

SWELL

November 2020 Volume 42 Number 1

HET WATERBOUWDISPUUT



Hydraulic Engineering Student Association





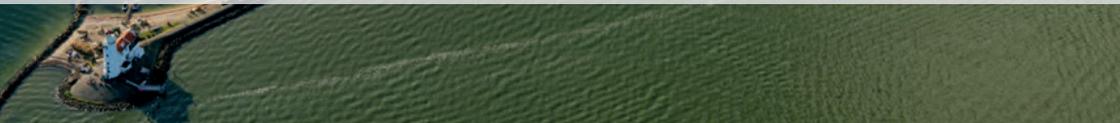
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- En geïnteresseerd in zaken als project- en contractbeheersing?

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FROM THE EDITORS

Dear members,

In front of you is the first Swell of 2020/2021. We hope that everyone is doing well and that in this way we can give you something nice to read while all off you are sitting at home. We owe you one Swell last year since the one from Q4 didn't come out, but that is why the board of 2019/2020 has helped us creating this one and we're proud of the result!

Meet the new board, cook some hydraulic recipes or enjoy yourself with a hydraulic puzzle, this Swell has it all!

We hope you have fun reading it!

The editors,
Board of Het Waterbouwdispuut 2019/2020
Board of Het Waterbouwdispuut 2020/2021

The editors:

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FROM THE PRESIDENT



Dear members of 'Het Waterbouwdispuut'

Welcome to the first edition of the Swell from study-year 2020/2021! Hopefully everybody started off great in Q1 and has finished their exams successfully. Even though the conditions of teaching methods were different than everyone had expected, I still hear positive feedback about the content of the masters.

With the academic year of 2019/2020 has ended, this means that the old board of the Hydraulic Engineering Student Association has retired and takes its well-deserved time off to concentrate on the remaining courses and master thesis's they have left. Even though their board year was different and some events that they were looking forward to were cancelled, they organized some amazing events until COVID-19 appeared in our country. Therefore, I would like to thank the board of 2019/2020. Dirk-jan, Daan, Ferdinand, Murielle, Eva, Jan and Tom, thank you guys a lot for what you have accomplished for the student association in the past year.

We will also try to make as much possible in these conditions. Even though some events are already postponed, we are still staying optimistic. To organize events during these conditions, creativity and thinking outside of the box is needed and creates room for new ideas. Our first 'new' events is already planned this month. If you feel creative and you think you have a great idea about what is possible and what will be interesting for our students, please contact us, because together we can achieve more.

We will keep you posted through our WhatsApp group, Instagram page, Facebook page, Newsletter, LinkedIn and Website. Enjoy reading this Swell!

See you water!

Eva Siderius

President of 'Het Waterbouwdispuut'



Arcadis opent haar virtuele deuren Ben jij erbij?

Persoonlijk kennis maken met (junior) Arcadianen uit je eigen vakgebied, speeddaten met recruiters en interessante projecten. Dit zijn onderdelen die in het programma (via Teams) zitten. Ben jij recent afgestudeerd of zit je in je laatste jaar van je studie en wil je werken aan 'Improving quality of life'? Dan nodigen wij je uit om je aan te melden.

Ben jij het technisch talent die deze kans pakt?



Wanneer?

Donderdag 10 óf vrijdag 11 december
(9.00-11.30 uur).



Hoe?

Via een online Team meeting



Voor wie?

HBO/WO-studenten in de eindfase van hun studie of net afgestudeerd



Inschrijven

tot 27 november 16.00 uur via
<https://www.arcadis.com/nl/nederland/carriere/inhousedag/>



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MEET THE BOARD

Eva Siderius Chairman

Hi Everyone, my name is Eva and I am a 23 year old Hydraulic Engineering student. I finished my bachelor degree in Civil Engineering in July 2019. After I finished my bachelors I took 6 months 'off', because I did not yet know what direction I wanted to go with my masters. During these months I discovered my love for water and started with Hydraulic engineering in February. Upcoming year I am the chairman of 'Het Waterbouwdispuut'. Being the chairman means that I am also responsible for informing you with all the news about the association, so do not hesitate to come to me with questions you may have. Next to informing you guys, it is my responsibility to make sure that also this year, despite COVID-19, the association will organize successful events and can still fulfil the tasks to strengthen the relationship between our students, the faculty of HE and our partners companies. Even though, this will and already is a challenge, we will try to do our best to make it the best year for our hydraulic students.



Ties Verhagen Secretary

Hi everyone!
My name is Ties and I am 24 years old and this year I will be the secretary of Het Waterbouwdispuut. Together with 87 other future Hydraulic Engineers I started this master's degree last September. Just like everybody else I experienced that everything this year is different than other years. Because there is no Hydraulic Coffee this year, there are a lot of you that I haven't seen or spoken to yet but if circumstances permit, I hope to see you more often in the second half of the year. Of course we, my fellow board members and I, are still very keen on organizing fun and educational things like a Hydraulic Dinner or a business course but for right now we have to settle with an online pub quiz which of course is also awesome! Always look on the bright side and let's hope the rest of this year, but especially 2021 has more to offer us Hydraulic Engineering students!



Anne Douwes

Treasurer

Hi hydraulic friends, My name is Anne, I'm 22 years old and I just started the HE master last September after my Bachelor years full of love for Civil Engineering. I liked water over structural mechanics and ocean and river systems over sewerages so here I am! My main job as the treasurer of the association is to guard the money (surprise), I do not think any of you will have a lot of questions for me about that but do not hesitate to ask them anyways/shoot me a message about any issues related to the association. Despite this year's slightly confusing circumstances I hope all of you still enjoy this year as much as possible, hopefully we will see each other in person as soon as possible.



Cato de Hullu

Educational affairs

Hi all!

My name is Cato de Hullu and I'm 23 years old. 4 years ago I started my bachelor Civil engineering in Delft. After four beautiful years, it was clear there was only one master that caught my interest, Hydraulic Engineering. Last September I started the master and since then I've enjoyed every white cap that caught my eye. This year I will be the Educational Affairs of 'het Waterbouwdispuut'. So if you have any remarks, positive or negative, feel free to contact me! I'm looking forward to the upcoming year and hope to see you at one of our activities, even if they must be hosted online!



Mathieu Roebroek

Internal affairs

Hi everyone!

My name is Mathieu, I'm 23 years and I live in the beautiful city Delft. In September I started with the master Hydraulic Engineering and water still gets me excited (even after three months of momentum and mass equations). Unfortunately 2020 didn't go the way we all wanted it go, but as we might learn during one of our courses: 'every cloud has a silver lining'. I look forward to get to learn more of my fellow students, hopefully in person but otherwise during one of the online events. This academic year I'll act as the commissionaire of internal affairs of the board. Please contact me for all your questions about the study association and the master, I'm happy to help. Stay healthy, stay positive and I'm sure we will see each other in the near future.



Luc van Koelen

External affairs

Hi Hydraulic Engineers!

My name is Luc and I'm 24 years old. This year I'll be in the board of Het Waterbouwdispuut, where I'll fulfil the task of maintaining the relationships with the partners of our association. As this year is different because of the well-known Covid virus, it still is important to keep the contacts. In this way all the events we organize can be continued when the situation is back to normal. Until then I'll do my best to organise as much events as possible to get the hydraulic students and our partners connected!



Stijn Lamers

Foreign affairs

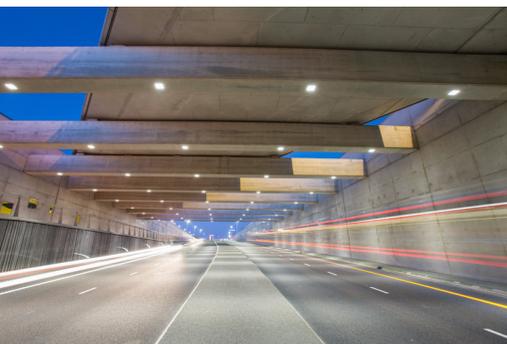
Hi Hydraulic Friends!

I am Stijn, 23 years old and already halfway down the Master HE road. This year I will be organizing the study tour of Hydraulic Engineering, also the Hydraulic Journey! With my lifelong excitement for traveling all around the world in combination with studying at TU Delft, the adventurer inside of me ended up in organizing this great journey!

My task is to keep an eye out all over the world if there are places where our HE brain starts to make grinchy noises. A port in Vietnam, a dredged canal in Panama or the worlds greatest swell in Portugal, the journey I am going to organize for you guys is definitely a greater adventure than all these three excitements combined. However I cannot travel on my own, and will certainly need some fellow HE students with me who are just as excited, thrilled and interested in the Hydraulic Engineering world as me! So if you want to be part of this, sign up for the journey and I will tell you this: you'll thank me later!



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HYDRAULIC ENGINEERING

MASTER SPECIALIZATIONS

If you have trouble fitting in the courses in your time schedule, the site of Tjerk Zitman is very helpful. It is possible to select your specialisation and it will make the schedule for you.
www.tjerkzitman.nl/WS_2018_new.html

Coastal Engineering

Prof. Stefan Aarninkhof

River Engineering

Ass. Prof. Astrid Blom

Ports and Waterways

Prof. Mark van Koningsveld

Dredging Engineering

Prof. Cees van Rhee

Environmental Fluid Mechanics

Prof. Ad Reniers and Prof. Julie Pietrzak

Flood Risk & Hydraulic Structures

Prof Bas Jonkman & Prof Matthijs Kok

SWELL OF THE CENTURY

The trees are turning bald, the temperature drops and a week without rain feels like a miracle. A typical Dutch November month. Of course the Dutch autumn can be quite beautiful now and then but for hydraulic engineers there is a place way more interesting in this period: the municipality of Nazare, Portugal. Nazare is famous for its surfing beaches, especially during the big wave season which starts in October and ends in March. Beautiful monochromatic swells arrive at the coast which makes the place a feast for surfers, but obviously also



for fluid mechanics engineers. Wave heights of over 30 meters are measured during big wave season, which makes the location very unique. How do these waves develop? Two reasons: 1) Hurricanes above Bermuda and the Caribbean generate a wide range of wave frequencies that propagate in different directions. Since some waves travel faster than other waves, the waves are sorted while they cross the northern Atlantic ocean. This phenomena is called frequency dispersion and is the reason that the waves are almost perfectly aligned. 2) When these swells arrive at Nazare, the wave height is greatly amplified by the Nazare North canyon which is also known as the big waves generator.



2020 is a year for the books in the surfing world. Hurricane Epsilon took a very special path from the US east coast to Greenland where it created colossal swells making a bee-line straight for Europe . This series of swells was given a catchy name by the surfer community: “The swell of the century”. On the 29th of October the swell arrived at Nazare which resulted in one of the highest swell waves ever. Amazing footage of these waves and the surfers conquering the waves can be found on Google and YouTube using the search term: “Swell of the century Nazare.”. A preview of this force nature is shown in the images. So, when it’s safe to travel and you get tired of the Dutch autumn whether. Nazare is definitely the place to be.

“You can’t stop the waves, but you can learn to surf” - Jon Kabat-Zinn



MSC THESIS

COASTAL ENGINEERING

My name is Jakob Christiaanse and I'm now finishing the second year of my Master's Hydraulic Engineering. I'm working on my thesis, which I started in May, in the midst of the corona crisis lockdown. Many students have had difficulties finding a suitable topic for their thesis in the past weeks / months, so I will tell how I ended up with mine.

At the beginning of the academic year, in September, I went to Buenos Aires in Argentina, to do an internship at a local engineering office. There, I worked on a project to model a tidal estuary in Argentina, using models such as SWAN and MIKE. This showed me that I liked modelling a lot, especially coastal areas and I was already specializing in coastal engineering. By the end of my internship, in January, nobody was worrying about Corona yet and I had planned three months to travel through South America, before planning to start my thesis in May. Knowing that I liked modelling and coastal engineering, I asked my internship supervisor, Matthieu de Schipper, if he could let me know in case there were any coastal modelling topics coming up. Quite soon he informed me about a very interesting topic: Analysing model uncertainty in morphological modelling of the Sand Engine on the Dutch coast. This topic was a perfect combination of modelling and coastal engineering for me, so I didn't hesitate long. In March I had to come back early from my trip, as the pandemic was causing more chaos with every day. Back in NL I had a few talks with the supervisors of the thesis project and a few weeks later I was able to start working on it, albeit from home of course.

So, for me, my internship really set up my MSc Thesis as well, as it first showed me my interests

UPCOMING EVENTS

- Master community 1 16-11-2020
- Online pubquiz instead of MEX 27-11-2020
- Business course Witteveen + Bos 2-12-2020 & 3-12-2020
- Ontmoet Arcadis 10-12-2020 & 11-12-2020



HYDRAULIC RECIPES

Mussels A La Hydraulique

Ingredients:

- 2 kilogram mussels
- 400 gram mussel vegetables (or onion, carrot, celery, parsley)
- A little bit (just a little bit) salt and pepper
- Olive oil
- Bay leaf
- A bottle of white wine
- A friend to eat the mussels with!!

Additional:

- French Fries (send your friend to get them at the snack corner)
- Additional sauces (mussel sauce)
- Bread (but I prefer French fries)

How to make the Mussels A La Hydraulique

The recipe for Mussels A La Hydraulique is almost exactly the same as classic Dutch Mussels, except for the name. First of all make sure to have a nice setting in the kitchen. Play your best tune (for example Tidal Wave from Tom Misch), dress as a cook and get started! It is important to rinse the mussels with cold water. Sometimes the mussels have to be brushed a little bit in order to remove all the sand that might be on them. Check the Mussels, this is very important!!! This can be done by removing the heavy mussels and the broken shells. The remaining part must be knocked on a table or something, if they close, they are perfectly fine. If they don't close, they have to be thrown away! Heat some oil in a very very big soup pan. Start by frying the vegetables for just a couple of minutes and add some salt or pepper. Blush the vegetables with some white wine and add the bay leaf. Add the mussels and put the cover on the pan (do not remove it!) After two minutes shake the pan, still with the cover on the pan. Subsequently wait 2 minutes and do the same thing again. Cook the mussels for 5 minutes in total. If you like, you can add some parsley. Serve the mussels with some fries and I promise you, everyone will be happy. If the recipe is follow precisely, you should have some wine left, drink it with your friend (important step).

Tip:

If you don't want to use alcohol, the white wine can be switched with broth

HYDRAULIC PUZZLE

Hydraulic puzzle

C	E	C	N	A	N	O	S	E	R	S	E	O
M	O	N	O	H	T	Y	P	S	C	N	S	C
W	W	A	V	E	S	A	C	I	G	I	L	S
S	A	S	S	T	E	I	L	I	R	O	N	P
K	T	T	R	T	M	U	N	I	S	C	O	R
R	F	O	E	A	A	E	S	U	T	L	R	I
O	L	F	N	R	E	L	R	S	R	I	T	N
W	E	Y	D	R	W	E	W	C	O	M	H	G
A	D	Y	I	F	D	A	I	A	P	A	S	T
T	H	N	L	A	E	N	Y	C	T	T	E	I
L	G	O	M	L	L	E	W	S	E	E	A	D
E	O	B	R	E	A	K	W	A	T	E	R	E
D	B	R	I	G	H	T	S	P	A	C	E	S

- BREAKWATER
- BRIGHTSPACE
- CLIMATE
- CLOSURE DAM
- COASTAL WATERS
- DELFT
- DELTA WORKS
- DYNAMICS
- ENGINEERING
- FLOOD
- HYDRAULICS
- NORTH SEA
- OSIRIS
- PORTS
- PYTHON
- RESONANCE
- SPRING TIDE
- SWELL
- WATERWAYS
- WAVES

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For more information about Royal HaskoningDHV, please contact Gosse de Boer (Gosse.de.Boer@rhdhv.com).

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DUTCH BEER TASTING

Delft is normally known for its bustling city centre with a lot of cafes, restaurants, cute squares and beautiful canals. Since we stay at home as much as possible we have to come up with other ideas to have fun during our spare time. To offer you a nice way to spend the evening, the study association introduces the “Dutch beer tasting” package. The beers in this package come from different breweries and have very different flavours. Please let us know which one you liked most!

Name:	Kompaan Bondgenoot
Colour:	Blonde
Style:	Pale Ale
Flavours:	Lemon, starts fruity ends hoppy
Percentage:	5,2 %
Brewery	Kompaan Dutch Craft Beer (The Hague)



Name:	Jopen Hop zij met ons
Colour:	Blonde
Style:	Indian Pale Ale
Flavours:	Pine needles, tropical fruit, citrus
Percentage:	5,2 %
Brewery	Jopen Craft Beer (Haarlem)



Name:	Texels Skuumkoppe
Colour:	Amber - Dark
Style:	Weizen
Flavours:	Banana, ripe fruit, caramel
Percentage:	6,0 %
Brewery	Texels speciaalbier (Texel)



Name:	Oedipus Mannenliefde
Colour:	Golden yellow
Style:	Saison
Flavours:	Spicy, herby, citrus
Percentage:	6,0 %
Brewery	Oedipus (Amsterdam)



Name:	t' IJ IJwit
Colour:	White
Style:	White beer
Flavours:	Citrus, koriander
Percentage:	6.5 %
Brewery	Brouwerij t' IJ (Amsterdam)



RECAP 'WATERBOUWDAG'

This year the 'Waterbouwdag' was held on the 15th of October. This event is held every year and it is really appealing for those who are interested in great and upcoming subjects and projects in our section.

The Association of Hydraulic Engineers offers students who graduate from HBO or Technical University in the direction of Hydraulic Engineering the opportunity to submit their graduation project to the annual Hydraulic Engineering Award. This prize is awarded during the annual event.

This year Nick Overkamp with his thesis 'Modelling gravitational launch of gravity based foundations of offshore wind turbines' won the Hydraulic Engineering Award!



The development of offshore wind farms is a crucial step in the transition to sustainable energy. Over the past decade, many wind farms have been built in the North Sea and many initiatives worldwide are developed worldwide. The development of new construction methods, for example to place windmills in deeper water, is therefore of great importance.

Nick has examined to what extent gravity-based foundations, GBF, are a cost-efficient alternative to monopile constructions, for example. The construction of a gbfc and the associated launch are crucial steps in this field. The jury was impressed by the scope and depth of the study. Nick first developed an analytical model himself and then used numerical models and laboratory research.

Congratulations Nick!



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COLOPHON

'Swell' is a magazine which is published three times a year for all the members of 'Het Waterbouwdispuut' and her relations.

'Het Waterbouwdispuut' is the student association of the department of Hydraulic Engineering and Environmental Fluid Mechanics of the Delft University of Technology.

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