

## TUM CREATE Centre for Electromobility, Creating a New Milestone for TUM Asia



Top row left to right: Mr. Gan Yeow Beng, Vice-President & Head of EADS Innovation Works Singapore, Mr. Cyril Annarella, Cito & Asia Strategy Director, Gemalto, Mr. Foong Sew Bun, Chief Technology Officer, IBM Singapore, His Excellency Mr Joerg Ranau, Ambassador of the Federal Republic of Germany, Prof. Wolfgang A. Herrmann, President of Technische Universität München, Dr. Tony Tan, Chairman of National Research Foundation, Dr. Su Guaning, President of Nanyang Technological University, Mr. Andrew Chong, Regional President & Managing Director, Infineon.

Front row left to right: Dr. Oliver Wolst, Senior Manager (Research and Technology Center Asia Pacific), Robert Bosch, Prof. Joachim Luther, CEO, SERIS, Dr. Markus Wächter, CEO (nominated), TUM CREATE also Managing Director, TUM Asia, Prof. Lam Khin Yong, Co-Scientific Director (nominated), TUM CREATE, and Associate Provost for Graduation Education & Special Projects, NTU, Prof. Gernot Spiegelberg, Vice President Corporate Technology, Siemens and Dr. Richard Kwok, Executive Vice President, ST Kinetics.

The last quarter of 2010 marked a significant milestone in the books of TUM Asia. We had seen the official opening of the TUM CREATE Centre for Electromobility at Nanyang Technological University & Technische Universität München Asia's premises. We had also witnessed the Memorandums of Understanding (MOU) signed with eight leading industry partners at the official opening of the Centre for Electromobility at NTU.

Working with the eight partners – EADS Singapore, Gemalto, IBM Singapore, Infineon Technologies Asia Pacific, Robert Bosch (South East Asia), Siemens Aktiengesellschaft, Singapore Technologies (ST) Kinetics, Solar Energy Research Institute of Singapore (SERIS) – TUM CREATE hopes to attract more research groups and experts for the development of a prototype electric car.

Besides industry collaborations, TUM CREATE has also partnered NTU to conduct research on electric car and battery technologies, energy storage as well as the related technology and infrastructure to support these areas.

Dr. Tony Tan, Chairman of the National Research Foundation and the Guest-of-Honour at the opening event, witnessed the signing of

Continued on next page

### WHAT'S INSIDE

**05** Research Corner

**06 & 07** TUM Alumni Stammtisch Signed Off the Night with Great Company, Food and Countless Celebrations

**08 & 09** Hartomo Believes That TUM Asia Programme Provides Him with the Right Technical Knowledge and Gives the Right Exposure to Industry Related Projects

**10 & 11** Industry Partners: Bringing in the Best for Our Students

the agreements together with TUM President, Professor Wolfgang A. Herrmann and NTU President, Dr. Su Guanng. Representing TUM CREATE were its Chief Executive Officer (nominated), Dr. Markus Wächter, and Co-Scientific Director (nominated), Prof. Lam Khin Yong who is also NTU's Associate Provost for Graduate Education & Special Projects. They signed the MOUs with Mr. Gan Yeow Beng, Vice-President & Head of EADS Innovation Works Singapore, Mr. Foong Sew Bun, Chief Technology Officer, IBM Singapore, Mr. Emmanuel Brouillet, Germalto Director, Mr. Andrew Chong, Regional President and Managing Director, Infineon Technologies Asia Pacific, Dr. Oliver Wolst, Senior Manager (Research and Technology Center Asia Pacific), Robert Bosch, Prof. Gernot Spiegelberg, Vice President Corporate Technology, Siemens, Dr. Richard Kwok, Executive Vice President, ST Kinetics, and Prof. Joachim Luther, Chief Executive Officer, SERIS.

The TUM CREATE Centre for Electromobility will capitalise on TUM and NTU's complementary strengths in research and development, as well as their long-standing strong academic collaborations to meet the demands for a new paradigm in urban e-mobility by fusing safety and energy efficiency. "The TUMCREATE Centre for Electromobility is well-poised to tap on the vast German engineering experiences, in partnership with our local universities and Singapore-based industries to create innovative solutions, to address the individual and public transport needs, which would allow Singapore to take a significant step towards the realisation of electricmobility," said Dr. Tony Tan, Chairman of NRF.

Under the TUM CREATE initiative, 40 faculty members from TUM and NTU will work in Singapore supported by 100 researchers, including PhD and Masters students from both countries. The project team hopes to complete a prototype of an electric car, in a year's time. Named MUTE, which is inspired by how quiet this vehicle is when it travels, the electric car will make its first public demonstration at the Frankfurt Autoshow in September 2011. This will be followed by fleet tests in Singapore in 2011 and 2012. The Programme aims to demonstrate by the year 2013 how electromobility solutions can be ideally suited for tropical megacities, such as Singapore.

"We need to be present in the Asian metropolitan centres where technological progress is unhindered and unobstructed," said Prof. Wolfgang Herrmann. "I see this

Continued on page 4



Prof. Wolfgang Herrmann, TUM President (3<sup>rd</sup> from left) together with Dr. Tony Tan, Chairman of NRF (4<sup>th</sup> from left), at the NTU reception.



Prof. Wolfgang Herrmann together with Dr. Su Guanng, NTU President, presenting a memento to Dr. Tony Tan.



Delegates at the TUM CREATE MOU Signing Ceremony at NTU.



Prof. Wolfgang Herrmann addressing the crowd.





Prof. Wolfgang Herrmann with respective delegates at the TUM CREATE Corporate Office opening ceremony at TUM Asia.



Prof. Lienkamp, Scientific Advisory Director of TUM CREATE.



From left to right: Dr. Markus Wächter, Prof. Wolfgang Herrmann, Mr Jörg Ranau (Ambassador of the Federal Republic of Germany), Mr Albert Berger (Chancellor of TUM) and Dr. Kai Wülbern (Vice President of TUM) at the ribbon cutting ceremony for the TUM CREATE Corporate Office.



TUM Asia and TUM CREATE staff at the opening ceremony.



Prof. Wolfgang Herrmann engaging in a conversation.

cooperation as a model for the internationalisation of German research universities, as a strong presence in other countries could enhance their performance and impact at home. Each of our countries has a highly skilled, educated workforce and a desire to pioneer clean technologies that will seed new industries," added Prof. Herrmann, who began building the university's presence in Singapore through TUM Asia, a decade ago.

Commenting on NTU's involvement in TUM CREATE, Dr. Su Guaning said, "Sustainability and energy research are key thrusts for NTU. The university, through the Energy Research Institute @ NTU (ERI@N), aims to advance research that improves efficiency of the current energy systems while maximising synergistic effects of alternative energy sources. We see our collaboration with TUM CREATE as a partnership of research excellence and value creation. With our excellent track record in engineering research and our thriving research environment, NTU hopes to share our expertise in energy research and contribute significantly to the creation of a new paradigm of electric vehicles."

Added NTU's Provost, Prof. Bertil Andersson, who was instrumental in sealing NTU's collaboration with TUM, "Although the Singapore auto market is relatively small, electric vehicles will be the next revolution in transportation.

Singapore is well-placed to be the test bed for technologies and infrastructures supporting such vehicles and this can then be exported to other countries in Asia. Research in these areas will help to create a new high-technology electronic vehicle industry in Singapore, which will benefit the economy in the near future and align with NTU's profile and leading position in the world in sustainability research."

Said Dr. Markus Wächter, CEO (nominated) of TUM CREATE, "TUM CREATE, set up in collaboration with NTU will be a model for a unique partnership between the world's two leading universities in Germany and Singapore. We look forward to having our PhD students on board for our joint PhD programme with NTU in electromobility and to kick start the research in electromobility solutions in the coming months. With our combined strengths, I believe that we will be grooming the future talents and leaders in E-Mobility."

Prof. Markus Lienkamp, Scientific Director of TUM CREATE added, "The complex yet compact urban structure of Singapore is ideally suited to develop and test a comprehensive electric mobility system for a megacity."

In the late evening after the signatory of the MOUs in the morning, guests were invited to grace the opening ceremony of the TUM CREATE Corporate office at TUM Asia. We were honoured to have Prof. Wolfgang Herrmann, President of TUM, together with Dr. Markus Wächter, Managing Director of TUM Asia, Mr. Albert Berger, Chancellor of TUM, Mr. Jörg Ranau, Ambassador of the Federal Republic of Germany to Singapore and Dr. Kai Wülbern, Vice President of the TUM to be at the Pixel Building premises to officiate the opening. This evening was made significant together with the signing of the Memorandum of Understanding between TUM Asia and the Singapore Workforce Development Agency (WDA). This MOU marks another collaboration between TUM Asia and WDA in providing Professional Development Programmes that will be delivered by German expertise from TUM to the local engineering professionals in Singapore.

For more information on TUM CREATE or the request for brochures, kindly forward your enquiries to [natalia.eddy@gist.edu.sg](mailto:natalia.eddy@gist.edu.sg).



Dr. Thomas Aulig and Dr. Thomas Maul (left and right, both front facing) engaging in a conversation with Dr. Harry Hoster and Prof. Lienkamp (left and right, both back facing).



Dr. Martin Sachenbacher, Principal Investigator of TUM-CREATE.



Dr. Markus Wächter with Ms. Julia Ng, Director, Manufacturing & Construction Division, Singapore Workforce Development Agency.



# Research Corner

TUM Research Corner highlighted research in novel technology

## Characterising photoelectrons with quantum point contacts: Electron billiards in nanoscale circuits



Circuit with quantum point contacts

In solar cells, solar radiation boosts electrons to higher energy states, thereby releasing them from their atomic bonds as electricity begins to flow. Scientists led by Professor Alexander Holleitner, physicist at the Technische Universität Muenchen (TUM), have developed a novel method

**to analyse the way photogenerated electrons move in the smallest photodetectors. They present the fruits of their research in the current issue of the magazine Nano Letters.**

At the heart of the method is so-called quantum point contact (QPC). This is a narrow conductive channel in a semiconductor circuit. The scientists created a 70-nanometer narrow channel, about as wide as the wavelength of electrons in the semiconductor. The key is that only one electron at a time will fit through the channel, making possible extremely high precision measurements of the electric current. As described in the current publication, this method was applied to photogenerated electrons for the first time ever.

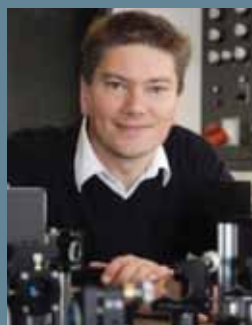
In the experimental set-up it is not the sun, but rather a laser beam that kicks the electrons into their excited state. These electrons are then analyzed using a quantum point contact. In the process, the scientists were able to demonstrate for the first time that photogenerated electrons can flow several micrometers before colliding with crystalline atoms. They also established that the geometric form of a circuit has a strong influence on electron paths. Electrons can even "run around corners" when they rebound from circuit boundaries, not unlike billiard balls.

The insights and analytic opportunities made possible by this novel technique are relevant to a whole range of applications. These include, most notably, further developments of electronic components such as photodetectors, high electron mobility transistors (HEMT), and components that utilize the magnetic spin of electrons to process information.

Apart from Professor Holleitner's team, scientists working with Professor Joerg Kotthaus (Ludwig-Maximilians-Universität Muenchen) and Professor Peter Haenggi (Universität Augsburg) participated in the research. The studies were funded by the Cluster of Excellence Nanosystems Initiative Munich (NIM), the German Federal Ministry of Education and Research BMBF via nanoQUIT, the Deutsche Forschungsgemeinschaft (DFG Grant no. Ho 3324/4), the Center for NanoScience (CeNS), and LMUexcellent.

## German Research Foundation awards top science prize to TUM physicist: Physicist Franz Pfeiffer receives 2011 Leibniz Prize

**The Leibniz Prize is Germany's most renowned scientific award and brings each recipient 2.5 million euros in prize**



Physicist Franz Pfeiffer is one of the ten winners of the 2011 Leibniz Prize

money. Physicist Franz Pfeiffer is one of the ten winners of the 2011 Leibniz Prize, announced by the German Research Foundation (DFG). The 38-year-old physicist is the Chair for Biomedical Physics at the Technische Universität Muenchen (TUM). The prize honors his fundamental and applied research in phase-contrast X-ray imaging, which promises significant progress towards early detection of tumors. Said Prof. Wolfgang A.

Herrmann, TUM President: "You are not only one of our top scientists, but as a member of our Senate you also serve the overall development of the university. With your innovative contributions in X-ray physics, you are setting the direction for the Centre for Advanced Laser Applications (CALA) project and the medicine of tomorrow."

CALA is a collaborative project of TUM and LMU that has taken shape on the TUM campus Garching near Munich, with significant participation by physicist Pfeiffer and TUM Professor Michael Molls, a medical doctor. Molls is director of the Clinic for Radiation Therapy and Radiological Oncology at the university hospital Klinikum rechts der Isar.

## Süd-Chemie AG and Technische Universität Muenchen reach agreement on strategic alliance: Up to €20 million for catalysis research

Süd-Chemie AG and Technische Universität Muenchen (TUM) have formed a strategic alliance for catalysis research, "Munich Catalysis". In addition to basic research in the field of catalysis, a major aspect of this cooperation will be the development of innovative catalysts as a key technology to help meet the rising global demand for energy and



Prof. Herrmann, TUM President and Dr. von Au, Chairman, Süd Chemie AG

base chemicals on a long-term basis. Süd-Chemie is to sponsor this research work with up to €2 million a year. The cooperation is based on a master agreement concluded for an initial term of ten years, which, if successful, is to be extended beyond this period.

"The overriding goal envisaged by Munich Catalysis is to develop key catalytic technologies on a sustainable basis which – in view of the limited fossil resources and a continuing rise in the global consumption of energy and base chemicals – make the greatest demands on research alliances between university and industry," says TUM President, Prof. Wolfgang Herrmann. "As an entrepreneurial university, our research activities pursue the path of innovation to the stage of technical realization. In the field of catalysis, we have selected Süd-Chemie since this partner has a globally successful catalyst business."

# TUM Alumni Stammtisch Signed Off the Night with Great Company, Food and Countless Celebrations

The Technische Universität München (TUM) Alumni Stammtisch which took place last October at Paulaner Singapore took a turn this time round. A whopping number of 200 alumni from all walks of life filled up level two of Paulaner at downtown Millenia Walk. Most of the alumni managed to take time off their busy schedules to attend this event. With free flow of Paulaner beer and a buffet spread of German cuisine, we saw many guests enjoying their dinner with great company of the fellow alumni.

The TUM Alumni Stammtisch coincided with the visit of our TUM delegates, who were here to grace the opening ceremonies of the TUM CREATE Centre for Electromobility office at NTU and TUM Asia. The President of TUM, Prof. Wolfgang Herrmann was present at the Stammtisch to give a presentation of the milestones that TUM Asia has come by far and presented the TUM Asia Alumni Appreciation Awards to three of our alumni who have been making contributions to TUM's presence in Singapore. Mr Chirag Tejuja and Mr

Srivarada Kota had each been awarded for their continuous support to our new intake of students on orientation days by sharing their studying experiences with TUM Asia. In addition, Mr Alex Buchner, the Brewmaster and General Manger from Paulaner, who is also a proud alumni of TUM, was awarded for his continuous support to us by being a choice venue for our events.

In addition, another highlight of the night was that we saw proud recipients of the DAAD Scholarship holders whom each received their award from Dr. Susanne Rentzow-Vasu, Director of DAAD Singapore, for their excellent academic results. We will like to take this opportunity to congratulate the following students: Song Wenji, Anila Ayyappa Rajan, Song Jun, Sasidharan Maya, Chen Yu, Cao Yang, Erik Budiman and Tanut Ungwattanapanit .

Overall, the reception turned out exceptionally well and we look forward to the next alumni bash in year 2011!



TUM alumni and delegates at the alumni Stammtisch.





Prof. Wolfgang Herrmann and alumni at the Stammtisch.



# Hartomo Believes That TUM Asia Programme Provides Him with the Right Technical Knowledge and Gives the Right Exposure to Industry Related Projects

**Q1. Could you share with us how you come to know about the Master programme at TUM Asia?**

During my last year in NTU, I was offered a scholarship by Infineon to pursue the TUM Asia Master programme.

**Q2. What made you decide to sign up with the programme?**

After graduating from NTU, I decided not to pursue a PhD. If I wanted to work in the industry, I figured a Master degree with strong industry connection would be beneficial.

**Q3. After 18 months on the programme, what are your thoughts about it?**

The coursework was tough and intensive, and the thesis project required significant effort and time. However, overall I am satisfied with the technical knowledge and industry experience which I have gained.

**Q4. Could you please share with us your student life in Singapore?**

**- Any interesting story to share?**

Attending class every day with the same group of classmates reminds me of my high school days. I think this arrangement allows us time to bond and become more closely knitted group of friends.

**Q5. What do you do during your leisure time while studying here?**

Hang out with friends and watching movies.

**Q6. Could you please share with us your internship experience?**

**- What did you do?**

I worked on a project in Infineon which explores new circuit concept. If the new concept is feasible to be implement, it may be offered to customers for consideration.

**- Did you enjoy the internship experience?**

Yes.



Hartomo (2<sup>nd</sup> row, far right) with his classmates at NTU



**- What have you gained from the internship experience?**

I gained a lot of practical know-how from my supervisors and understand more about the industry work flow.

**Q7. Did you manage to do some travelling around Asia during your internship and studies?**

During the semester break, I went back to Indonesia to visit my family.

**Q8. Going back to your university days could you share with us some of the extra curriculum activities that you were involved in?**

I was not involved in any extra curricular activities during my Master study except going out with friends.

**Q9. Regarding your course of study, could you share with us which area you specialised in? Were you interested in any particular area of study back then?**

Before I joined this programme, I was more inclined towards digital IC design. However, throughout the course of study, I became more interested in analog IC design. In fact, my thesis project and my current job scope are related to analog IC design.

**Q10. You were awarded the Best Student Award in Integrated Circuit Design in last year's Graduation Ceremony. Could you share with us more details?**

I felt honoured even though I did not expect to win this award since the competition from my classmates was really stiff.

**Q11. Where are you currently working at and how has studies in TUM Asia help you in your job?**

I am currently working in Infineon Technologies Asia Pacific as an analog IC design engineer. The TUM Asia Master programme



Hartomo (far right) with his classmates at the Graduation Ceremony 2010

has helped me to realise my interest in analog IC design and prepare the technical knowledge necessary to work in this field.

**Q12. Do you have any advice to share with our potential students?**

You should consider this programme if you wish to have strong technical knowledge in a specialised area and be exposed to industry related project experience.

**Q13. What are your plans for the years to come?**

I want to increase my technical know-how in analog IC design and projects portfolio.



Hartomo (far right) with his classmates and Prof. Siek Liter (ICD lecturer from NTU, 4<sup>th</sup> from right)

# Industry Partners: Bringing in the Best for Our Students

Industry partners hold important roles in the education programme structure of TUM Asia students. The activities, organised by TUM Asia, aim to give our students insights of career opportunities on related areas of their studies as well as network with the industry partners from various companies. In the last quarter of 2010, we had been busy with activities of visiting Micron/Numonyx and Lantiq and inviting speakers from BASF, Clariant, and Pratt and Whitney to give talks to students.



Prof. Warzelhan preparing to deliver a presentation to our MSc Industrial Chemistry students.

## BASF

BASF has been a long time partner of TUM Asia. Since 2003, BASF has been awarding four Industrial Scholarships annually for MSc in Industrial Chemistry. In addition, Prof. Volker Warzelhan, Vice President of BASF Ludwigshafen, gives lectures for the Industrial Chemical Marketing module every year in partnership with Budenheim.

As seen above, Prof. Volker Warzelhan gave talks about BASF activities as well as its future developments. The talk, which was attended by around 20 students, lasted for around one and a half hours, inclusive of Q&A sessions.

## Clariant

Two high level representatives from Clariant, Dr. Martin Vollmer, Chief Technology Officer (CTO), Head of Group Technology Clariant International Ltd and Mr. Walter Mohr, Head of Regional Business Services and Regional Representatives South East Asia and Pacific, Clariant (Singapore) Pte Ltd, visited TUM Asia in November 2010.



Simon Maaland with Dr. Martin Vollmer, CTO, Clariant.

Addressing to 12 MSc in Industrial Chemistry students, Dr. Vollmer gave an overview on Clariant business activities, Global R&D Centers, and its case studies of innovation in Clariant and information on internship placements career path after graduation. Students were actively asking questions ranging from business perspective, internship/master thesis opportunities, and sharing views of future career on chemical business.

Clariant, the world leader in colours, surface effects, and performance chemical with annual sales of CHF 6.6 billion (2009) is sponsoring one of our MSc in Industrial Chemistry student in 2010, Mr. Simon Maaland. An additional scholarship has been already in the pipeline for future candidates.

## Pratt and Whitney

Pratt & Whitney designs, manufactures, services and supports aircraft engines, industrial gas turbines and space propulsion systems. Whether it's through more environmentally friendly processes, innovative services, or quieter, more fuel efficient engines, Pratt & Whitney is the pioneer behind most major advances in both military and commercial aviation.



A mingling session between our students and our representatives from Pratt and Whitney.

It was an honour for TUM Asia to invite one of the big players in aero-engine industries. Bringing along with five of his colleagues, the team lead by Mr. Robert Mazurkivich gave a presentation about Pratt and Whitney's operations globally and in Singapore. Mr. Mazurkivich mentioned that there are two tracks of careers that are equally valued and required strong mechanical and aerospace engineering background; Project Management and Design. Sharing his opinion, Mr. Orville Dunn said "P&W is a good home to groom your career in your professional aspects, career development, work culture and benefit".

Attended by about 22 students, they interacted with the Pratt and Whitney team personally to discuss about their interests and opportunities after graduation. In Singapore, the of Pratt and Whitney team is expected to expand from 75 engineers to 100-plus engineers.





Our MSc Integrated Circuit Design students attending a talk at LantiQ Singapore.

### Lantiq

Our students from MSc Integrated Design programme had the opportunity to visit Lantiq office and facilities in Kallang, Singapore. The visit was welcomed by Ms. Goh Ko Kah, whom gave a presentation about Lantiq's core business and its portfolio. Questions on internship and master thesis opportunities arise. Mr. Ulf Schneider, Managing Director of Lantiq, had spared a few minutes of his time to welcome our TUM Asia students and addressed their queries. Students were given an opportunity to view the laboratory facilities as well as invited to a sharing session by our current Integrated Design student, Mr. Gibran Limijaya, who is serving his internship in Lantiq. Limijaya shared that he was tasked to handle a challenging project in Lantiq and he needed to apply theories into practice. He felt proud to participate in a project in developing the new future technology.

### Micron/Numonyx

Students from MSC Microelectronics programme had an opportunity to visit Micron/Numonyx wafer fab facility in Ang Mo Kio. After being welcomed by team leader Ms. Amanda Leong, Micron/Numonyx, the students had an interactive session with various topics such as wafer processing, career in semiconductor industries, and employment opportunities.

The visit was followed by a tour to the clean room. Students wore special lab attire to enter the clean room, and they were divided into two groups. Walking along the wafer fab lines under the guidance of Mr. Ba Tan's team,



MSc Microelectronics students in lab attire before entering the clean room

students had a bit of experience working in wafer fab environment and experience the technology used in the process.



Our MSc in Microelectronics students visited Nymonyx.

## April is the LOGISTICS MONTH of the year.

Stretching from the final week of March to April, TUM Asia will be offering a series of logistics short courses, helmed by renowned experts in the logistics and supply chain industry.

### 1. Green Supply Chain – How to enhance and maximise your profitability

Date: 28th & 29th March 2011 (2 days)

Speakers: Mr. Vivek Sood and  
Dr. Hanns Zeltner

### 2. Outsourcing and The Challenge to Build Sustainable Contract Logistics

Date: 30th March – 1st April 2011 (3 days)

Speakers: Dr. Oliver Kunze and  
Dr. Jens Wollenweber

### 3. The Art and Science of Designing Logistical Network

Date: 4th – 6th April 2011 (2.5 days)

Speakers: Professor Peter Klaus and  
Mr. Heiko Wrobel

### 4. Costing and Pricing Logistics Services – The New Opportunities of Revenue Management

Date: 12th – 14th April 2011 (2.5 days)

Speakers: Professor Peter Klaus and  
Mr. Lars Schubert

Email us at [exec.training@gist.edu.sg](mailto:exec.training@gist.edu.sg) to find out more on course fees and promotions.

\*WDA subsidy is available for the above courses.

\*\* All courses will be held at 10 Central Exchange Green, The Pixel Building, Level One.

### Key Highlights:

- Sharing sessions by industry experts
- Free software given for The Art and Science of Designing Logistical Network workshop
- BVL Logistics Day on the 14th April (Federal Logistics Association)

# Announcements

## TUM Asia has officially launched its new logo as of January 2011.

A new logo has been officially launched as of January 2011. The purpose of this rebranding will bring us closer to our parent university, the Technische Universität München (TUM), back in Munich, Germany. Said Dr. Markus Wächter, Managing Director of TUM Asia, "With this new branding, we hope to enforce an even closer identification with our parent university, TUM, and continue to provide elite German education in Asia."

## First intake of Master of Science in Biomedical Imaging and Computing in August 2011.

TUM Asia will be expecting its first batch of MSc Biomedical Imaging and Computing for the August 2011 intake. This programme has gone through a soft launch at the end of year 2010 and has been officially launched in January 2011. We are looking for candidates who have a Bachelor in Biomedical Engineering, Computation and Computer Engineering, Material Science, Chemical Engineering, Life Science and Medical studies to join us in our admission. For more details, log on to [www.gist.edu.sg](http://www.gist.edu.sg) for more information.

## Upcoming events

Our student recruiters are travelling again. Catch them at the following cities and bring in your burning questions regarding our courses.

Date (Day)	Time	Event Name	Country, City	Venue
18 Feb 2011 (Fri)	11am-7pm	Global Education Fair	Mumbai, India	2nd Floor, Business Point, Paliram Road Next to B.M.C. office Off S.V. Road Andheri-West
19/20 Feb 2011 (Sat/Sun)	10am-7pm	The Star Education Fair	Penang, Malaysia	Penang International Sport Arena (PISA)
20 Feb 2011 (Sun)	3-6pm	Public Seminar by TUM Asia	Coimbatore, India	The Residency Hotel
21 Feb 2011 (Mon)	10.30am -5.30pm	World Education Fair	Coimbatore, India	The Residency Hotel
22 Feb 2011 (Tue)	10.30am -5.30pm	World Education Fair	Cochin, India	Abad Plaza
12/13 Mar 2011 (Sat/Sun)	1-6pm	European Higher Education Fair Hong Kong (EHEF HK) 2011	Hong Kong, China	Exhibition Gallery, Hong Kong Central Library
12/13 Mar 2011 (Sat/Sun)	9am-4.30pm	China International Education Exhibition Tour	Beijing, China	China World Exhibition Hall
15 Mar 2011 (Tue)	1-6pm	China International Education Exhibition Tour	Dalian, China	Furama Hotel Dalian
17 Mar 2011	1-6pm	China International Education Exhibition Tour	Xi'an, China	Sofitel Xian on Renmin Square
19/20 Mar 2011 (Sat/Sun)	10am-4.30pm	China International Education Exhibition Tour	Shanghai, China	ShanghaiMart 4/F
26/27 Mar 2011 (Sat/Sun)	1-5pm	China International Education Exhibition Tour	Guangzhou, China	Dongfang Hotel

## GERMAN INSTITUTE OF SCIENCE AND TECHNOLOGY-TUM ASIA (TUM ASIA)

**Managing Director**  
Dr. Markus Wächter

**Academic Director**  
Prof. Dr.Dr.h.c.mult.Wolfgang A. Herrmann

**Personal Assistant to Managing Director**  
Christina Ang

**Personal Assistant to CEO (TUM CREATE)**  
Elaine Yap

**Industrial Relations and Continuous Education**  
Natalia Eddy (Manager)  
Gary Ong (Project Manger)

**Special Projects Department**  
Bettina Petz (Project Assistant)

**Faculty**  
Dr. Thomas Maul  
(Head of Education and Research , Electrical Engineering)

Dr. Andreas Rau  
(Head of Education and Research, Civil Engineering)

Dr. Yong Zhong Zhu  
(Head of Education and Research, Chemistry)

**General Manager**  
Marian Majer

**Human Resources Department**  
Ivy Tan (Manager)  
Grace Tan (Executive)

**Corporate Communications Department**  
Natalie Toh  
(Manager, Communications)  
Amelia Chang  
(Manager, International Student Recruitment)  
Timmy Zhao  
(Manager, International Student Recruitment)

**Academic Services Department**  
Nicholas Tan (Manager)  
*Academic Services Executives:*  
Zara Mohd  
Punitha Nathan

*Academic Services Officers:*  
Edeline Moniaga  
Vivien Ho  
Monica Laurence  
Alvin Lim

**Finance Department**  
Evelyn Chua (Manager)  
Hidayah (Executive)

**Receptionist and Administrative Officer**  
Siti Azman

**Editorial Team**  
Natalie Toh

**Address:**  
German Institute of Science and Technology-TUM Asia  
10 Central Exchange Green  
#03-01 Pixel Building Singapore 138649

Tel : +65 6777.7407  
Fax : +65 6777.7236  
Email : [info@gist.edu.sg](mailto:info@gist.edu.sg)  
Website : [www.gist.edu.sg](http://www.gist.edu.sg)

**Printer:**  
Image Printers Pte Ltd

MICA (P) 236/03/2008