

TAYLOR VISION

*the beginning
of the end*

April 2021



about us

BOARD

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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.

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Sports
picture



from the board

Trying not to make the introduction of the Vision boring, take two!

Hmm, trying to sum up the events of the past quarter be like; Elections in lockdown, curfew, facemasks, mutations popping up like mushrooms and global tensions rising. Quite the story we get to tell our grandchildren may the day ever come that's for sure.

Last week, I got to visit the department again for the first time in months. I can't even remember the last time we (the board) were at our office together, or the last

time we played a game of 'koeenen' for that matter. Never did I imagine I would miss a game of soccer. Yesterday the first "real-life meeting" in months occurred, that was about the highlight of my week and man.. did it feel good to have some actual social interaction.

It feels like we got the hang of it though, this whole lockdown-keep-yourself-busy thing. I'm not just talking about the board or the department, I'm talking about you (the students) too! It's nice to hear from different sides what people do to fight boredom or isolation.

**Taylor
meet-ups:
every
Thursday
from 12:30-
13:30 at
coffee com-
pany LOT**

Students joining each other on weekend trips, the coffee breaks and the walks that most of us discovered as a nice social distraction, even inviting fellow international students to celebrate Christmas at your parents.. you people are legends.

Every time we're hosting another online event with Taylor, thoughts like "I'm just hoping people are still in the mood for online events" are continuously crossing our minds and a topic of debate during the board meetings. Every time you prove us that the spirit is still vivid! You just gotta love the mentality of us 'fietsenmakers'.

Now that the third quarter has come to an end, it's time to start with the home stretch! Q4 marks the beginning of the end of an odd year, which hopefully comes paired with the relaxation of some measures. It's too soon yet to look back at past year, though it is already time to start planning next year. With a heavy heart the time has already come to start thinking of the people that will succeed us and guide Taylor through a whole new year of opportunity (wink-wink @students). Time did fly and it is difficult to accept, though I'm certainly not going to sum up the things that I'll miss and cry about it yet because there's still a quarter left!

With a more sunny perspective ahead, both in terms of weather as well as measures, I can only say that we're looking forward to hosting some physical events! So stay safe, stay tuned, and hopefully we'll be seeing all of you in the coming months.

Cheers!

On behalf of the Taylor Board,

Jaap Resink



**Taylor
meet-up**



Now that the weather is getting warmer and sunnier, these lonely times demand more social interaction outside! The Taylor board has been busy with some smaller activities to bring everyone a bit closer (more than 1.5m though!) together.

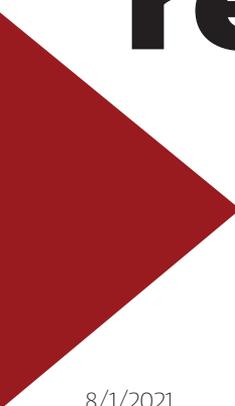
As Jaap already briefly mentioned in his letter, since a few weeks we have created a Whatsapp group "Taylor meet-ups" (see QR code) in which students can send a message if they feel like going for a walk with someone. Next to that, we are hosting a regular coffee break every Thursday during lunch time.

This break is a great opportunity to enjoy a coffee and have a nice walk and chat with your fellow students, PhD'ers or colleagues! We meet at 12:30-12:45 at coffee company LOT at Voldersgracht 6 in Delft.

Until now, we already spoke to some of you and we have been learning interesting things about each others life and study experiences. We hope to see more of you in our next editions!

With love,

Taylor Board



recent

graduates

8/1/2021	Ronald van den Berg	Automation of the clipping process in cryogenic electron tomography
8/1/2021	Michiel Zeelenberg	Inkjet printing of 3D overhanging microstructures
22/1/2021	Armin Nunic	Manipulating post-buckled compliant mechanisms. Buckling mode interaction as a novel method of stiffness compensation.
25/1/2021	Stefan Molenaar	Examination of large amplitude vibrations of a nonlinear oscillator for energy harvesting
26/1/2021	Erik van de Wetering	Stiffness compensation for piezoelectric energy harvesting: improving the efficiency at low-frequency vibrations
26/1/2021	Robin Bastiaanse	Energy harvesting for pacemakers: combining cardiac measurement techniques to improve testing
27/1/2021	Rafael Argiro	The design and experimental validation of a permanent magnet long-stroke gravity compensator
28/1/2021	Max Wouters	On the efficiency of coupled versus uncoupled vibration energy harvesters under transient excitations
28/1/2021	Lisanne Nijdam	Dynamic balance principles based on a flexible beam for the synthesis of dynamically balanced compliant mechanisms
29/1/2021	Yogesh Kumar Pilania	Finite element-based model order reduction for nonlinear structural dynamics
29/1/2021	Mitchell Beacom	Synthesis and control of a 3 degrees of freedom inherently dynamically balanced manipulator for an unmanned aerial vehicle

24/2/2021	Thomas Frateur	Next-gen actuator comparison for the Ampelmann hexapod platform
25/2/2021	Abdelhakim Amer	Shape optimization of a flapping wing for the Atalanta project FWMAV
25/2/2021	Parth Deshpande	Design and analysis of an optical system to detect changes in the optical payload on a CubeSat
3/3/2021	Sara Pakvis	Topology optimization for 4D-printed structures
8/3/2021	Rutger Schreurs	Predicting thermal history, microstructure and hardness of S690 wire arc additive manufactured parts
11/3/2021	Kylian van Puffelen	Design of travel limits for bistable energy harvesting
22/3/2021	Arnout Fritz	Distributed optical sensor surface concept for planar object detection: Using optical fibers as a vision distributor
26/3/2021	Yuheng Yan	A Discontinuity-Enriched Finite Element Method for dynamic fracture in brittle materials
29/3/2021	Mehdi Mollaie Daryani	Precise mass measurements of nanoparticles in fluids using suspended microchannel resonators
30/3/2021	Thomas van der Hout	Mitigating weaknesses of density-based thermo-fluid topology optimization using meta-optimization of modelling parameters
30/3/2021	Innocent Ekhikioya	Studies towards the development of a device for the Raman characterisation of the SARS-CoV-2 antibody



Sports picture

A PASSION FOR TECHNOLOGY

Responsible

You don't just go to work,
you feel responsible for your project



We're looking for

Mechanical design engineer

Mechanical precision engineer

Thermodynamics & fluid engineer

Opto-mechatronics engineer

Mechatronic engineer

Flexible

You decide when, where
and how much you want to work



Manufacturing

You like to think about
manufacturability when designing



Initiative

You don't sit and wait,
you have a hands-on mentality



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- Mathware
- Mechatronics
- Electronics
- Automotive
- Mechanics

history

A Swift History Lesson

All readers of this once again fabulous Taylor Vision are in some shape or form connected to our beloved PME Department. However, do you know how this department got to be? Especially for our students this might be something they have never thought about.

To get a clearer image about the history of PME we dove into the history books. We had a look in some old Taylor Visions and asked a couple of PME employees for their stories. Special thanks goes to Paul van Woerkom, Jo Spronck and Ron van Ostayen.

The PME department came to fruition in the summer of 2004. PME is a merger of several different sections that used to be part of 3ME. After a couple of reorganisations, these sections were coupled to each other. These sections were; Advanced mechatronics and mechatronic design, Precision Manufacturing and Assembly (PMA), and Mechanics. From this then-formed department, only a few veterans are still working with us to this day. These are Fred van Keulen, Anton van Beek, Ron van Ostayen, Jo Spronck, Marcel Tichem, Hans Goosen, Matthijs Langelaar, Marianne Stolker and Marli Guffens.

Fred van Keulen was the first chairman of this newly formed department and its daily board. If we have to believe our sources the weekly meetings of the daily board got heated on a regular basis back in the day...

The PME department began offering a master track in September 2005, which was then called Production, Mechatronics and Microsystems or PMM for short.

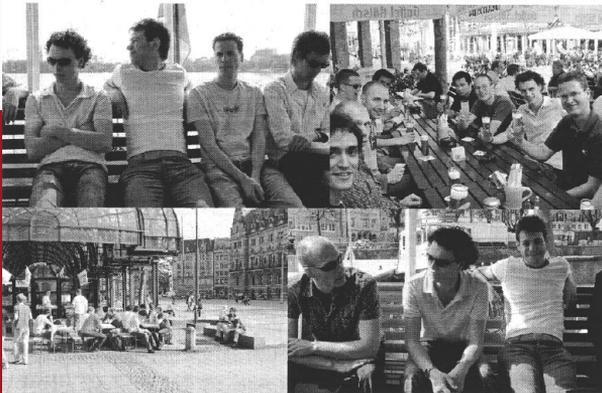
Study association Taylor used to be the association of the PMA track only. However, with the merger Taylor became the study association of the complete newly formed PME department. With this increase in students, came new possibilities and Taylor could organise bigger and better events for its students.

A good story we got from the early PME days goes as follows. The entire PME staff embarked on an important brainstorm weekend to the picturesque village of Oostvoorne. With good progress made during the brainstorm sessions, time was made for outdoor activities. First it was time for a nice bike ride! However, not an ordinary bike but a recumbent bike. As proud dutchies, most staff members thought: how difficult can riding a bike be? Time proved otherwise. Multiple people had fallen on their side while stopping for a traffic light at the end of the day. The next exciting activity was kiting on the beach, in a cart or while standing still. Not all kites survived the whole ordeal. One person in a cart slashed the lines of another kiter with his own lines. The freed kite lived happily ever after with its newly gained freedom. All in all, an eventful brainstorm weekend.

PME Trivia - Fun facts to tell at the coffee machine. Hopefully sometime in the not to distant future!

In the hallway leading to the PME square is a little bench with a deeper message. It carries the name of PME.

Neve points are named after Jan Neve. Jan was the predecessor of our well-known Eveline as Master Coordinator. He thought it might be a good idea for students to attend colloquia and other educational events to broaden their interest field. This was such a success that it has been adopted by other master studies around 3ME.



PME was originally located on the second to fourth floor of wing C of 3ME before it moved to its current place.

Did you know that the coffee corner at our beloved PME square carries a hidden meaning. They spell the name of our faculty 3ME!



activities

NEW YEARS BINGO

The lockdown opened the opportunity for a whole new competitive element to the New Year's drinks. This year the New Year was celebrated with an extremely tense game of Bingo, with lots of great prizes. The competitive mind I am, I, of course, joined this game of bingo.

The evening kicked off with a speech by our "CEO" Just Herder, motivating us to make the best of 2021. After the toast, the evening genuinely began as the bingo started. So, I set myself up in the most competitive way possible. I grabbed a blanket

*Jaap and
Matthijs
handing out
beers and pizza*



and made a big cup of ginger tea. And so, the games started. Soon, the first bingo was called. It was a valid bingo. As the night progressed, the 70's music started to play. More and more bingos were called with even one invalid bingo until the final bingo card was reached. This card had three possible prizes to win. However, everyone in the Zoom call knew there was only one prize we were all playing for, the soundbar.

Within minutes the first bingo was called. The Taylor mug. My odds at this point were terrible. I was not even close to having any sight at a possible bingo. Soon the second bingo was called. My bingo card was already much more filled up than it was at the first bingo. The bingo moved on. At a certain point, I realized I only needed two more number to get a bingo. Only one number left. The hype was getting real, and there it was. I unmuted myself in the Zoom call and shouted: "BINGO!". Now the only thing between me and the soundbar was Myla checking whether my bingo was valid. And there came the redeeming words: "The bingo is valid, congratulations".

Overall, the evening was a great success, and it was good to see some faces after sitting inside for so long. I would like to thank the Taylor board for organizing this evening and wish you all the best for 2021!

K. Foeken (HTE Student '20/'21)

LUNCH LECTURE PHILIPS

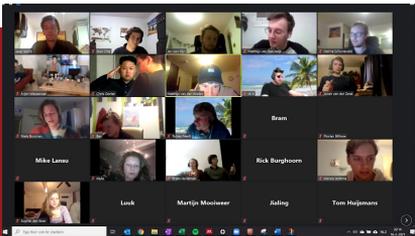
In the afternoon of the 10th of February, Taylor invited employees of Philips to give the students of HTE an introduction to the technique of their company. The lecture was given by Rob van Gils from Philips Innovation Services. He was very enthusiastic and did his very best to make the lecture interactive.

The focus of the lecture was an overview of efficient ways on amazingly highly complex thermal systems that are commonly employed within Philips Innovation Services. As the lecture got going, it was introduced that high precision systems become increasingly reliant upon the ability for sub-millikelvin thermal conditioning. To obtain high stability levels, advanced thermal control schemes are built

and is beneficial from appropriate modelling. These appropriate models namely provide required insights of thermal behaviours in frequency domain that are extremely difficult to obtain experimentally. Some techniques were introduced by the lecturer used to solve these difficulties in Philips, inspiring us how to apply principles to solve industrial problems.

Overall, it was an enriched and interesting lecture of a diverse company being able to solve many difficult and practical thermal problems. I am looking forward to learning more about how to apply thermal principles into real thermal system design.

W. She (HTE student '20/'21)



BREAKING NEWS!

Going live to our reporter on the ground!
Matthusu vanderWheels what's going on?

*Zoom screen
of the music
madness quiz*

MUSIC MADNESS

On Tuesday the 16th of February, Taylor hosted its Music Madness night including free pizza and delicious craft beers! Due to the CoVid pandemic, it was an online Zoom event, but that didn't make the evening less enjoyable! All kinds of music themes from great hits to movie producers and music mash-ups came by. Due to the good organization, the evening ran like clockwork, even though the difficulties were due to the event

being fully online. The entire music quiz was very competitive until the end. Even though being rick-rolled twice, we have had a lot of laughter whilst enjoying some of the finest craft beers. With some good teamwork we managed to submit the most correct answers. We were surprised but very happy to find out that we won! After all, it was a great night and we had a lot of fun.

*J. van Pelt, J. Smit, T. Huijsmans en
B. Wielaard (HTE Students '20/'21)*

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activities

LUNCH LECTURE PM

As February turned into March, Taylor continues to organize interesting events to keep its student aware of industry developments and motivated to keep on studying, despite not having been at the university in weeks or perhaps months. Today's activity was a lunch lecture of a company called PM. The lunch lecture was given by Mathys te Wierik, an enthusiastic former TU Delft high tech student.

First, we were given a general description of what the company does, at which scale and what kind of clients it has. Then we were acquainted with its specialization:

high precision linear and rotating bearings and slides. Exactly the kind of thing high tech students must be and are fantasizing about.

We were also shown a positioning stage, designed for a client. The product was already finished, which gave Mathys te Wierik the chance to show the complications that arise when working in PMs field of expertise. These complications had a lot more overlap with the courses I am following now during my first year of the high-tech master, which surprised me in a positive way!

E. Heezen (HTE Student '20/'21)

1 Neve point
Free lunch

**Precision and
Microsystems
Engineering**

PHD TALKS

"Have you ever wondered what it will be like to do a PhD? During this session you will be informed about the ins and outs of a PhD, to help you with the choice to apply for a PhD position or not. It will be covered by Just Herder, who on his turn will give the floor to two enthusiastic PhD'ers: Thijs Blad and Ata Kaykeler. They will tell you about the life as a PhD'er and their research. Finally, we'll wrap up with an interactive Q&A. Come up to your curiosity and find out if a PhD at PME suits you!"

Taylor

March 24th 2021
12:30 to 13:30
Online

TU Delft

PHD TALKS

At the end of the third quarter Taylor organized a lunch lecture, but instead of a company presenting their work and career opportunities. The presentation was about doing a PhD in the HTE department. The presentation was given by 3 very enthusiastic presenters. Just Herder who supervises PhD students and two PhD students Thijs and Ata, who are currently working on their PhD.

After a general introduction given by Just. Thijs started off with his motivation to start a PhD.

**PhD talk
promotional
poster**

His aim was not to inform us into much detail about his PhD topic, but instead he gave his own reasons to start a PhD. The thing I remembered the most is that you should see the PhD trajectory as an adventure instead of 4 years of work on a small scientific topic. Next to that he pointed out the freedom, but also the responsibility that comes with this freedom in doing your PhD.

The second part was given by Ata. He started by telling how he came in touch with the HTE Department during a conference in Germany. And how it is to come to Delft as an international student from another

university. After that he tried to give an insight into a normal week as a PhD student. But this was not possible as each week is very different. So instead, he told us what he did last week. Which consisted of a lot of lab work, simulations, and meetings. Ata stressed the fact that social skills are a very important part of succeeding in your PhD. This interesting lunch lecture ended with the opportunity to ask questions to the three presenters. Overall, it was an interesting lecture, which made doing a PhD from being something very exclusive for the best students to something which also you can do with the right mindset.



Sports activity

R. van Tatenhove (HTE student '19/'20)

Pictures spread throughout this edition!

SPORTS

On the 23rd of March, all hell broke loose on the grass fields of Fortuna korfbal association. After a very lengthy waiting period, it was finally time for the first real PHYSICAL event of the year, hosted by Taylor (woohoo!!!). Luckily the fields that were hired and the sports attributes that were gathered with the help of students made that there was plenty of sports and games to join for everyone, because the animo was of course a force to be reckoned with after so many indoor days!

Given the happy faces that left the fields after 3 hours of playing beach volleyball, football, badminton, KUBBS and many other games, it's safe to conclude that this was the first SUCCESSFUL physical event of the year!!! How could one ever describe this amazing feeling of happy gathering, you can't. Luckily we all know that a picture says more than a 1000 words, so look around and make sure that you join us the next time!

Jan van Rijn (Taylor board)

upcoming activities

Add them to your calendar through:



April 29th

Lunch lecture

ACE

May 18th

Drinks

Taylor

May 25th

Lecture/excursion

TBA

Every Thursday

Taylor Meet-ups

Every Thursday at 12:30, we meet at coffee company LOT at Voldersgracht 6 in Delft for a nice walk and talk!

June 8th

End-of-the-year drinks

Taylor

Prof.dr.ir. Fred van Keulen is the chair of the Structural Optimization and Mechanics (SOM) research section and professor at the PME department. In this interview we give you a small insight on Fred his drive and motivation.

interview

with Fred van Keulen by Jaap Resink

Fred van Keulen



Why did you choose for the academic world?

That's actually quite funny, I knew rather quickly that I wanted to end up in the academic world, that was a very deliberate choice at the time. During one of the lectures in the first year, where buckling theory was taught during the lecture (we got that during our first year), I actually found that really interesting. I could already see myself tutor that course, even in those days. Actually pretty mad if you think that as a freshman.

What kind of education did you follow? Was it in Delft?

I always thought that I wanted to study physics, though last minute I switched to Mechanical Engineering actually. I did however always enjoy the theoretical side more. Those practically oriented courses, where you have to solve some small mathematical problem, those are fun of course, though in the end it's nothing more than only applying the theory of the more fundamental courses that you've learned. I would rather spend my time on that theory, even back in the day. That's where the physics aspect of myself comes back a bit I think.

Did you have an inspirer? Someone that triggered your passion for SOM?

In those days both SOM and PME didn't exist yet. I chose for the "Vakgroep Technische Mechanica" (Department of Technical Mechanics). In those days, the finite-element method was in it's full development stage and the computers at the time were too small to model a serious problem. A couple of hundred degrees of freedom was huge at that time. My choice for "Technische Mechanica" was particularly based on that area of interest.

As far as I could find on researchgate from the TU delft regarding your articles, I could find at least 350+ research outputs, of which Engineering&Materials area alone had about 41 different topics. What interests you in a certain topic?

Well that's a difficult question, usually you kind of roll into a subject. Important is that it has a challenge, and that new theory can be discovered or implemented. That makes practically everything interesting. I think that's what I find the most important, the challenge that makes it interesting.

If you look at all the different papers that you've contributed to, which one was the most "ground-breaking" or the one that you enjoyed spending time on most?

It's difficult to say which one was the most 'ground breaking'. The fun part is that the problems that you're dealing with are often ones that you've spent a long time looking at, and then suddenly one afternoon you have one of those "Eureka" moments ("dan valt het kwartje ineens"). Suddenly you see how it should be done and then before you know it you're busy for quite some time again to work out the details. When I was working on my doctoral thesis, it was regarding a specific way of describing finite rotations for shell elements. We didn't think it would be possible for years and on a summer afternoon suddenly this elegant way of solving the problem appeared. Unfortunately, that doesn't happen every day. Recently, we have suggested a method to simultaneously optimize a product and the process sequence. I'm having high expectations for it, though the amount of time in advance of the previous example was a lot longer.

I think most people would agree on me that your portfolio is as complete as it

can get. Though, imagine infinite funding and a team of specialists as support. Is there something that you would still like to add to your research?

Funding is not the problem on this topic, I just miss the time to get my hands dirty. Nowadays I have so many tasks depending on me, supervising Msc. and PhD students etc etc. If people think that being a professor is a quiet and boring job, they are gravely mistaken. For this reason I deliberately tried to free myself as much as possible from the usual work when I went to Denmark for a couple of months, just so that I could get my own hands dirty again, I missed that. So funding or knowledge is not per se the thing that I miss, it is time. There is just not enough of it.

Regarding the future of your department/area of expertise, do you expect certain major breakthroughs in the coming years or is there still a gap in knowledge that you think will be filled in the future?

I don't really believe that there are going to be major breakthroughs in the coming years, It will all get finer and finer of course, more computations, smaller meshes etcetera. What you see nowadays is that every component is designed separately, the calculations are done separately and then the whole thing is combined. I'm expecting in the future that this process will be much more unified, meaning that several of these processes will be executed in parallel or in one go. Of course you need a tremendous amount of computation power for this, which will continue to grow in the coming years of course. I experienced the whole rise of the internet, communication and the computers. If I think back on my first computer, I coded on it in some ancient language. I could make myself a

"In those days we could only dream of such computation power."

“If people think that being a professor is a quiet and boring job, they are gravely mistaken”

cup of tea during the time it took for some very simple FEM program to finish its calculations, and with only a fraction of the mesh points that would be possible nowadays. What a laptop can do in these times.. In those days we could only dream of such computation power.

I think Continuum Mechanics was my first lecture during my premaster, in that classroom you looked very self secure and with tons of experience. Though we all start somewhere. Are there things or moments you found/find hard at being a professor?

Hmm if I found anything particularly hard? Well you roll into it so you spend a lot of time on it, and through the years you'll learn most things. What can be hard sometimes is if it's not going well with students, no matter the reason. For example during the thesis work of a student, or maybe due to personal reasons, you name it. Those remain difficult situations which can still give a big relief when things turn out well in the end.

If you consider HTE, the courses that are being taught and the way of tutoring, would you change anything about it?

Not for HTE in particular, perhaps more for the master programs in general. Frankly, I don't like the obligatory courses in the master. A part of the courses that are being taught in the Bachelor have been shifted through the years to the Master. If you are a student working on your Bachelors, and you finally got your degree, then of course you want to specialize in the area that really interests you, you don't want to start your masters and think: "pff, finally managed to pass all those courses just to get a whole bunch of obligatory courses again". I get where it comes from, though I'm not an advocate. This is actually the

first thing I ask students when they come to me and ask: "Do you have any thesis topics for me?". I'll first ask them "what do you want?" I can just sum up some ideas that are floating around in my head, but then you would still be working on the idea of someone else instead of your own idea. Your master thesis is probably the last chance for you to really freely pick your topic of interest. After this, you'll probably won't encounter that sort of freedom anytime soon.

What do you enjoy doing on a sunny Sunday given an empty agenda?

I like to spend time outside, I enjoy spending time in nature. In my spare time I like kayaking, on the inland waterways, the "Ijsselmeer" or "het Wad". On these big lakes you do join bigger groups, definitely not just by yourself. Lately joining a group hasn't been possible of course. The fun part about kayaking is that you can reach spots that you just can't reach on a normal boat. You can take the shallow waters and really encounter all sorts of things. Like the times when we went to the islands, we would bring our tents and camping gear to spend a night over there, that's really nice to do. People would look at us when they see us coming and ask where we're from, if we'd tell them that we came from the mainland they just wouldn't believe that we travelled that whole distance in a kayak.

Hobby wise, is there anything else that interests you?

Well considering that area, I am a real technician. If there's something broken in our house, then you can bet on it that I will do anything I can to fix it. Of course when I don't succeed in that, well.. that's a bit painful.

Jaap Resink (Taylor Board)

Ingredients:

- 4 eggs
- 6 oz wheat flour
- 6 oz white sugar
- 6 oz butter (or margarine, at room temperature)
- 1 teaspoon baking soda
- 1.5 teaspoon cinnamon
- pinch of salt
- 4 stroopwafels (normal, sea-salt caramel, whatever you like)
- 1 lemon

Feeling lazy? you can always replace the ingredients with a pre-packed cake mixture from the supermarket!



recipe

by Myla

Are you looking for a study snack that is perfect for the spring months? Do not look any further, as this Stroopwafel cake will blow your tastebuds away!

1. Preheat oven to 180 degrees and grease your cake mold thoroughly.
2. Mix the sugar and butter approx. 10 minutes till fluffy and white.
3. Mix the eggs through the butter-sugar one by one, only add the next egg when the previous is fully absorbed.
4. Now add a pinch of salt and the cinnamon.
5. Mix baking soda with flour and sift to add to the batter, carefully scoop through the batter.
6. Add lemon zest of one lemon and 4 table spoons of it's juice.
7. Break 4 fresh stroopwafels in little pieces and scoop through the dough carefully.
8. Pour the cake dough into a cake mold.

9. Break 1 or 2 stroopwafels in bigger pieces and put them on top to decorate it. Now put your cake in the oven and bake for at least 50 minutes.

10. You can check if it's ready with sticking a thin skewer (if you can't find any, a toothpick will do the trick!) in the middle of the cake. If the stick comes out clean, the stroopwafel cake is ready!!

11. Let it cool about 15 minutes before taking it out of it's mold.

12. Serve it in slices with ice cream or just whipped cream with little pieces of Stroopwafels as decoration.

Enjoy the snack!

Do you have a nice recipe you want to share with fellow HTE'ers? You can send it to intern-taylor@tudelft.nl, and maybe your recipe will shine in the next Vision!

Another Vision another puzzle. In this edition we have a so called *Suguru*, also known as *Tectonics* or *Number Blocks*. *Suguru* puzzles are quite different than *Sudoku*, so you'll want to read these rules carefully.

You'll see that the grid is subdivided into containers or cages, each of which is 1 to 6 cells in size. You need to fill each container with unique digits,

counting up from 1. So for example a 2-square container contains the numbers 1 and 2. A 6-square container contains the numbers from 1 to 6. Adjacent (touching) cells may never contain the same number, and this includes diagonally adjacent cells.

That's it, good luck!

puzzle

by *Matthijs*

Send an email to taylor-3me@tudelft.nl with your solution and you might be the lucky winner!

1	5				6			3					3
							5						
	2						3						
5						5		2		1	2		4
			1										
		5		5				6				5	3
	2												2
	6			3	5			6			1		6
4			1				4						
				6			3		3		6		3
													4

