

TAYLOR VISION



*Have no veer,
spring is here!*



May 2024

About us

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HISTORY

Taylor is the study association related to the department Precision and Microsystems Engineering of Delft University of Technology. The association was founded in 1988 to enhance the study experience of the students. The Taylor Foundation, in its legal form, was subsequently founded in 1992, making it an official organ in the TU Delft. During this time, the department changed its name from "Production Engineering" to the PME you are all familiar with. In contrast to what many people think, Taylor is not named after the famous mathematician known for the Taylor expansion. It is named after the mechanical engineer Frederick Winslow Taylor, who was active in production engineering and industrial efficiency. The logo of Taylor was inspired by the tip of an Atomic Force Microscope, an instrument that requires technology from all the divisions of the department. Taylor aims to enhance the study experience of the students by: trying to improve the relation between the students and the department staff, bringing the students in contact with the industry, providing the department with student feedback about courses and, last but not least, organizing recreational events to de-stress from the hard working life as a PME student.

AI prompt for the cover: light brown bunny with metal springs as legs, in the style of digital art. In a green field (spring vibe). The bunny is wearing a tie.

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Comic by Camila Fuentes Rueda	back-cover

From the board

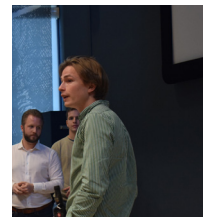
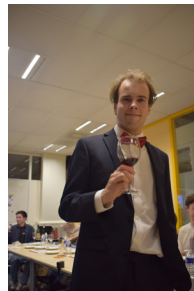
Dear HTE'ers,

The sun is starting to shine again, the cherry blossoms are blooming and ducklings can be spotted outside of the ME building. It is clear that Spring is in the air! Hopefully you have had a successful exam week and are enjoying this change in weather. We are looking forward to some exciting events in this final quarter, so check out the activities on page 8!

You can also meet the Taylor Trip committee in this edition on page 16. They are working hard to organise an unforgettable trip this Summer. Enjoy the last Vision of the academic year and good luck with your final quarter!

On behalf of the Taylor Board,

Maurita Bloembergen (Taylor 23/24)

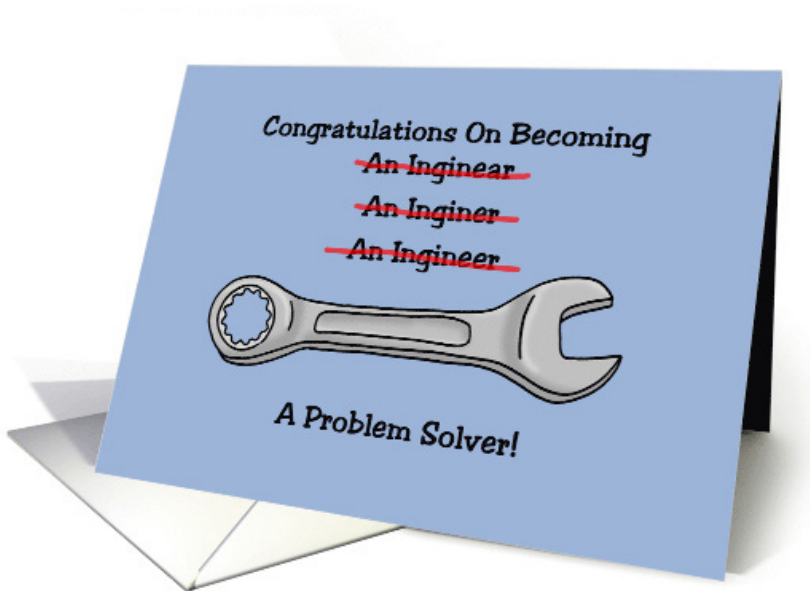


Recent graduates

8/2/2024	Vincent Bashandy	Development of a high-temperature industrial heat pump model with a novel compressor technology
13/2/2024	Mark Kuntz	Pull-out force determination of initially-curved compliant grippers based on Pseudo-Rigid Body modelling
16/2/2024	Bart Schoone	Ringdown of high-Q nonlinear Si ₃ N ₄ beam resonator with multi-overtone recording
27/2/2024	Alexander Bom	Design of an inherently fully dynamically balanced aerial manipulator with omnidirectional workspace
27/2/2024	Patrick de Groot	Topology and variable optimization of a planar quasi-zero stiffness mechanism for motion isolation during the installation of wind turbine blades
28/2/2024	Hendrik Jaap Algra	Optimizing nanomechanical resonators
28/3/2024	Jeffrey Zhu	Towards a neutrally stable compressible metamaterial
20/3/2024	Burak Palali	A cable-based parallel mechanism for increasing shear stiffness

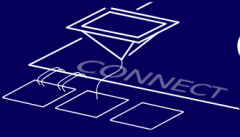
27/3/2024	Thies Postma	Employing sensitivity analysis for evaluation of vibration effects on multi-mirror optomechanical systems
11/4/2024	Barbara de Vries	Optical alignment strategies for assembly of endoscopic probes
23/4/2024	Arjen Wassenaar	MEMS mechanism for fine-tuning geometric anti-spring compression

Congratulations!



Picture submitted by Chris Wattjes

23 APRIL



CONNECT EVENT

1 MAY



PM LUNCH LECTURE

8 MAY

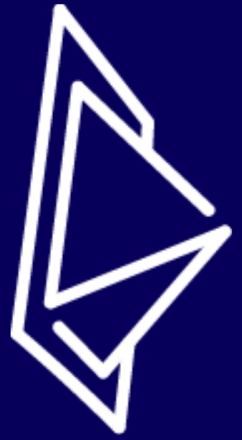


JPE LUNCH LECTURE



8 MAY

TAYLOR DRINKS



TAYLOR

15 MAY

SIoux
TECHNOLOGIES



LUNCH LECTURE



22 MAY

MEI PARTY

24 MAY



BALL-BQ!

28 MAY

TWD

COMPANY VISIT

6 JUNE



TAYLOR DRINKS

ACTIVITIES

Taylor Football

Taylor football team remains undefeated

Directors being fired for controversially purchasing club shares, transgressive behaviour or conflicts of interest with transfers and a new trainer every week, known all too well. So it goes in modern day football, but not for the Taylor Football team! The united group battles weekly in style on the pitch, driven solely by their untameable fighting spirit and paid by Taylor in the form of cold beer. In Q3 the cold and dark Monday evenings slowly made place for daylight and warm sunshine from the 8th biggest star in the universe. Because you know what? The real stars, bigger than the whole sky, are still those seven players out on the football (or hockey) field, shining brighter than ever! With a flawless record of seven wins in a row, Taylor sits untouchable at the top of the table, leaving a blank space of a dazzling 10 points between the runner-ups, who are facing a cruel summer. The hunger for the enchanted trophy gets bigger every week, but the players don't lose their head in this gold rush. Even the 'no-match' exams weeks are used for training sessions to reach for peak performance levels. We expect to see a lot more from this team in the remaining of the season, who can thank their success to excellent chemistry, fearless spirit, delicate footwork and devoted fans. Long story short, the future looks bright for Taylor Football.

By Niels Dee



Try to spot all 13 Taylor Swift references in this review!

High Tech Ladies

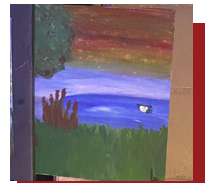
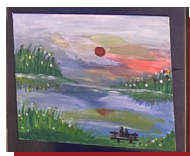
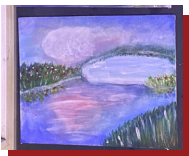
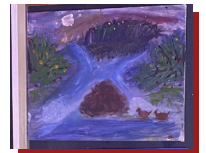
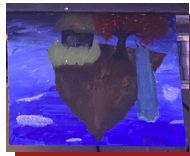
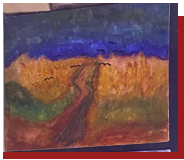
Sip and Paint

Beauty is in the eye of the beholder

The High Tech ladies were once again in creative spirits and this time it was expressed through paint on a canvas. That's right, we had a classic sip and paint session! After a nice meal and our first sips of a delicious cocktail, we got ready for the main event. For those who did not feel so confident in keeping their clothes paint-free, we had some fashionable trash bags to wear. Unfortunately, there are no pictures of these lovely gowns so you'll have to use your imagination.

As inspiration, a deviously simple (looking) tutorial was played on a laptop screen. Quickly we realised it was a bit harder than we thought, even with the video playing at 0.5x the speed. However, we made the most of it. For some, the best option was to completely forget about the video and focus on an original creation - which is why these paintings are not necessarily very similar. Hours passed by and everyone was so concentrated on their art that by the end of the evening, we had forgotten all about the sipping part of this activity. Luckily, that left us with these absolute master pieces, some of which you can see below. If you're interested in purchasing one, please come by the Taylor office with a fair offer and we'll see if we can arrange something.

By Maurita Bloembergen



Taylor Drinks

Hunting for pizza and Easter eggs

February

It had been a while since the last Taylor Drinks but finally on the 15th of February students and staff gathered on PME square like a herd of gnu's roaming the Serengeti to find a refreshing drink. To make these long-awaited Taylor drinks a little bit more special, pizza's were ordered. It was great to see so many people join the drinks and I hope everyone had a great time!



March

After a long day of hard working PME's students and staff gathered at the PME Square to blow off some steam under the enjoyment of some cold drinks. Before the drinks the PME Square welcomed a special visitor that hid it's tasty eggs all over the department, which triggered the hunter-gatherer instincts of some students. They left no stone unturned in their pursuit of winning the amazing price. Allies were being formed and the ones that could not resist getting a taste of the paashaas' delicious eggs even tried wrapping tomatoes to trick the objective jury. The prize was almost handed over to a team of scavengers when another student showed up who single-handedly collected 15 eggs and walked away with the precious limited-edition Theelor mug.



By Tetsuo Martynowicz and Niels Dee



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Discover more about Demcon and join us
for our Inhouse day in Delft!

Reserve your spot via:



www.demcon.com/event.inhouse-day-delft/

Taylor Wine quiz

Were you winning or whining?

Taylor, our study association, hosted a wine quiz attended by nearly 30 enthusiasts. We started the evening with pizza to prepare our bodies for the night of degustation. Pepijn and Niels kicked off the event with a presentation on wine tasting fundamentals. They taught everyone how to determine the flavors, the alcohol and sugar content, and the origin of the wine. We learned about the influence of the climate on the flavor of wine and we were even taught how to distinguish between dryness and tannicity. Following the presentation, we sampled ten different wines, spanning from refreshing, crisp white varietals to exquisite, tropical gems of red wine craftsmanship, attempting to identify their characteristics. It was not an easy task! Many subtle undertones were difficult to identify, especially with the dials on our personal "tipsy meters" rising with each wine.



Some were even fooled by the unexpectedly low alcohol content of some selections. Each participant's guesses were assessed by their peers. It was a close call but Maurita emerged as the winner, claiming the main prize: the famous Taylor port wine. Bagdan Vaseiko placed second for which he received a nice boxed wine. Pepijn Neeteson, the unfortunate loser, received a consolation prize: wine sour kraut.

The tasting was accompanied by a multitude of snacks, which added to the wonderful atmosphere. The evening was a both a great learning experience as well as a splendid way to spend time together.

By Jakub Kraciuk



Meet the Taylor Trip Committee!

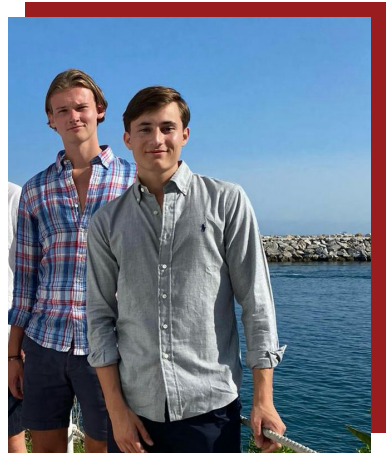


Hi, my name is Peiyu and I help with external affairs in the trip such as contacting universities and companies. As a native Chinese speaker, I'm glad to help you break the language barrier during the journey. I love sipping tea and Taiwan is just the place you can find the best oolong tea in the world. Really looking forward to explore the Taiwan's nature sites and Nature Publications with you.

"You can trust my Chinese, but not my English."

Hello everyone,

I'm Lucas, the treasurer of the Taylor Trip committee, so I take care of all the finances in order to use it as optimal as possible and also keep an overview of all the expenses. Some years ago I went to Jakarta and Bali, where I got to know Asia, this has attracted my interest and still offers so much beautiful and unique nature but also diverse cultures. What I am most looking forward to are the evenings where we go into some kind of pub or club to sip some Taiwanese pints. I am also very curious about the culture there and the beautiful nature with nice hiking trails. Maybe I will go to a gym in Taipei with the enthusiasts in our free time we have there, of course we can't stay behind.



"Real G's move in silence like lasagna"

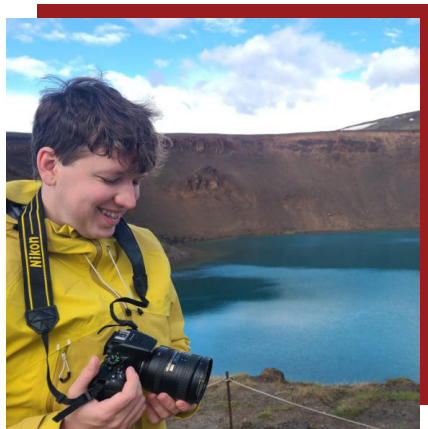


Hi all! My name is Noor and together with Peiyu I am responsible for the external contact to Universities and companies in Taiwan! This means that we are looking for high tech companies where we can go on a visit. I am really interested in exploring the Taiwanese culture and especially the food markets! As a classic dutchie I have some trouble with spicy food so I hope that I will manage... haha. I really enjoy going on spontaneous adventures and do some roadtripping!

"A jet leg is for amateurs!"

Hi, my name is Pepijn Westland, I'm the chair of the committee. I enjoy traveling and I am looking forward to the study trip in Taiwan. I have never been to south east asia before, and I hope to learn a lot about living in taiwan, its traditional culture and modern inovation within the high tech industry. Taiwan promises to be a great experience!

"Nooit geschoten altijd mis"



Hi, my name is Isabelle and I am the secretary of the Taylor Trip Committee and am among others responsible for the communication around the trip! I already prepared for the trip and took a Chinese class some time ago but apparently I still have to work on my pronunciation according to my Chinese fellow students. So this trip offers the perfect opportunity for doing that! I also love hiking and the nature (especially trees as you can see in the picture) and am looking forward to exploring the amazing nature of Taiwan. Another thing I am looking forward to is to try as much food as I can eat in the 2 weeks of our stay!



"Travel is still the most intense mode of learning."
– Kevin Kelly

Lunch lecture

Only pro's at Demcon

On Thursday the 15th of February, Tim van de Ven from Demcon hosted an interesting lunch, giving insights into a representative project undertaken by the company. Tim guided us through a specific project focused on aligning interferometer heads, which are used for measurements with sub-nanometer precision and thus requiring very precise alignment. The lecture covered various approaches undertaken during the project to fixate the interferometer heads, along with the solutions Tim came up with to address hysteresis and overconstraints. Demcon is a unique High-Tech Engineering company, with one of its primary offices located in Delft! Every year Demcon hosts an in-house day so make sure to check this out!

By Niels Dee



TNO

Lunch lecture

The Dutch Birthplace of Technology

In the Netherlands there is a research and development organization responsible for many groundbreaking innovations, applied in the High-Tech industry. Kristiaan, an employee of this institution gave an interesting presentation about the organization, the projects, and the people. TNO, which stands for “Toegepast-Natuurwetenschappelijk Onderzoek” translating directly to Applied-Scientific Research, has many divisions spanning a range of industries. They do research for the fundamental physics of medical devices, but also investigate the possible systems for transitioning effectively to sustainable energy sources. Furthermore, TNO is applying high-precision positioning- and measurement techniques for satellites. The idea is to have geostatic satellites communicating via a laser to the ground system. With optical systems and deformable mirrors this system can be positioned as such, to achieve micrometre accuracy from space! This was just one example of the interesting projects TNO was working on. The good news is that TNO is located on campus, next to applied physics. At the end of the lecture were received some goodies and goodbyes, which concluded this interesting experience.

By Jeroen Nieuweboer



Interview

with Angelo Accardo

Associate professor

Angelo Accardo has been a part of the PME department for almost five years now. His main area of research focuses on the development of multi-scale (nano-micro-meso) 3D fabrication paradigms to address a wide range of open questions in cell biology. He is interested in particular in the design and fabrication of 3D microenvironments for studying the mechanobiology, migration and differentiation mechanisms of cells coming from different tissues (e.g. brain, bone) as well as the response of cancer cells to proton therapy

Where did you grow up and what was your childhood like?

I was born in the most beautiful city of Italy. Rome? Right answer! and I was raised in a little village next to the seaside called Fregene which is very close to the airport of Fiumicino. I lived next to a magnificent pine forest and 400 meters from the sea and my parents still do. So, as you can imagine, from April until beginning of October, after coming back from university I would just take my surfboard and go surfing!

My childhood was really great. I did several sports including football of course. I also played tennis, but I had to stop because of a problem with my back. That had to be fixed by swimming, but, after a while, it became somewhat boring. So, I thought, let's add at least a ball inside the pool. And that is how I started playing water polo for many years. At some point I had to choose either to go further with water polo or with my studies and I chose my studies, because it was becoming too intense. I could not do both at the same time.

Your first ambition was to be a fighter pilot, how did you get into that?

Well, that was during the last year of high school. I had this dream of flying and becoming a military pilot, influenced probably by the Top Gun movie. And then there was this national selection for potential pilots joining the Air Force Academy Pozzuoli, Napoli.

Favourite animated movie?

Ratatouille

Winter or Summer?

Both

Favourite food?

all'amatriciana

Cats or dogs?

Cats, Simba



I applied and was lucky enough to get in. So that's how I joined the Italian Air Force. Nonetheless, after two, three months, I realized that flying was not giving me the emotions that I expected, even though the environment was really engaging and I was a quite decent pilot. After all, we were a bunch of kids, 17/18 years of age, in an environment of collaboration and friendship.

At the Italian Air Force Academy, you had also to follow some protocols, and many specific rules, not only while you were on the plane, but also when it comes to the way you behave or even eat. You were always under observation. That was meant to develop your 'forma mentis' which means shape of your mind in Latin. I have a funny anecdote. We had to learn the rules of 'galateo' which are the rules of eating in a proper way, like in Windsor castle. And then one day it happened that we were in the Pilot officers' restaurant where they served spaghetti, and whenever they were serving spaghetti, it was a nightmare because you have to make a perfect wrap before eating and if one strand goes out while eating, you're screwed. Because you cannot cut it with your teeth, it goes against galateo. So that is what happened to me and eventually some of the officers in charge of controlling us caught me, and I lost 10 minutes of phone call time back to my family, because yes, our mobiles were available to us only for 20 minutes per week.



Do you carry any of this discipline and forma mentis over to your research today?

Some things, but not that strict of course. The discipline from the military remained but I would say this is not everything in my job. To work in academia, you need to have a good balance between what I call the three P's: Passion, Patience and Perseverance.

Where did you study and what Major did you choose?

I studied at the Sapienza University in Rome where I chose electronic engineering with a major in robotics. So, my study background is quite different compared to what I'm doing now. There, I was working with brain computer interfaces for controlling the movement of prosthetic hands using EEG signals from the brain. It was one of my passions during my master and a first hint that I enjoyed doing research.

How were you as a student?

In high school I must admit I didn't need to study much. We were just 15 students in my class, and I was used to being asked by my friends to help them during exams. The rule was simple: I'll help you out, as long as you let me hand it in first. During the last year of high school, when I was going through the Italian Air Force selection, my classmates from high school were cheering at every step of the way. I remember that when we were on a skiing holiday with the class and the letter with the outcome of my application, including theory exams and physical tests, to the Air Force arrived, my mother called me and she opened the letter in real time, so we celebrated all together. That is a moment I will never forget.

University required way more effort. But it was fun as well because I was spending many weekends with my classmates in Rome partying and hanging out. My masters helped in developing an interest in science. Nonetheless, at the end of it, when I got my degree, I was saying to myself: I will never ever go for a PhD, because I saw a lot of job insecurity in the Italian academic scenario.

After the master, I found a nice job at Fiat, in the automotive industry in Turin, as quality control engineer. However I soon realized it was boring, everything was very routine and there was not much freedom of action, so I quit, again, after a couple of months. At the Air Force, the problem was that I felt like trapped in a metal cage with too many instruments to look at and not enjoying the flight itself, I was 18 after all. Everyone told me I was crazy after doing all the effort to get in. Everyone called me crazy again for leaving Fiat which provided stable and remunerative opportunities. And I said look, I just don't like it. I was still quite young, so I took the risk and started a PhD because I knew for sure I loved science due to my master's project. Before, I absolutely didn't want to go for a PhD because my view was limited to what happens in most of the universities in Italy. I didn't widen my horizon. I did my PhD at the university Magna Græcia of Catanzaro in the south of Italy, but almost immediately I got a grant to spend more than half of my PhD in France at the European Synchrotron Radiation facility in Grenoble. This was quite a big change because I started to see how things work in an international context and that is how I found my way. So the

important thing, what I also try to convey to my students, is: When you start to doubt your choices, just change, *dubium sapientiae initium*, Doubt is the origin of wisdom as said by René Descartes. Of course you cannot change forever, but if young people, students, realize that a PhD or a company job is not something that is meant for them, just try something else and don't content yourself with a choice that does not fit you.

How did you end up going to delft?

I started my PhD in 2009 and arrived in Delft in 2019. During these 10 years, I've been in Catanzaro in the south of Italy. Then I moved to the European synchrotron radiation facility in Grenoble. Then I moved back to the Italian Institute of Technology in Genova for my postdoc after my PhD, but there were no opportunities for permanent positions. So I went back to France, this time to Toulouse. However, I realized that there were not concrete perspectives for the future, at least not in the short term. Reason why I sent my application to Delft and that was an amazing experience because, during the interviews I also had the possibility to "interview the department". And I don't mean just the people from my section, but also the PhD's and postdoc's. So that really allowed me to see how the department was functioning and if I would fit in nicely, in terms of people and research. For me, the scientific and the human aspect are equally important, sometimes the human aspect even more. I immediately got the sensation that it was a very constructive place, Where, people try to help each other. We saw a lot of opportunities for my wife as well, she's working in a company in Rotterdam now which is really great.

I would like to thank my specific section of MNE, as I was given full freedom of action. That is what I always looked for, to find a place where I could independently express my creativity. It's how I developed my team, which grew quite rapidly over the course of almost five years.

Can you tell us something about your group?

It's very diverse in terms of ethnicity, cultural background, and gender. I'm very proud to say that we have a very nice gender balance. That's probably because we do a lot of biology, and biology is apparently attractive towards female colleagues. Periodically, we go for dinner together, we rent one of these little boats in Delft for a tour together or we go laser gaming. I'm really lucky to have them because without them my research would not be possible, they're really an important part of the whole picture.

What are your passions and hobbies?

My hobby? That would be my daughter. I know it's my duty to take care of her but it's also a lot of fun because she's super funny. Her name is Veronica and she's six now. Whatever the activity is, like dancing, swimming lessons, or going 'stepping', we like to go together. She also contributed to my promotion to associate professor, because I substantially improved my Dutch thanks to her. She goes to a Dutch basisschool, therefore I started to do a lot of homework with her, because my wife doesn't speak a word of Dutch. Now she learns Italian and Dutch with me, Russian with my wife, and English via YouTube. Besides that, I love to bike when it doesn't rain. I don't like to bike when it rains, it's just against my nature.



How did you and your wife meet?

I was doing my PhD in Grenoble and she was doing her master's in Moscow. We met at a scientific winter school in Aachen, Germany. From that moment, I started to travel a lot to Russia and she started to travel a lot to France. She was very patient because she followed me in all these travels and finally to Delft. She's now an application engineer at a company, Mesoline, that develops technology for gas sensors in Rotterdam.



What is on top of your bucket list?

On the short-term, I would love to go to the Tomorrowland festival because I love electronic dance music. Unfortunately whenever the tickets became available, I never managed to get one. But it's not too bad. Sooner or later, we'll go there. This year, I will have to content myself with Mysteryland, for which I managed to get a ticket. I am an EDM music lover, one of my PhD students can confirm that because we make a lot of car trips together between the Leiden University Medical Center, and the Holland Proton Therapy Center to transport living cells.

Who are you going with?

With my wife, she enjoys it too, fortunately. One of my former PhD students from France moved to the Netherlands, and his wife works with my wife in the same company. So, they're going to babysit my daughter for a whole weekend while we go to Mysteryland.

Concerning my long-term bucketlist, closer to retirement, I would like to open a tourism business in Thailand. I went there for my honeymoon in 2015 with my wife. We went to an island called Ko Phi Phi Don in the Andaman Sea. There, we met an Italian couple who told us how 20 years before, they went to Thailand with 30 million of the old Italian lire, which was equivalent to approximately 15 thousand euro now, and. With that pot of money they built a little bed and breakfast next to the beach. Thais have a profound peace of mind and are incredibly friendly people. Therefore,

after retirement, my dream would be to open as well a B&B or similar. I love Thailand, I love the spirit, I love the landscape, and I love the weather even if it's a bit too humid for my wife maybe. I already have the name for my B&B.

Do you want to spoil it or is that a secret?

It's going to be called V&V because these are the initials of my wife and my daughter, Victoria and Veronica. And actually, if you cross a V with an inverted V, a Λ , there is also my A inside.

And finally, why do you escape from giving coffee to Alejandro?

Actually, this question should be reverted to our dear Argentinian. We are the cappuccino gang, together with Farbod, we always go to Coffee Star, it's a ritual. But we also have the ritual that someone has to offer coffee to the others. Therefore, we keep sort of record who offered last time. Farbod is fully reliable, but the problem is with Alejandro, he tries always to cheat, always! He will say the same thing about me, but believe me, he always cheats. When it's his turn, he can create all the possible excuses not to go. Once I was sitting here in my office, I heard his door closing and I knew that it was his turn to pay. He was literally crawling under my window so that I could not see him! But it's always fun, the guys and ladies from the Coffee Star know us, we are very attached to the place.

By Pepijn van Kampen



engineering your career



Hilde




The basic principle is that you learn the most by doing things yourself”.



Read Hilde's story here.



VIRO
Academy



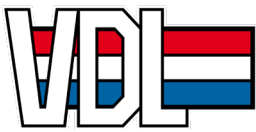
Will you join us for a cup of coffee soon?



Check our latest vacancies



VIRO: We are a multidisciplinary engineering firm specialising in project management and engineering. Our offices in the Netherlands, Belgium and Germany employ over 900 people who work on projects worldwide in a variety of markets.



Company visit

An inspiring visit to Eindhoven

On Tuesday the 19th of March, VDL - Enabling Technologies group (ETG) was so kind to invite us over for a company visit. After being picked up in Delft by the VDL bus, it was a one and a half hour drive to be greeted by the VDL - ETG facilities in Eindhoven.

After entering what felt like a candy shop filled to the brim with machining equipment, we were given a great presentation by Willem Hoekman and Guus Bauwens. Who told us everything about working at VDL - ETG, from the company culture to migrating from Delft to the high-tech industry focused around Eindhoven. This was followed by a detailed but confidential description of two engineering projects currently being developed by VDL - ETG.

Next up was the tour around the company facilities, with multiple buildings to see, and with limited time it was quite the rush to visit everything. There were new facilities with the newest metal powder bed printers, two CNC machines with a bigger working volume than my room. A large clean room for the assembly of the equipment. But also older production rooms like the welding shop, and even a handful of manual operated milling machines. Which still had their use. During the whole tour the machining staff was eager to talk about their equipment and its capabilities, which really added to the friendly atmosphere, and the production capabilities of VDL - ETG.

To end off the day there was a quick case study to apply our knowledge of engineering. Where surprisingly the simplest solution came out as the most viable one, giving our over-engineered solutions a run for its money. Then it was quickly to the bus for the long ride back. All in all it was a fun and informative day at VDL - ETG.

by Pepijn Westland





Case study

Case closed!

This quarter, we hosted a case-study together with TBRM. In preparation of the event posters were hung, banners were put in place, everything was yellow! During the presentation, our PhD'er Kaan presented some interesting stuff about the company and explained their unusual logo. Did you know the company was founded by a Mechanical Engineer from Delft, hence the logo symbolises the bicycle repair person or "fietsenmaker" in Dutch. TBRM has also brought their CTO to elaborate on their core competences and successful projects. After the presentation it was time to start the case-study, which was quite intensive. First, the problem was about methods of properly aligning a diode with a lens to ensure a proper focus point at some distance. Here we discussed some interesting methods of alignment, trying not to be dependant on manufacturing accuracies.

After sharing each other's findings and providing insights, we hurried to the next case. The second problem was a dynamical heat transfer problem of a rotating drum with a thin foil. The challenge arose when thinking about cooling solutions that could be applied in high-vacuum and are able to move along with the foil. With limited time we were able to find some good solutions, but quickly converted to some drinks. Here TBRM offered a very nice special wine with a bicycle as a gift, but was unfortunately never to be seen again after the wine bingo...

By Jeroen Nieuweboer



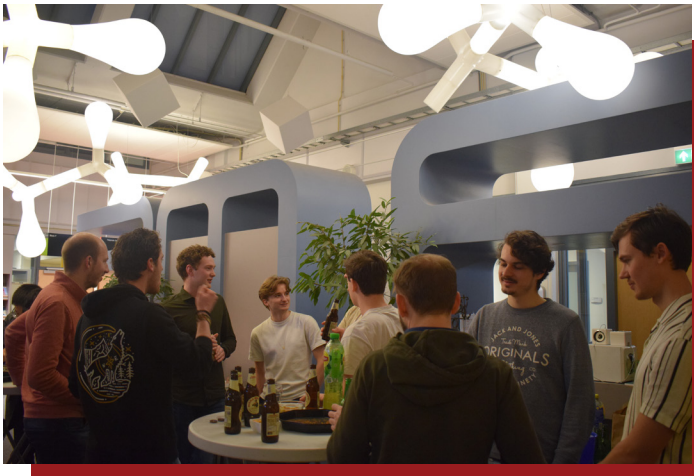
Network drinks

Levitating chips!

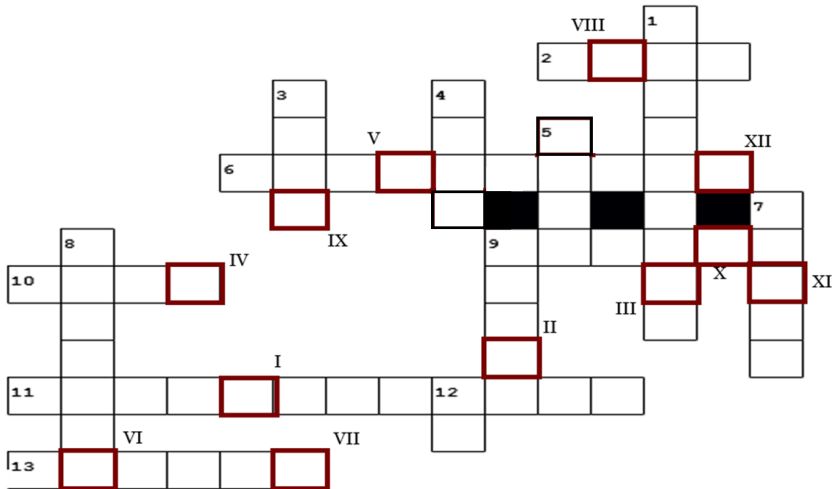
In the middle of March, Itec visited our faculty, giving a presentation about their company on PME Square, a place they were quite familiar with, as they told us later. Itec, headquartered in Nijmegen, is a constituent of the Nexperia Group, encompassing a workforce of 250 employees spread across Europe and Asia. Specializing in the final stages of semiconductor manufacturing, Itec pioneers state-of-the-art machines that enable chip-handling from wafer to package. With the escalating demands for speed, Itec is actively exploring innovative solutions to improve their machinery.

To drive this innovation, Itec is collaborating with the TU Delft and especially our high-tech department, which opens up numerous internship and thesis opportunities. Following the presentation, an interactive session during the networking drinks allowed students to pose questions to Itec representatives, delving into the company culture and current projects.

by Pepijn van Kampen



Taylor Puzzle - Prize edition!



Across

2. Beverage gifted to company at Taylor activity.
6. The first word of a movie starring two actors named Taylor, after which they were reportedly dating each other for a while.
9. Second word of a definition describing an infinite sum of terms expressed in the function's derivatives at a single point, word ends with 's'
10. The word of the number contains as much letters as the number itself
11. In this US state two famous Taylors were born.
13. First word of the device our Taylor logo resembles.

Down

1. First name of person after which our study association is named.
3. Last name of the Taylor board chairman of study year 2016-2017.
4. Last name of Chinese-born American to go into space.
5. The third prime number.
7. You can form a word solving the equation:

$$2u \int_0^{g/2} (\cos^2(x) - \sin^2(x)) dx, g > 0$$
8. The first word of the most important career event of this year, organised by Taylor.
9. The word is an uneven number, but removing one letter makes it even.
12. The second and fourth letter of the official colour name of Taylor red.

Stranded car problem:

Three people are stranded with eight cars. Each car has a full tank with 100 km worth of fuel contained inside. They can transfer fuel between cars but are not allowed to walk or leave anyone behind. Determine how far they will be able to travel, round up your number to the nearest integer (ceiling rounding), which is XIII.

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII

Think you cracked the code? Send an e-mail to secretaris-taylor@tudelft.nl! The first correct answer will receive a mysterious prize!



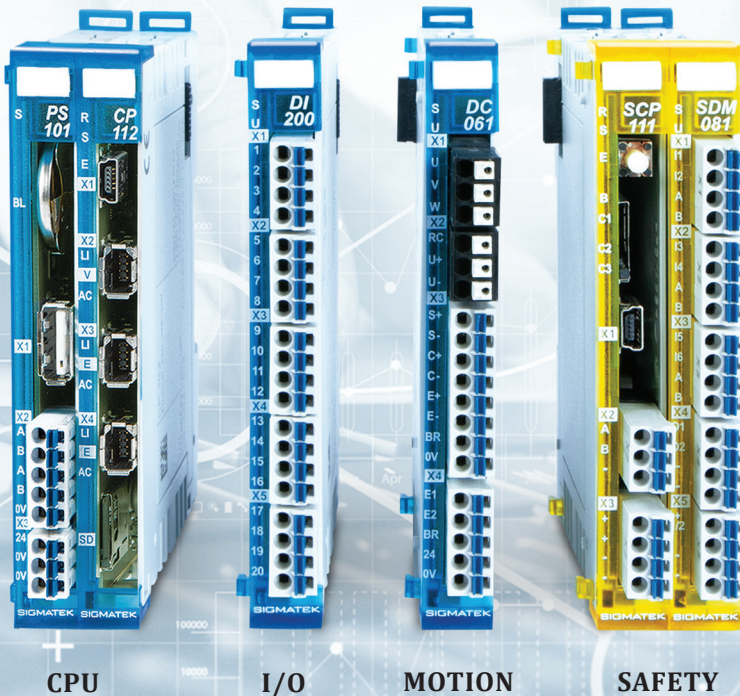
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Spring!

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Younis
Camille