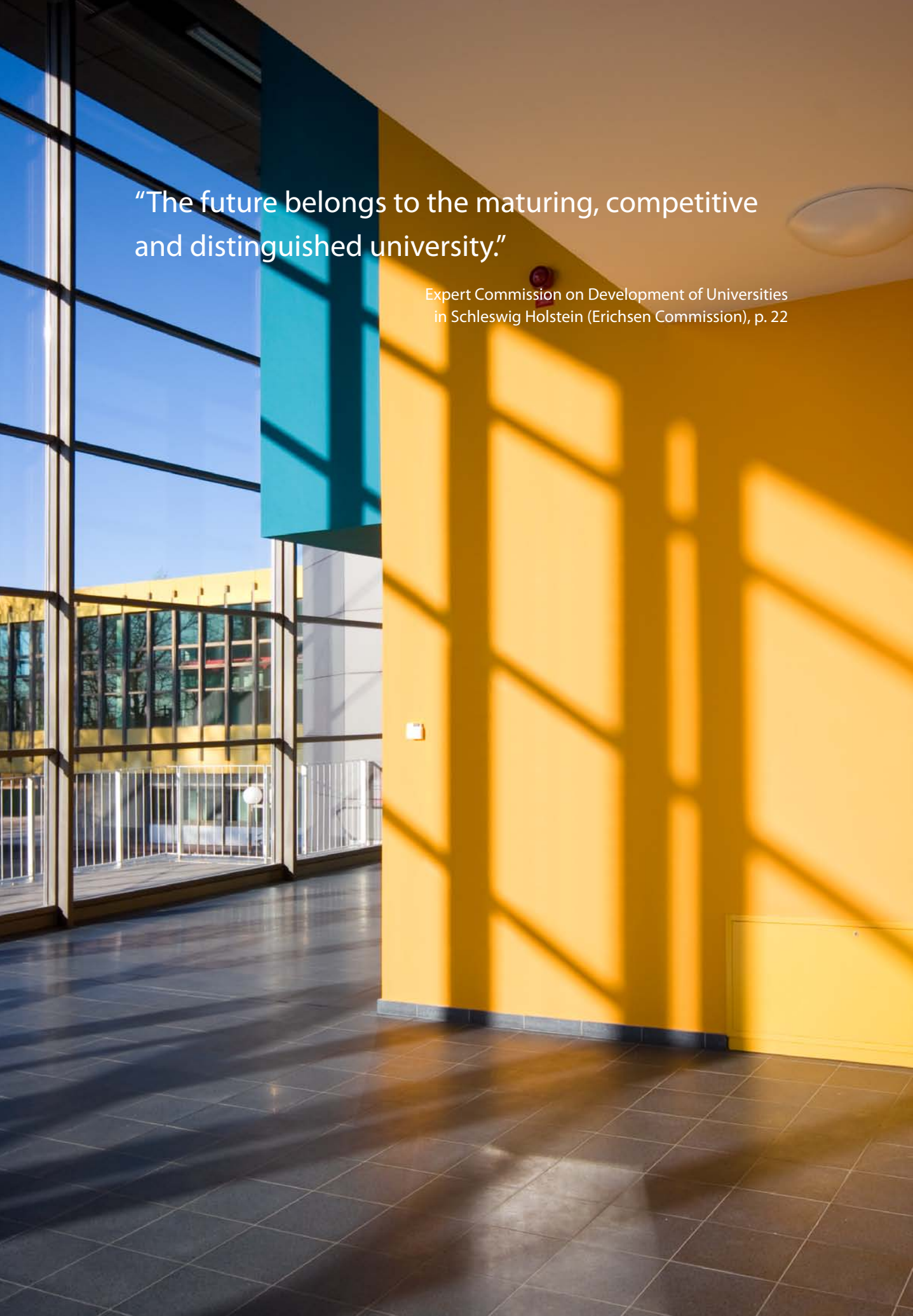
The breadth of our departments reflects the rapid rate of academic advancement in our times: with scientists decoding the building blocks of life, while informatics replicates the basic foundations of our knowledge and thought. Medicine, the reason for founding the Universität zu Lübeck and its younger sister discipline, medical engineering, are always at the heart of all our research and teaching programs.

Our motto, *Im Focus das Leben (Focus on Life)*, is also our trademark. It describes this highly specialised program that distinguishes us in the domestic and international arenas. At the same time though, *Im Focus das Leben* also signifies a key second facet – how we interact on a personal level across the Lübeck campus, something that is perhaps feasible only in a university where everyone knows everybody and we run into one another daily. Our university and clinic are neighbours, functioning literally like a true *Universitas*, or a symbiosis of students and teachers.

This brochure also informs you about the university's new image, internally and externally. Our vision and goals centre on the Science Campus in Lübeck. Strong partners are walking this path with us, partners I would also like to introduce to you. Come, join us for an exciting tour through the Universität zu Lübeck and on to the future Science Campus.

A handwritten signature in blue ink, appearing to read 'P. Dominiak', with a stylized flourish at the end.

Prof. Dr. Peter Dominiak  
- President -

A photograph of a modern university interior. On the left, a large glass window looks out onto a courtyard with a yellow building. On the right, a bright yellow wall is covered in shadows from the window. The floor is dark grey tiles. The text is overlaid on the upper part of the image.

“The future belongs to the maturing, competitive  
and distinguished university.”

Expert Commission on Development of Universities  
in Schleswig Holstein (Erichsen Commission), p. 22



**Research and teaching** at the Universität zu Lübeck started in the field of medicine, but our faculties today encompass much more than medicine: informatics, science and engineering. The common element among these is their focus on life sciences, which is also mirrored by our motto, *Im Focus das Leben*. The Universität zu Lübeck is internationally distinguished for its research and the high quality of academic education. We offer degree programs in human medicine, informatics, computational life science, molecular life science and medical engineering science. We initiated a master's program in biomedical engineering in collaboration with the University of Applied Sciences of Lübeck.

The university's decision to specialise in the field of life sciences has proven to be a winner. The large number of interdisciplinary projects is the reason for our excellent reputation worldwide. For example, the focus on imaging systems in the medical engineering department led to initiation of cross-disciplinary research on *Imaging the Course of a Disease*.

**Collaboration with the industry.** We work closely with regional and global businesses,

specialising in this field in order to ensure optimum commercialisation of our research results.

**Knowledge & technology transfer.** Intensive transfer of knowledge and technology also characterises the Universität zu Lübeck. We rank among the top five universities in Germany in the competition on *Exchanges between Universities and Corporations*. We see our name repeatedly among highly ranked universities, which substantiates the superior standard of our programs.

The Centre for Higher Education Development (CHE), conducted a major survey of universities in German speaking regions. Of the almost 50 universities assessed, our faculty of medicine landed at the top, with informatics and molecular life sciences taking second place. Many years of excelling in this field coordinated with equally experienced professors has certainly enabled us to establish special areas of research, clinical research groups and the major programs of the Deutsche Forschungsgemeinschaft (DFG – German Research Foundation). This ongoing emphasis on refining our image obligates and unites at once teachers and students.



“As a community of questioners and knowers, unwaveringly searching for the truth, the university is the foundation of and for excellence! The Universität zu Lübeck offers a multitude of opportunities, one of its biggest being its smallness. The openness of its community of teachers and students offers the unique chance to create a corporate identity via close interaction and direct contact, something unthinkable in large universities. With a little bit of luck, perhaps one could even create a corporate culture.”

Björn Engholm, former Premier of Schleswig Holstein and Honorary Citizen of the University

**Research.** The ubiquitous, intensive, interdisciplinary exchange at the university is the motor for superior, internationally outstanding, innovative and knowledge-oriented basic research marked by multifaceted applications. We strive to constantly raise the bar for the quality of our research and education and to master the challenges and opportunities of worldwide competition in times of increasing globalisation. Therefore, we collaborate closely both with national and international research institutions.

**People.** We create the right framework for students, researchers and teachers to harmonise their education and careers with family life and to make them feel at home. We have a multiplicity of programs spanning a family-friendly infrastructure, child-care facilities, flex working hours, alternating *teleworking* programs, post-doctoral grants for female scientists and proactive tenure procedures.

Cooperation and networking from such family-friendly programs benefit our partners too. This systematic and didactically well structured, multifaceted, research-based teaching forms the foundation of one of the best rated universities in the German speaking world.

**Teaching.** Here too, we pursue the interdisciplinary approach prevalent across our university at the research, theoretical and practical levels. We are Schleswig-Holstein's largest employer and innovation driver. Under the umbrella of such a responsibility, we strive for both sustained and responsible planning. Through expansion of the university and the clinic, assistance for spin-offs and support for establishing life science companies, we create jobs and bolster the significance of the Lübeck region as the centre of excellence for medicine.

University of life sciences /  
Interdisciplinary / Excellent  
education through excellent  
research / National and  
international collaboration /  
Science Campus of Lübeck /  
Living campus, personal  
contacts / Family-friendly  
university / Lübeck, the  
City of Science and Culture:  
University in a dialog /  
Academy for Pupils / Great  
quality of life in the  
city and its surroundings



**History of the Universität zu Lübeck:**

1964 Medizinische Akademie Lübeck

1973 Medizinische Hochschule Lübeck

1985 Medizinische Universität zu Lübeck

2002 Universität zu Lübeck

**7,632 persons as of October 2009:**

1,400 Female students (53.93%), 1,196 male students (46.07%)

91 Professors

4,945 Staff members at the University and Clinic

**Financial figures (October 2009):**

€56.29 million for research and teaching, of which

€32.95 million for the medical faculty

€25.56 million external funds

**Degree programs:**

Human Medicine

Informatics

Molecular Life Science (MLS)

Computational Life Science (CLS)

Medical Engineering Science (MIW)

Graduate School for Computing in Medicine and Life Sciences

Biomedical Engineering (Master's program in collaboration with University of Applied Sciences of Lübeck)

**Partner Universities:**

University of Bergen, Norway

Medical University of Zhejiang, Hangzhou, People's Republic of China

Semmelweis University, Budapest, Hungary

University of Tartu (Dorpat), Estonia

Bukovin State Medical University, Chernivtsi, Ukraine

Polytechnic University of Bucharest, Rumania

University of New Mexico, Albuquerque, NM, USA



"With such excellent mentors,  
one cannot but succeed at the university"

Freya Zielke, Medical student

Our medical program is ranked as the best in Germany. It is distinguished by its interdisciplinary approach throughout the curriculum and intensive mentoring of doctoral candidates.

**The curriculum – borne together.** We especially emphasise interdisciplinary, problem-oriented learning in guided groups. Throughout the program, we teach selected science subjects to our medical students in groups with students from engineering fields. The two faculties define the curriculum jointly, which allows our professors to interact closely with the students. This enables us to help our medical students perform very well not only in oral, practical and written exams, but also to teach them the practical, communicative and ethical foundations necessary for professional and yet empathetic treatment of patients.

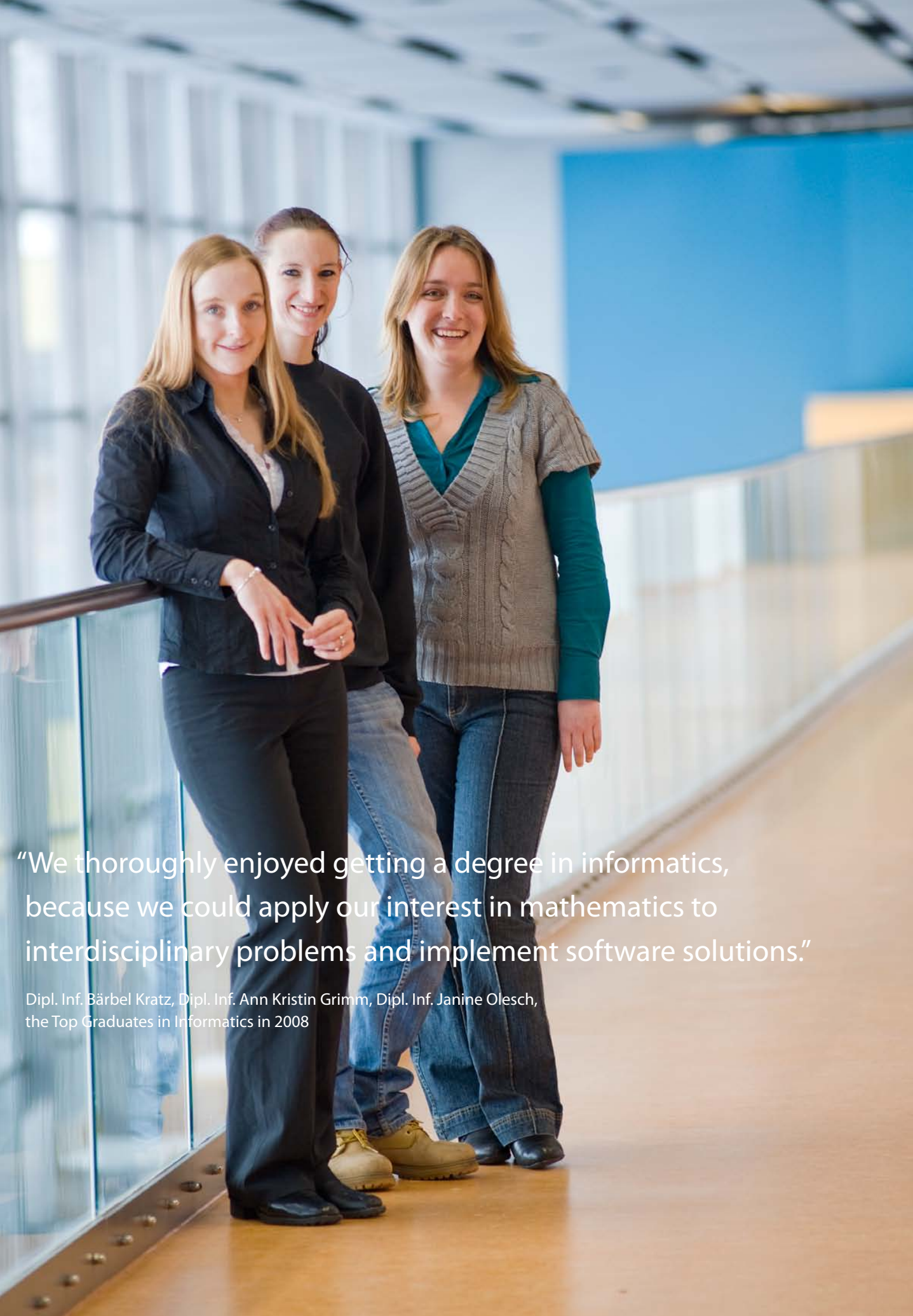
**Doctoral program – a key element of the education.** Almost 80% of our yearly graduates write a doctoral thesis during their studies. We foster interdisciplinary education for doctoral candidates in science, starting at the preclinical stage through cooperation with laboratories.

Our curriculum is structured to provide sufficient space for students to plan their scientific work well in advance. At the end of a semester, each student has a clear timetable for the next semester, without any compulsory events during lecture-free periods. “I prefer doing my doctorate at Lübeck, because here one has the required time for the program,” said Christoph Zabel from the Faculty of Medicine.

**Our students – are more than just students.**

Being the smallest university in Germany allows us to mould campus life to the individual scholarly needs of our students. Professors and students introduce freshmen to the program, while mentors and mentees meet regularly throughout the program to ensure close communication and one-to-one support. Prof. Dr. Dr. h.c. Karl Friedrich Klotz, Deputy Director of the Anaesthesiology Clinic stresses, “I like being a mentor, because I not only meet interesting people from different educational levels at the university, I really enjoy sharing experiences with the groups and helping each other out.”





"We thoroughly enjoyed getting a degree in informatics,  
because we could apply our interest in mathematics to  
interdisciplinary problems and implement software solutions."

Dipl. Inf. Bärbel Kratz, Dipl. Inf. Ann Kristin Grimm, Dipl. Inf. Janine Olesch,  
the Top Graduates in Informatics in 2008



**Exciting future.** Computers are a given in many facets of our daily lives. They network the world and bridge the new forms of communications that are rapidly emerging. Our information society needs well qualified people in informatics. Hardly any other field offers such great career opportunities, whether you graduate with a bachelor's or master's degree. At our university, you can expect to delve into exciting research and studies at the interfaces of medicine, science, engineering and the new media. Our commitment to guide our students personally is underscored by our consistently high CHE rankings.

**Solid base – solid applications.** Informatics is fast-moving with a variety of rapidly changing modes. Yet its fundamentals remain solid and these are precisely what we teach you. In addition to the principles, we focus significantly on applications by educating you on industry-standard programming languages and software engineering. In sum, we spend almost a third

of the program on applied fields like bio-informatics, media informatics, medical informatics, robotics, automation and, only for the master's program, also software systems engineering. All of this kicks-off on day one, alongside core subjects, reflecting the strong emphasis on applications for our three-year bachelor's degree.

**Case studies and projects.** Our two-year, research intensive master's degree offers a multitude of majors. You have the required time to deepen your knowledge well beyond that found in standard course books. As students, you learn how to start from scratch and simulate problems in the field and devise algorithmic and system-based solutions. Case studies and projects make up a critical part of the course, whereby you learn software development and management.



“In the Molecular Life Science (MLS) program, we explore the molecular basis for illnesses, primarily viral infections – for most of which no specific medication is available. RNA viruses that cause measles and dengue fever still kill millions yearly around the world. We apply our knowledge of cellular biology, structural biology, drug design and medical chemistry to discover and create new antiviral agents that prolong our lives.”

Prof. Dr. Rolf Hilgenfeld, Institute for Biochemistry

**Life at the molecular level.** In this field, scientists and students devote their efforts to molecular cell biology, structural biology and practical applications in medicine and biomedical engineering. As our students, you are the key asset and can opt for a career in basic biomedical research or one in applied medical or biomedical research. You can research the full gamut from the 3D-structure of proteins on the surface of a virus, to investigating new treatments for infections and inflammations, to novel methods for using one's own tissues.

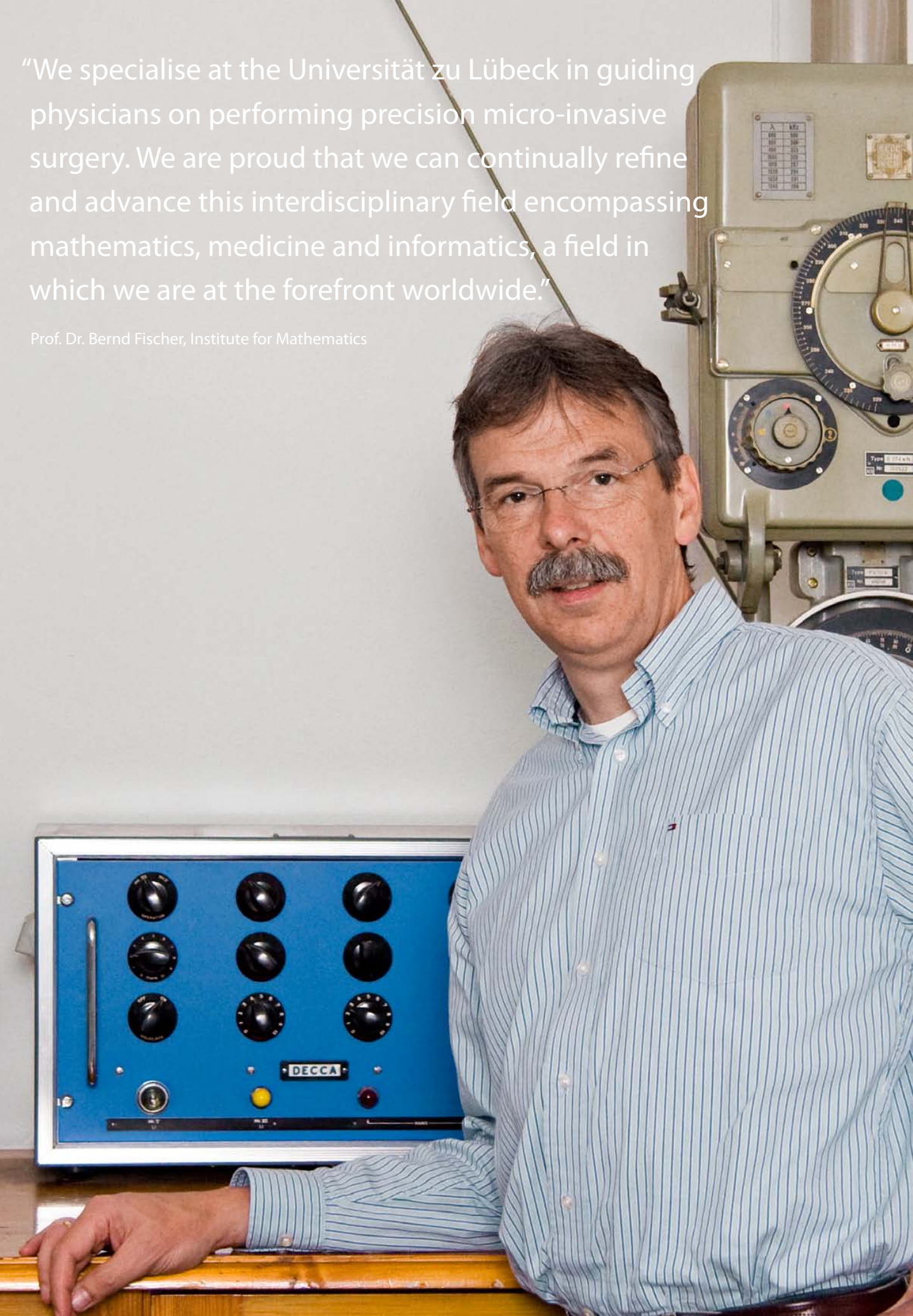
**Theory and practice.** Our three-year bachelor's degree program offers interdisciplinary majors in both biological and medical sciences. The professors have conceived the curriculum for the students to build a solid foundation of theoretical knowledge and practical skills in experimental sciences. The program starts by concentrating on the basics in biology, chemistry, physics and mathematics. Chemistry is deemed the crucial foundation, since it is the prerequisite for understanding structural biology. In the final year, you will study the interrelated fields of structural analytics, tissue engineering, molecular biology and bioinformatics.

**Chemical structure and biological mechanisms.** Our two-year master's degree program focuses on an in-depth investigation into the interfaces of chemical structures and biological mechanisms. These could be defined as target locations for diagnostics and therapeutic intervention. The program is offered in two tracks, *Medical Cell Biology and Agent Research* and *Structural Biology for Pathogenesis and Therapy*. We augment these majors with bioinformatics, biomathematics, biophysics, scientific writing and research ethics. Students can also complete two big blocks of internships at either the research institutes of the university, the Leibniz Research Centre in Borstel, at universities or institutes in Germany or abroad, or in industry. These internships also give our students the opportunity to apply their practice-oriented knowledge in different scientific and industrial fields and to cultivate contacts.



"We specialise at the Universität zu Lübeck in guiding physicians on performing precision micro-invasive surgery. We are proud that we can continually refine and advance this interdisciplinary field encompassing mathematics, medicine and informatics, a field in which we are at the forefront worldwide."

Prof. Dr. Bernd Fischer, Institute for Mathematics





**Mathematics focused on life.** This degree program coalesces applied mathematics with problems in the fields of medicine and life sciences. It is highly interdisciplinary and directed at practical applications in medicine and biosciences. As a graduate of this program, you can look forward to excellent career opportunities, since you will be among the few qualified in this field, while biosciences is in increasing demand by industry and research institutes. Our university's clear image and our personal support offer you the perfect environment at the junctures of biomedicine, informatics and engineering.

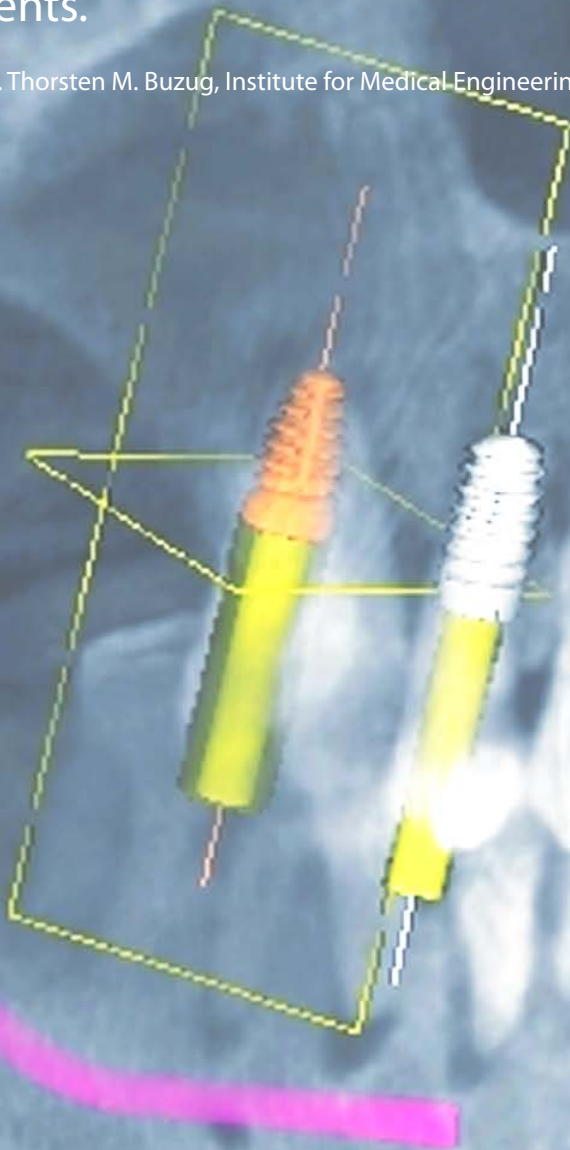
**Work in interdisciplinary research institutes.** Our bachelor's program commences with the fundamentals of mathematics, informatics, biology, chemistry and physics. As students, you can expect ongoing guidance in small teaching and exercise groups, with adequate time for you to analyse the complex subjects. We also impart the practical relevance of what you learn, early on in the bachelor's program, by involving you in interdisciplinary tasks at institutes and collaborating with research centres, both here and outside the university.

In the third year, you can advance your knowledge into fields like medical image processing, genome analysis, molecular modelling, or medical documentation and statistics for clinical purposes.

**Mathematics in medicine.** Lectures in mathematics, such as on signal processing, bio-signal analysis, image processing, statistical pattern recognition, stochastic processes, testing and theory of estimation form the core of this two-year research-intensive master's program. You can pick from among two majors, life sciences or imaging/image processing. In the former, we complement your education in mathematics with modules of biochemistry, structural analytics and artificial life. In imaging, the research and theory concentrate on mathematical analysis and creating images from medical applications. This could, for instance, involve the planning of surgical operations or improving the quality of computer tomography images.

“Imaging is the melting pot for medical and technical disciplines within medical engineering. We look at problems in the field of medicine – in the above example of navigating an implant – from the standpoint of mathematics, informatics of 3D-visualisation and the physics of the interaction of x-rays with tissues. This approach usually gives rise to technologies developed in collaboration with the industry for the benefit of patients.”

Prof. Dr. Thorsten M. Buzug, Institute for Medical Engineering



**Research for the people.** As our graduates, you will be highly sought after by medical engineering companies researching new technologies in their R&D labs, aimed at producing medical diagnostics and therapy devices for the next generation and beyond. This program will excite students who enjoy researching interdisciplinary tasks in the fields of medicine, physics, informatics and mathematics. You will thus have the chance to be involved at the cutting edges of technologies that could revolutionise medical diagnostics and therapies.

**Research across disciplines.** During the three-year bachelor's degree program, we address practical issues in small exercise groups of students. You are taught relevant content in physics, mathematics, informatics and medicine. We naturally take advantage of medical excellence at our university by invoking this as a key part of the program. Right from the start, physicians teach you medical skills while you study other subjects, such that the roots of the medical engineering program grow deeper each semester. In addition to general subjects on applied

medical engineering, we also arrange for insights into research in other areas at the university like biomedical engineering research, biophysics, medical imaging and image processing.

**Research at the forefront.** Our two-year master's program is research-oriented, with majors in physics, informatics and medical applications in the areas of medical visualisation and photonics. Our graduates conduct complex mathematical and science research and development assignments of relevance to problems in the field of medicine. In addition, we supplement our lectures with two comprehensive practical projects: a) in research labs or clinics either within or outside of the Universität zu Lübeck and b) exercises involving applications of imaging systems, signal and image computing, biomedical optics and biophysics.





“This graduate school is proof that the Universität zu Lübeck has a solid international standing in research. Through its strong emphasis on research and an innovative program, the school offers one of the best environments for international doctoral candidates in biomedical engineering.”

Chaoqun Jiang, Executive Officer and Dr. Yan Bailly, Managing Director of Graduate School

**Interdisciplinary exchange.** Founded in the year 2007 within the framework of the Excellence Initiative of the German federal and state governments, our Graduate School is a distinguished, interdisciplinary, scientific institute of the University of Lübeck. Its charter is to resolutely foster outstanding doctoral candidates through a structured education and research program set within an interdisciplinary and international environment. Mehrnaz Hazrati, a doctoral student from Iran, said, “I really appreciate the tailored curriculum and the various soft skills courses offered by the Graduate School. I feel more confident about my future career in academia or industry.”

**Tandem mentoring.** From medical robotics to transcranial sonography, from macromolecular crystallography to virus evolution, interdisciplinary research is the key to the success of our Graduate School in Lübeck. Doctoral candidates are assigned two mentors from different fields from among

medicine, informatics and life sciences. For their research project, they will also team up with senior scientists, researchers and students from other clinics and institutes. Their scientific horizon is further broadened through interdisciplinary seminars held by distinguished scientists from around the world.

**International atmosphere.** This school has an international flair. Our working language is English and international experiences at all levels are promoted through financial support for conferences, summer schools and research residencies abroad. “With our international staff and faculty, the Graduate School has a friendly and supportive atmosphere”, commented the French Managing Director.



“The Universität zu Lübeck is a mini-campus with distinct emphasis on medicine and life sciences, backed by the largest possible network of research groups and facilities. These are ideal conditions for innovative and successful science in an interdisciplinary field like ours, where the fundamental question is, “How does memory development function in biological systems?”

Prof. Dr. Jan Born, Winner of the 2010 Leibniz Prize, Institute for Neuroendocrinology

Our scope of research encompasses three interlinked scientific fields – medicine, informatics and science – each diverging into several sub-disciplines. We concentrate on integrating these fields from a scientific perspective and cultivating close exchanges between professors and young scientists. Our university provides education at these interfaces for doctoral candidates from around the world. Young scientists thus work on projects and enjoy interdisciplinary mentoring. Representatives from different sub-disciplines regularly define the research programs for the various departments.

**The Science Campus of Lübeck** offers a dynamic research environment that constantly grows and changes, while staying on a steadfast course. Such emphasis is reflected equally by our multidisciplinary degree programs and the development of cooperative networks.

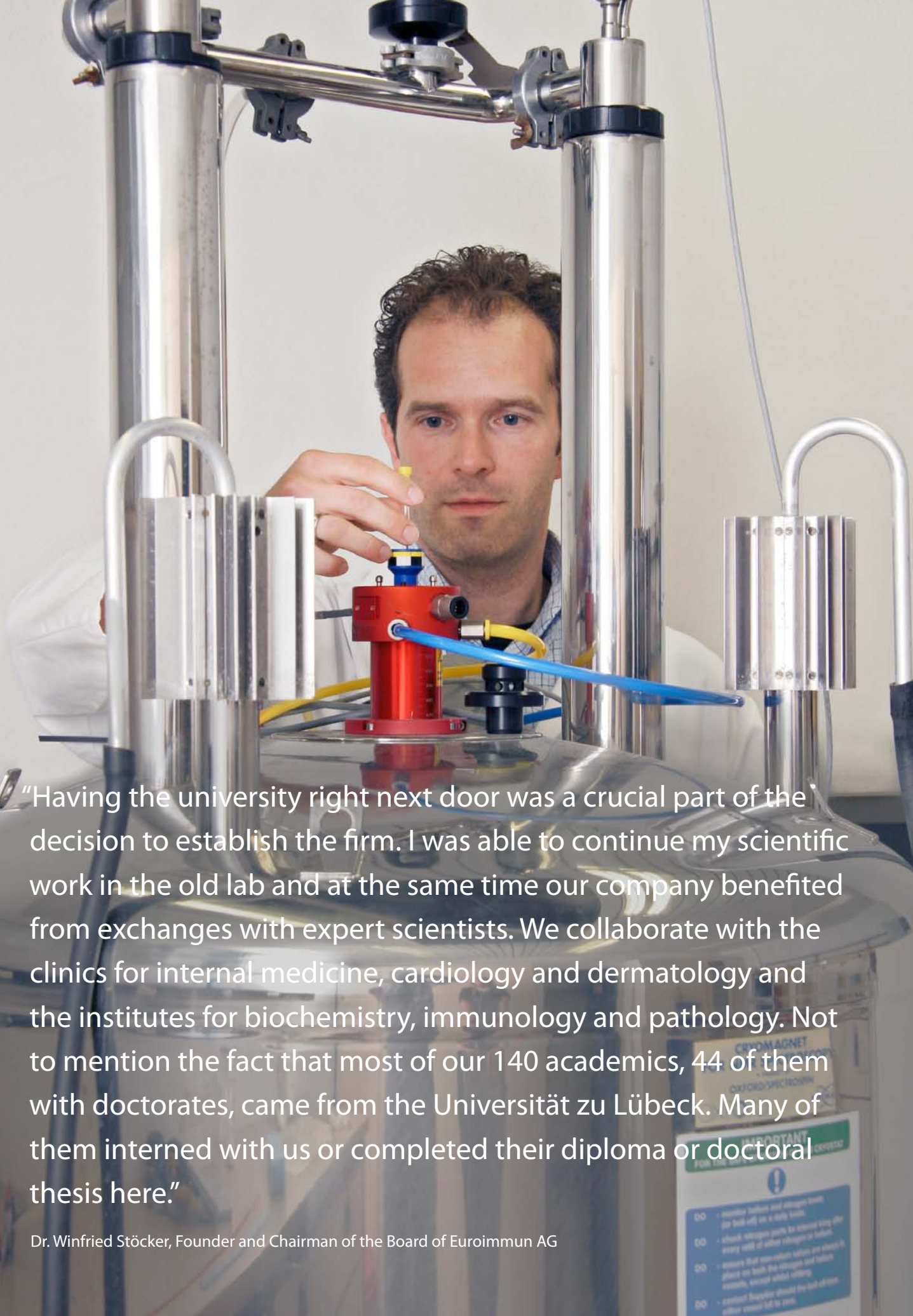
**Research at the cutting edge** demands solid partnerships. Hence, our medical school collaborates with internationally renowned universities and local partners like the University of Applied Sciences of Lübeck, the Leibniz Research Centre in Borstel and the Fraunhofer Research Institution for Marine Biotechnology. Furthermore, our engineering science programs reinforce the link to businesses and the industry. Our university program in medicine offers four majors:

- I. Infections and inflammations
- II. Cardiovascular genomics
- III. Neurobiomedicine
- IV. Biomedical engineering – imaging the course of a disease

**These majors** are backed by research organised through partners and networks, for instance, the DFG's Excellence Cluster, *Inflammation at Interfaces* and the DFG's *Graduate School for Computing in Medicine and Life Sciences*. A majority of their funding comes from domestic and foreign third parties. The research results are channelled directly into a transfer process via the *Academic Centre for People's Medicine and Healthcare Research* through to the Centre for Clinical Research. This is supplemented by excellence in developing technologies for minimal invasive surgery ("gentle surgery") and for the advancement of reproductive medicine.

The science department, a key pillar of basic research, rounds off the biomedical image of the university by adding expertise in the areas of virology, cell biology and biological systems. The informatics and mathematics institutes represent theoretical, technical and applied approaches for researching IT issues. The informatics department complements the broad scope of research at the Universität zu Lübeck with, for example, its solutions for interactive security every day, communication patterns for intelligent programming and signal processing for indispensable imaging for diagnostics.





“Having the university right next door was a crucial part of the decision to establish the firm. I was able to continue my scientific work in the old lab and at the same time our company benefited from exchanges with expert scientists. We collaborate with the clinics for internal medicine, cardiology and dermatology and the institutes for biochemistry, immunology and pathology. Not to mention the fact that most of our 140 academics, 44 of them with doctorates, came from the Universität zu Lübeck. Many of them interned with us or completed their diploma or doctoral thesis here.”

Dr. Winfried Stöcker, Founder and Chairman of the Board of Euroimmun AG



**Image of the University.** Although the Universität zu Lübeck is Germany's smallest state-funded university, it has emerged as a giant imbued with the incredible inner strength and confidence to be at the cutting edge of research and education. It has collaborated with other research centres to step out of its boots as the second medical faculty of the Christian Albrechts University in Kiel (CAU) and become a leading university offering the full spectrum of science.

**Collaboration.** Until now, the university has collaborated on its science programs with other suitable universities and external institutes. Among these is primarily the Leibniz Research Centre in Borstel (FZB), with which the university has been working closely and successfully for years in the fields of inflammation and immunology. The university, FZB and CAU jointly run the Excellence Cluster, *Inflammation at Interfaces*, which is sponsored under the Excellence Initiative of the German federal and state governments. Two years ago, the first foreign institute of the Universität zu Lübeck was set up as the European Academy (EURAC) in Bolzano, Italy. This internationally renowned institute is involved in the genetics of motor disorders and diseases and that of cardiovascular

diseases. As such, this institute ideally complements the fields of "Brain, Hormones and Behaviour" and "Cardiogenics."

**Science Campus.** The university plans to establish the Science Campus together with its partners. These partners are the University of Applied Sciences of Lübeck, the FZB via its clinic for Internal Medicine III, Leibniz Units, Fraunhofer Research Institution for *Marine Biotechnology* and *Safir* and the Lübeck Campus of the University Clinic of Schleswig-Holstein (UK S-H). The goal of this joint effort is to bring all scientific endeavours involved in biomedical engineering together on one campus. The board of directors will be assembled from leaders of each partner and charged with executing the jointly approved projects. Since it is hard to imagine biomedical engineering without industrial involvement, the Science Campus will also include companies like Euroimmun AG and Dräger AG, with whom the university has been collaborating for years. Collaborations with other research centres are a key element of the Universität zu Lübeck's scientific work. It characterises the university and helps refine its unmistakable image.

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# Studies and Research for Growth and Jobs Tomorrow

Prof. Dr. Bernd Rohwer, CEO of Chamber of Commerce and Industry (CCI), Lübeck

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Global competition will certainly continue to intensify. China, India and many other developing countries are potential challengers, not only because of their sheer size but because of their steady growth and innovative strategies. They will thus contest Germany's position as the leading nation for technology and exports. If we want to retain our standard of living and jobs, there is only one answer: we must focus resolutely on education and research. We can stay competitive only with highly qualified, creative and innovative people. Hence, we need good schools and universities, a creative environment, an open climate for innovation, more collaboration and internationalisation. These are the key pillars of strength on which we can build our future strategy to open the doors for our youths to pursue careers and earn incomes, even in the year 2020.

The Lübeck universities recognised this challenge early on. Although they are among the smallest in terms of the number of students or budgets – or possibly because of this fact, they rank among the best nationwide for excellence in education, field orientation and external funding. The Universität zu Lübeck is pushing its *Univision 2020* strategy through solid collaboration with the University of Applied Sciences of Lübeck and the Fraunhofer Institutes. The university and its partners will bank on next generation technologies that are already embedded in our HanseBelt and offer the potential for strong growth.

Among the key technologies of the 21<sup>st</sup> century is the field of life sciences with new applications in healthcare, the environment

and for the food industry. This has the significant potential to create and retain new and highly skilled jobs. Medical engineering is well entrenched in a cluster with about 300 companies. Here, 11,500 employees generate annual revenues of €3.9 billion. Medical engineering is particularly important for Lübeck, which employs roughly 6% of the workforce in this field, the fifth highest in Germany. On a per capita basis, the region is ranked at the top along with the state of Baden-Württemberg.

Our HanseBelt has more to offer than just ideal conditions for life sciences. It boasts a scientific infrastructure marked by more than 25 technical degree programs at universities in the region, renowned research centres and eight technology and founders' centres. The planned Fehmarn Sund Bridge will bring the metropolises of Hamburg/Lübeck and Copenhagen/Malmö closer together. This is at once a fabulous opportunity and an enormous challenge. We will need to spotlight ourselves as the base for science even more than before. Our goal should be to create a regional research zone in the HanseBelt, modelled on the Öresund region for knowledge and innovation, which can compete internationally for people and technologies. Our only chance to achieve this is through networking. With our HanseBelt Initiative involving 25 collaborating companies, we strive to be the best for this good deed. We took the first step with our university congress in December 2009. The presidents of the Universität zu Lübeck, University of Applied sciences of Lübeck and the University of Wismar issued a joint declaration to cooperate closely with the Chamber



of Commerce and Industry in Lübeck and the HanseBelt Initiative. This means working together on our image, common degree programs and exchanges between students and professors. The state governments of

Schleswig-Holstein and Hamburg are also on board. We have made a start. Now it is upon the politicians, administrations and universities to push the networking process forward and utilise the inherent synergies.

Even businesses have a responsibility and we wish to also contribute to boost the image of this scientific region. We support the joint initiative, *Lübeck – the City of Science* and wish to expand this strategically to an initiative covering the scientific region of the HanseBelt. We have started a program to promote skilled and leadership jobs together with the partners for education and labour in our region. This will prepare us for upcoming demographic and economic development, by pushing for technical careers and degree programs, supporting new education and degree programs and providing direct support for skilled workers who wish to make their home in our HanseBelt.

Knowledge will be a decisive factor for competition. Businesses need universities, universities need businesses! That's the only way we can outfit tomorrow's markets. That's the only way we can open the doors for our young people to find jobs and aspire for a life in the HanseBelt – an attractive region of the future situated between Hamburg and Öresund.

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# GründerKlinik – Consultants for Start-Ups

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*Winner of the University Founders' Award 2008, Dipl.-Ing. Lukas Ramrath from pro medTec GmbH of the Institute of Robotics and Cognitive Systems at the Universität zu Lübeck, standing with Premier Peter Harry Carstensen and Prof. Dr. Peter Dominiak*

**Advice and management.** The charter of the GründerKlinik is to transform the outcome of research into economic added value. Consequently, we promote business ideas and entrepreneurs at the university and research centres. This clinic at the Universität zu Lübeck thus assists start-ups and spin-offs from the idea stage, to defining the concept and business plan, capitalisation, recruitment and market launch. The Federal Ministry of Education and Research (BMBF) and the Association of Sponsors for the Promotion of German Science ran a competition on *Exchanges between Universities and Businesses* – we were honoured as one of the top five German universities transferring knowledge and technology.

**And the winner is Lübeck.** Since setting up the GründerKlinik in 2007, we have backed 15 founding projects. In 2008 and 2009, the federal department of commerce funded five EXIST research transfer projects and gave one grant to a founder. This puts our Universität zu Lübeck ahead of all other German universities. Prof. Dr. Thomas Martinetz, Vice President for Research, explains the success of the GründerKlinik, “We establish not only a culture of corporate independence, we also help boost the number of companies established. This creates jobs and strengthens the region, especially in the field of medicine.”

**University Founders' Award.** This award was conferred for the first time in 2008, as a joint initiative of the Universität zu Lübeck and the Savings Bank of Lübeck (Sparkasse). This biannual event alternates with the University Transfer Award, thus distinguishing innovative business concepts stemming from students, graduates and scientists at the Universität zu Lübeck. Each award comes with prize money of €10,000.



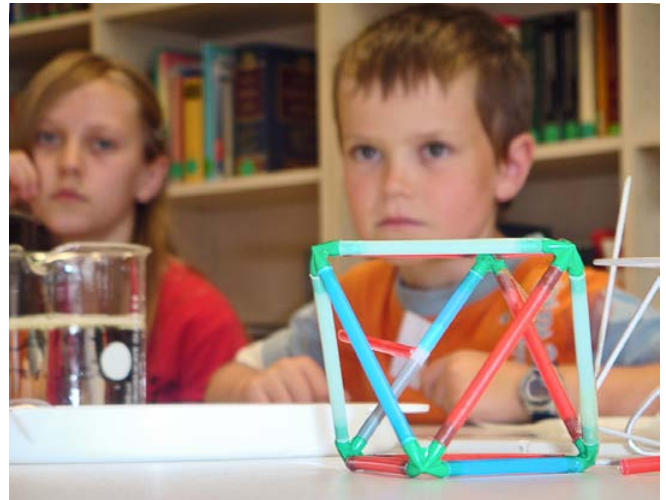
Our Academy for Pupils (SaLü) holds regular events for schools in the form of the following four initiatives. The aim is to instil enthusiasm for science and research into children and youths at all kinds of schools, enabling them to experience modern technology and raise their awareness of how informatics, mathematics and science are omnipresent in their daily lives. "We find the visits enriching, because we can connect the theory learnt in school with practical aspects that are not possible in school," remarked pupils from the biology stream group.

## **Kids in Media and Motion (KIMM)**

Members of the institute for multimedia and interactive systems research, test and evaluate new forms of communication for advanced interactive media. They bring this into their pre-school, school and out of school experiences through museums and youth activities. The program is a success, because it offers guidance for the projects in school and helps train the teachers too.

## **Computing in Lübeck Schools (LIaS)**

The institute for multimedia and interactive systems helps guide and motivate kids in the 5th to 13th grades to develop and cultivate an interest in computing and related fields of application. The LIaS program thus holds computing camps, work groups and competitions tailored to these grades. The camps focus on teaching the children about information systems and how to effectively use current software and hardware.



## **Mathematics Initiative of Lübeck (LIMa)**

This effort highlights the role of mathematics as a useful aid for solving complex problems in the fields of modern medicine and biosciences. It builds a long-lasting, effective base that fosters talented pupils and those interested in mathematics. Special emphasis is placed on running a Math Club with members from various age groups, a Math Olympics for kids in the 3rd to 13th grades and on careers in mathematics.

## **Open Lab in Lübeck (LOLA)**

A set of 20 experimental lessons are arranged for 8th to 13th graders, covering various aspects of biology and chemistry. LOLA also runs summer schools, working groups and special projects (like Young Researchers) for keen students. These courses let the children experience modern life sciences directly and get an impression of universities and a working life.



“The Heinrich Dräger Science Award is named after my deceased husband. It was always our special wish to motivate and foster promising young scientists.”

Lisa Dräger, Patron of the Universität zu Lübeck

**Society of Friends and Patrons of the Universität zu Lübeck.** An initiative of various Lübeck institutions and citizens established this society in 1966, just two years after the Universität zu Lübeck was founded as the second medical faculty of the Christian Albrechts University of Kiel. Its charter, among others, is to provide tangible and intangible support for certain projects for which the university and students receive no funds from the state, or only inadequate amounts. This promotes and honours their scientific research and teaching activities, underpins cultural, sports and social activities and cultivates international contacts.

[www.mu-luebeck.de/universitaet/~freundeundfoerderer.php](http://www.mu-luebeck.de/universitaet/~freundeundfoerderer.php)

**University alumni association.** One is an alumnus lifelong. The emotional attachment to the university does not start after the exams, but right in the first semester. The alumni thus support students from day one to make contacts in their specific fields. Along with the university's facilities, they offer personal and academic assistance,

which paves the way later to entering an occupation. The alumni comprise students, members and former graduates who function as a part of the Society of Friends and Patrons. They build a network to facilitate contacts to the university and among themselves. They meet annually, with domestic and foreign guests, on the same day as the convocation ceremony and the university ball. The alumni also sponsor projects at the university for which there is no public funding.

[www.uni-luebeck.de/universitaet/alumni.php](http://www.uni-luebeck.de/universitaet/alumni.php)

### **Hanseatic University Foundation**

This foundation was created in 1980, with the purpose of fostering development of universities and science in the Hanseatic City of Lübeck. This foundation and the Society of Friends and Patrons of the university coordinate their funding activities, whereby the foundation backs larger projects of general significance, like *Studium Generale* (General University Education).

[www.mu-luebeck.de/universitaet/~hansestiftung.php](http://www.mu-luebeck.de/universitaet/~hansestiftung.php)

*Prof. Dr. Peter Dominiak is awarding the 2009 German Academic Exchange Services Prize for excellent achievement by a foreign student to Armand Njontie Datchia, a medical student from Cameroon.*

*A panel discussion between Joschka Fischer, former Secretary of State and Günter Grass, Nobel Laureate for Literature with an Honorary Doctorate from the Faculty of Medicine of Lübeck; Moderated by Ulrich Wickert, Audimax Auditorium, Universität zu Lübeck, 2008*



*The Universität zu Lübeck orchestra performing at the convocation ceremony in the University Church of St. Petri*

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## Public Lectures and Social Life

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**Studium Generale.** This general university education program is headed by Prof. Dr. Cornelius Borck, Director of the Institute for Medical History and Scientific Research at the Universität zu Lübeck. Papers written by reputable foreign experts are published and presented once a month in the university's Audimax auditorium during the lecture season.

**Literary seminars.** Seminars are hosted regularly for readings by poets and writers, while courses are offered in literature studies. This program was initiated by the Nobel Laureate Günter Grass, when he was conferred an honorary doctorate. He continues to support this effort.

**Sunday lectures.** Lectures are given on general current events in the fields of science to the populace of Lübeck and its

surroundings. Their motto is, *City University – Encounters between the Public and Science*. The lectures are held the first Sunday of each month in the City Hall Auditorium.

**University in dialog** is a series of events on communication among members of the university community and between the university and the city. Held in the University Church of St. Petri, doctoral candidates present their research topics to the public on posters – the best ones win a prize.

**Historic city.** This is the name of a distance learning program designed for people working in the public and transportation sector, tourism, the historic buildings and monuments branch. Also welcome are property developers, city guides, history hobbyists and all those interested in furthering their knowledge of the city's history.





**The cultural calendar** of the Universität zu Lübeck lists all public events – and can be downloaded from the Web site:

<http://www.uni-luebeck.de/studium/~oeffentlichevorl.php>

**Annual reception.** An annual reception is hosted at the beginning of the summer semester by the President and Senate to honour members and patrons of the university. This official program is followed by an informal one for mingling with politicians, entrepreneurs, local dignitaries and members of the university community.

**Convocation ceremony.** Presenting degrees at the convocation ceremony certainly marks a very important step for the students, as they face the next phase in their lives. Hence, this day demands respect. We organise the convocation in the University Church of

St. Petri, infused by an atmosphere of awards and musical performances. We realise that a university education is more than just teaching and learning, that it means striving for a comprehensive education, that one must continue to share ideas on scientific and personal levels and that the graduates need support in making and cultivating contacts. In appreciation of the magnitude of all this, each graduate is also presented a work of art by a local Lübeck artist as a farewell gift during the convocation ceremonies. This initiative is spearheaded by Björn Engholm, the long-term chairman of the former advisory board of the university, an honorary citizen of the university and the ex-Premier of Schleswig-Holstein. Thereafter, the graduates attend the university ball, where they can end the day in style while mingling with their family, friends, guests and others from the university.



"Students get to know each other through committees and groups, share ideas and make contact with previous semesters – that by far is a lot of fun!"

Michael Drefahl, AStA (Student Council)





**Students can influence their daily lives at the university.** A student council (AStA in German), is responsible for all departments. Its members are elected pursuant to the university act from a student committee and the council serves as the managing entity for the student government. The AStA represents the interests of students within the university, to the university's board and the public. It also organises many events, such as an open air movie in the summer, a showing in December of the film *Die Feuerzangenbowle* (a famous German Christmas movie) and a big pre-university orientation week for all new students at the start of the winter semester. The AStA arranges for a free semester pass for students to use public transportation. AStA has a Web site where it lists all job openings, etc., at the university and in Lübeck and through its UniShop sells clothes and other merchandise with the university logo.

[www.ast.uni-luebeck.de](http://www.ast.uni-luebeck.de)

**Learning and living.** In addition to AStA, special student councils in certain faculties represent the interests of their students to the departments' professors and outside the university. At the Universität zu Lübeck, there are such councils in the faculties of medicine, molecular life science (MLS) and computational science (CS). They also organise diverse projects and department-related events, which certainly add some spice to a student's life on campus.

**Student Council of Medicine.** This council organises a party at the end of the semester with live music and the *Rock for Charity*

celebration at Christmas in cooperation with a disco in Lübeck, whose cover charge is donated. Moreover, it sets up meetings to familiarise students who transferred to Lübeck from other universities. In a skills lab, the council and the student dean seek to organise the possibility for medical students to practice their medical skills in the city on dolls. A working group arranges for internships and practical medical training abroad and runs social projects as well. In the *Teddy Bear Hospital*, medical students go to a kindergarten to treat children's teddy bears, to help kids overcome their fear of doctors in a playful manner. Under the initiative, *Safe Love & Sex*, medical students discuss sexuality and sexually transmitted diseases with pupils. The *University Helps* program, run jointly with the transfusion medicine department, strives to sign up fellow citizens as bone marrow donors and to donate blood. The 2009 Student Council of Medicine also initiated the series of lectures on current political events, *Einblick schafft Durchblick* (Insight Means Clarity), with contributions by guest speakers.

[www.medizin.fachschaften.uni-luebeck.de](http://www.medizin.fachschaften.uni-luebeck.de)

**Student Council of MLS and CS.** A special council café is there for students to relax and really share ideas. They can prepare themselves for upcoming exams and understand how things work, by going through old exams or leafing through reports of exams by other students. Professors are evaluated regularly and this has grown into an annual ceremony to select the best professors and award the *HeliProf* medal to them.

[www.cs.fachschaften.uni-luebeck.de](http://www.cs.fachschaften.uni-luebeck.de)

“University sports offer fun and games, balance and relaxation, the opportunity to meet people and make lifelong friends. In other words, it is the icing on the cake of university life.”

Dr. Petra Roßkopf, Director, University Sports Club





## University Sports Club

This is an association of Lübeck universities and a part of the local cultural life for the population of roughly 10,000 university students. It collaborates with about 35 other sports associations to offer a diverse range of activities, including ball games, martial arts, fitness training, relaxation, water sports on local waters, excursions for climbing, skiing and snowboarding, various kinds of tournaments and much more.

[www.hochschulsport-luebeck.de](http://www.hochschulsport-luebeck.de)

## Orchestral Society of the Universität zu Lübeck

Of its 70 members, most of the musicians in the orchestra are students, but anyone may join. The group practices once a week and a public concert is held regularly at the end of each semester. The orchestra also performs at official university functions like the one to welcome new students at the start of a semester, at convocations and awards ceremonies.

[www.orchester.uni-luebeck.de](http://www.orchester.uni-luebeck.de)

## University choir

About 40 singers from Lübeck universities practice choir pieces of all genres. Four concerts are performed annually, plus performances at university functions. The choir has a lively exchange program with other European choirs and also goes on concert tours abroad.

[www.unichor-luebeck.de](http://www.unichor-luebeck.de)

## "Salt Peanuts" big band

The musicians in this big band are mostly students and alumni from the Universität zu

Lübeck, the University of Applied Sciences of Lübeck and the Academy of Music. This band plays different genres like swing, Latin and funk, with and without vocals and is an indispensable part of the Lübeck cultural scene. It is considered one of the best big bands in Northern Germany.

[www.saltpeanuts.de](http://www.saltpeanuts.de)

## Popsymphonics e.V.

This ensemble has 60 students from the university and the academy of music. They play pop, rock, film music and other hits in their own arrangements and compositions. Included are vocal numbers and full and rich orchestral music ranging from epic sonority to quiet string movements and awesome jazz – for which it is joined by a big band with percussion instruments.

## Student theatre of Lübeck

In 2007, several theatrically-motivated students got together and founded this theatre group. A year later, they premiered with *King Kongs Töchter* (*King Kong's Daughters*) by Theresia Walser. In June 2009, the group followed up with *Ein Inspektor kommt* (*An Inspector calls*) by John Boynton Priestley and then in December of that year they performed *Die Spielverderber oder das Erbe der Narren* (*The Spoilsports*) by Michael Ende. *Das Alte Kesselhaus* is the group's home stage on campus.

## MetaMeute

Arisen from technical and social aspects of informatics, MetaMeute offers students from all fields a regular joint to meet, discuss and work on interdisciplinary projects.



# Lübeck:

## Combining Tradition with the Modern Age

**The Hanseatic city.** Trade, science and culture have been the three constants throughout the 800-year history of Lübeck. Founded along the Baltic in the mid-12th century on older settlements, it was one of the first port cities in Germany. Ever since, trade through the Baltic has also played a major role in the fate of Lübeck. Traders from Lübeck were among the founders of the Hanseatic League, an association of medieval traders and cities, which represented their interests in goods traffic across the Baltic. For a long time, the *City at Trave* was one of the key trading centres of Northern Europe. Now, several important ports and Europe's largest ferry terminal in Lübeck-Travemünde are continuing this tradition.

**The city of science.** Lübeck is the centre of science in Northern Germany. The Universität zu Lübeck is not only the region's biggest employer, it pursues cutting-edge research along with other institutes. Roughly 10,000 young people from around the world seek entrance to one of the four universities in Lübeck. The close collaboration between the universities and businesses has transformed Lübeck into a centre of excellence in the fields of medical engineering and media informatics.

**The city of Nobel Laureates.** Lübeck is the home of two Nobel Laureates for Literature and one winner of the Nobel Peace Prize. The cultural scene in the city has been shaped by the heritage of Thomas Mann, Günter Grass and Willy Brandt and the constant debate on their works. Born in Lübeck and the author of *Buddenbrooks*, Thomas Mann was honoured with the Nobel Prize

for Literature in 1929. Günter Grass, author of the *Tin Drum* and a Nobel Laureate since 1999, has been working for many years in his Lübeck studio. He initiated the literary seminars. Two museums, which also double as research centres, are dedicated to the contributions of both these writers. The *Willy Brandt Haus* is devoted to the life and works of Willy Brandt, a former German Chancellor and winner of the 1971 Nobel Peace Prize.

**The city of culture.** The academy of music enjoys an excellent reputation worldwide. Students here are taught by internationally renowned artists and scientists. Performances and concerts can be heard almost daily in the academy or in Lübeck's Convention Hall. Each summer, music aficionados from across Europe flock to the *Schleswig-Holstein Festival of Music* in this Hanseatic city. In November, the Nordic Film Festival adds another feather in the cultural scene of the North. The city's theatres are known for impressive performances. Such an abundance of events stimulates creativity among the university students, not to mention the high standards of performance by the university orchestra and choir, the *Salt Peanuts* big band and *Popsymphonics* – all of which are famous far beyond the limits of their city.

**Metropolis with a view of the sea.** Lübeck is situated between the metropolis of Hamburg and the expansive, flat sandy beaches of the Lübeck cove reaching out to the sea. The cityscape encompasses the old town island, a World Heritage Site, the residential suburb stemming from the Wilhelminian era and lakes and rivers that define its character.



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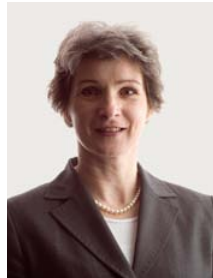
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