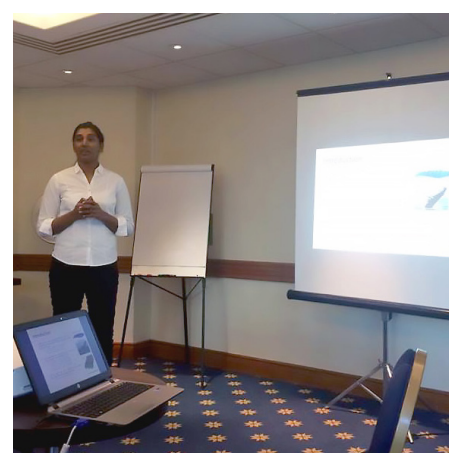


Verbinden

German to English Definition: To link up, to connect together
 A bi-annual Alumni newsletter from Technische Universität München Asia (TUM Asia)

SPRING 2016 // 02



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Director's Message

TUM's global alumni network has continued to grow vastly over the years. The need for more skilled and highly educated professionals continues to rise. Many TUM students have completed their Bachelors and Masters degrees. They continue their journey by furthering their education with a doctorate, or move on into the industry. In the recent years, interest in doctorate programmes has been growing at TUM and TUM Asia. This issue of Verbinden aims to highlight the achievements and successes of TUM Asia alumni that prepared them for a doctorate. In the past month, we held our annual career networking

event. It was inspiring to witness the positive turn out of students and alumni, who were eager to talk to the various companies within minutes of the event commencement. To read more about the Career Opportunity Day, check out pages 3 & 4.

Recently, we were able to catch up with three of our graduates. They have all had unique experiences since their time at TUM Asia. Two of them were invited to speak at well-known conferences in the industry, while one of them went on to Germany to complete his PhD and is currently working in Infineon, Munich. To learn more about their experiences, read their interviews on pages 5 - 6, 8 - 9.

I hope that you will enjoy this



issue of the alumni newsletter. Stay tuned to our next issue in October 2016.

Yours Sincerely,

Dr. Markus Wächter
Managing Director, TUM Asia

TUM Alumni Network

More than 45.000 TUM alumni and current students form the TUM network. As an alumni, you can benefit from your Alma Mater even after graduating. Interact with others in your area, get in touch in real life or virtually, and benefit from these connections for the rest of your life! Find out ways you can benefit as an alumni. Register now at together.tum.de.



COMMUNITY

Register your profile on the TUM network and be part of the global community. Create your own interest group or interact with alumni from all over the world.

Visit: www.together.tum.de/en/



CAREER

Looking for job opportunities in another country? TUM's online job portal offers a variety of job positions all over the world, made accessible by a click of a button.

Find out more at:
www.db.alumni.tum.de/jobs



ALUMNI SERVICES

Keep in touch with the latest news and events from TUM and TUM Asia. Make sure you keep an updated profile so all campus news can reach your email inbox.

Update your details at the bottom of the page in this link:
www.tum-asia.edu.sg/community/alumni/



EVENTS

TUM and TUM Asia organizes regular events and workshops that can further develop your professional skills. Alumni events such as Stammtischs will also be a great time to catch up with friends.

Stay tuned to our Facebook page for regular updates:
www.facebook.com/tum-asia



PUBLICATIONS

Get the news on who's who in the various newsletters and magazines published by the university. All publications are made available in English so you can definitely enjoy the articles within!

To view our publications, visit:
www.tum-asia.edu.sg/media/newsletter/



SUPPORT

As an alumna or alumnus, you can support our students in many ways. Through sharing your expertise and experiences in our newsletter, you are able to offer insights into your professional everyday life.

Simply contact us at:
info@tum-asia.edu.sg

Photos: Playground Pictures, TUM Asia

Career Opportunity Day



Photo: TUM Asia

TUM Asia places great emphasis on maintaining strong relationships with the industry by incorporating the feedback it receives from its industry partners. Every year, TUM Asia invites established companies from the industry to participate in its annual industry networking event. Being an exclusive TUM Asia event, students and alumni are able to have more time to have close and personal interactions with the companies. This year, over 150 students and alumni took part in the Career Opportunity Day, held in SIT@SP on the 22nd of March.

There were numerous opportunities present for students and alumni. Some were looking for internships or thesis opportunities, while others were seeking for employment opportunities after graduating. There were students who were considering to further their studies by pursuing a PhD.

Organising the Career Opportunity Day provided students with the opportunity to interact directly with employers during their studies. Students and alumni were dressed in their best and seen moving around to the different booths, eager to find out more from the respective companies. This not only allows students to understand the requirements of the openings that these companies offer, but also enables companies to easily approach students to have casual conversations. Some companies were even able to conduct on-the-spot interviews with multiple candidates.

TUM Asia Career Services can benefit you when planning your career options. It serves as the focal point that connects TUM Asia students, its alumni and the employers through a variety of services and events.

If you have enquiries, or require advice or support, please send an email to careerservices@tum-asia.edu.sg.
If you wish to make a consultation appointment, please notify Career Services via email 3 working days in advance.



Photos: TUM Asia

Alumni Spotlight

Jesline Joy

Master of Science in Aerospace Engineering
Class of 2013



Photo: Jesline Joy

Photo: Jesline Joy

To be recognised by the industry is a huge honour for any TUM Asia student or alumni as it can come in many forms. We catch up with Jesline, whose success with her research topic during her time at TUM Asia led her to be invited to present her technical paper at an international conference.

Hello! Could you share with us more about your topic?

My topic is related to Bio-inspired Aerodynamics. The research draws its inspiration from Humpback whales. Humpback whales are huge and giant sea whales with excellent performance features, with a sinusoidal wing structure known as 'pectoral flippers'. During my research, I carried out the computational analysis on these modified wing structures at low Reynolds number to analyse the flow behaviour. I am confident in my topic that it would contribute to the aircraft industry. I was recently invited to two conferences to present my paper.

What do you aim to achieve with your technical presentation?

Although everyone is aware about the wonders of this modified wing design, most of the research background deals with higher Reynolds Number and quantitative analysis. What is more interesting is to understand how these giant whales are able to perform exceptionally well in water which is a denser medium. More qualitative analysis and flow separation control characteristics are part of my technical presentation, which are aspects that I want to inform the researchers.

Was the outcome of your research what you had expected it to be?

Before starting my work, I had not expected such a successful outcome. I started off trying to validate the experimental results performed by a Research Fellow in NTU. Since Computational Fluid Dynamics is more flexible than the experimental approach, I was able to achieve some good results which my supervisor thought was a good idea to have it published.

We hear that you will be presenting at an international conference. Are you prepared for it?

It is the first time I will be presenting on an international level, which will be at the International Conference on Aerodynamics and Hydrodynamics to be held in London, United Kingdom. I am very excited!

Were there challenges while completing your technical paper? How did you overcome them?

I made plenty of mistakes. However, these mistakes were brought to notice by my supervisor and the review process was quite strong. Rectifying these mistakes led me on the path I am today.

Do you have any advice for TUM Asia students on giving a presentation, like yourself, in the future?

I completed my thesis in NTU and it was a non-disclosure agreement. Thus, I had little experience in conducting a public presentation, with the exception of a weekly review. However, some of my classmates conducted their thesis with TUM and they were able to gain exposure to giving presentations in front of a crowd. Your thesis presentation is a stepping stone and is easier than an international conference as you are representing your work as well as your university. Be confident in your work!

What are your plans after TUM Asia?

I have not come to a firm decision; however, since I have worked closely with high-speed Aerodynamics and Bio-inspired Aerodynamics, I am still fascinated by the wonders of aerospace technology. I am also considering a PhD.

Alumni Spotlight

Nandhini Raju

Master of Science in Aerospace Engineering
Class of 2013



Photo: Nandhini Raju

Due to the success of her research, Nandhini was invited to conferences to present her technical paper. The Verbinden team speaks with her to learn more about her experiences and successes, which played a huge part in securing a PhD in the USA.

Hello! Could you share with us more about your technical paper and the topic?

My work is about tomographic reconstruction of the supersonic jet. We are familiar with the computed tomography (CT) scanner. I am following the same technique to produce the quantitative density value of a supersonic jet. I am using 2D images and trying to produce 3D images and its density values. This work is related to flow visualisation and it covers experimental, analytical, mathematical and computational part of CT.

What do you aim to achieve with your technical presentation?

I aim to give a detailed explanation of this technique and how it would help the flow visualisation field. With my research, I am taking this technique one step forward by proving the quality of my results.

Was the process to get your work noticed challenging?

Definitely. There were certain criteria's that we needed to meet in order to have our work considered for selection. Our research should be taking the next step forward of that method or technique in the research field. We should be very clear on what we are working on in terms of theory and practical work. This would allow you to explain it in your research paper. Your research and clarity to

explain your work must work well together.

Is this your first time presenting your technical paper? How do you prepare yourself for the actual presentation?

SATEC 2016 is actually my second presentation. I gave my first presentation in the AIAA Aerospace Meeting Scitech 2016, in San Diego, USA. I prepared my slides by making sure that they are easy to understand and in a chronological order so that my audience can follow my research journey. After that, I will start practicing my presentation at least 10 – 12 times in front of my project mates or by myself. I firmly believe my mentor's policy; that a good presentation needs practice. It prepares me to be confident while answering questions.

While you were completing your technical paper, did you encounter challenges? How did you overcome them?

Once my paper was completed, I submitted it for correction. My mentor questioned me thoroughly to make sure that the data which I produced is correct and that I have complete understanding of the data. This process took 4 – 6 hours and I was able to answer all the questions from the session chair and audience during the conferences.

What made you decide to come to

Singapore and pursue a Master of Science degree?

Most of my juniors, and myself included, pursued a Master of Science degree in order to gain new skills to advance our careers. Eventually, a degree with TUM Asia would enable us to get a job or PhD position somewhere else in the world.

Do you have any advice to fellow TUM Asia students and alumni on giving presentations?

Giving a presentation with my friends and giving a presentation in a conference is completely different. The audience in AIAA are experts from the industry. Sometimes, the experts that invented the areas you are researching on are present in the audience. You need to be very careful of what you are talking about and how you are explaining it. Focus on topics that you enjoy and improve yourself by referring books and journal articles. Performing well in your presentation may open the door for you to receive a job or a PhD.

What's next for you after TUM Asia?

My plan is to pursue a PhD. After my presentation at SATEC, I received some PhD offers from different universities in USA. I am looking forward to accepting an offer from one of them this coming August. However, I will be travelling to the USA within two months to prepare for my PhD.

LTA Site Visit



Photos: TUM Asia



On the 22nd of January, an industry visit was organised for the Master of Science in Transport & Logistic students, which allowed them to visit the Land Transport Authority (LTA) of Singapore. The LTA is responsible for planning, operating and maintaining Singapore's land transport infrastructure and systems. They seek to improve public transportation for the daily travellers. This trip was extremely relevant to the students specialising in Transportation. As most of the cohort hails from countries across the globe, it was an eye-opening experience for them to witness the operations of a local Singaporean company.

“My Masters Prepared Me For A PhD In Germany”

Srinivas Boppu

Master of Science in Integrated Circuit Design, Class of 2009
Completed PhD at University of Erlangen Nuremberg, Germany
Consultant at Infineon, Munich



Photos: Srinivas Boppu (fourth from the left, in a black business suit)

With modern technology moving at a progressive rate, a growing number of job postings are now requiring higher levels of expertise. Students are now looking to pursue a Master’s degree, followed by a PhD, which would significantly influence one’s career path. In this issue of Verbinden, one of our alumni shares his story on how his time with TUM Asia led him to his current job with Infineon.

Hi Srinvas! You have accomplished much since graduating from TUM Asia. What motivated you to pursue the educational path that you took?

A Very-large-scale integration (VLSI) course in my Bachelors motivated me to pursue a career in IC design and after working in that field for a couple of years, I felt that a Master of Science degree in the same field could provide me with knowledge that can help further my career. I had also witnessed some of my colleagues, who had an edge due to the knowledge they gained with a Masters degree. I decided to pursue the Master of Science degree in Integrated Circuit Design by TUM Asia due to the modules being offered. I would say that it was the best educational decision as it paved the way for a PhD.

How did your professors at TUM Asia inspire you?

I was really fascinated by the way that the German professors taught and how they encouraged us to think. I was inspired from the courses, particularly those taught

by Prof. Andreas Herkersdorf, Prof. Ulf Schlichtmann and Prof. Paolo Lugli. I read up more to gain deeper perspectives on my courses, while gaining practical knowledge through my classes.

How has your Master’s degree at TUM Asia prepared you for a PhD?

My classes helped me to understand the basic fundamentals of the IC design. The discussions during the exercises and preparing for the exams in a group had a lot of impact on the way of thinking. This enabled me to do well in the interviews when I was looking for my PhD and a full-time job after that.

How were you able to apply what you learnt during your education at TUM Asia towards your PhD?

With the knowledge I gained from TUM Asia, I was able to come up with interesting solutions to complete my PhD. I applied the low power design fundamentals and optimizations that I learnt in the Digital IC Design and System-on-Chip design modules. I was able to quickly code a circuit

in Verilog and get it working on real hardware.

What is the daily life of a PhD student like?

During my PhD, I had a predefined project to work on. Apart from that, I would teach the exercises and conduct labs for some other courses. You will have to define some bachelor and master theses and guides for the students. You are also expected to publish and demonstrate your ideas and concepts by implementing either software or hardware prototypes. I also worked in an inter-university project with not only colleagues from Germany but from across the globe. The most interesting part was that some of the students helped me to implement some of the designs for which I did not have time to complete on my own.

What was one challenge you faced when you were pursuing your PhD?

The biggest challenge during my PhD was to demonstrate my ideas and concepts on the real hardware. Designing a circuit might be easy

compared to making it to work on the real hardware. I ended up spending weekends and late nights in the lab. However, I really enjoyed the journey and was surrounded by great and friendly colleagues, who worked towards a single goal.

Do you keep in touch with your TUM Asia classmates and professors?

I am in touch with most of classmates and we regularly exchange e-mails. With regards to professors, I previously worked closely with several professors during my Masters. Doing my PhD in Germany allowed me to meet them regularly and work with their students as well. One of them, Prof. Andreas Herkersdorf, was my second reviewer for my PhD thesis.

How did you hear about your current job with Infineon Munich?

I had previously conducted my Master thesis and internship at Infineon Singapore. It was only through the

contacts that I had made in Singapore that gave me the opportunity to work in Infineon Munich. My supervisor from Infineon Singapore moved back to Germany and when I was looking for job, he referred me to the team that I am currently working for. Currently, I am working in Infineon as a consultant for Chip Globe, GmbH. I work in a team where we develop the timing sign-off methodology.

What do you miss about being a student at TUM Asia?

In general, I miss the campuses and the fun. I really had a wonderful time on the campus. I was close with my batch mates and we would often go on small local trips after each module.

Any advice for TUM Asia students or graduates who are interested to pursue a PhD?

If you are looking to pursue a PhD, Germany is one of the best places to look for open positions. Each

department is like a small start-up company. They are equipped with very good facilities, such as high end equipment to do your research. You have the opportunity to gain full funding until you complete your PhD. You will learn a great deal during this period.



Photo: Srinivas Boppu (third from left, showing his unique graduation cap to his professors and colleagues)

On The Cover Photos:

Jesline Joy, Nandhini Raju, Srinivas Boppu, TUM Asia

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CPE Registration No. 200105229R (13/06/2011 - 12/06/2017)
German Institute of Science & Technology – TUM Asia Pte Ltd

