

Aeroplane

VLAAMSE TECHNISCHE KRING

Monthly - Edition 5: April 2015



Existenz: The Architect's vision



Outdoor Weekend



On the banks of the Dijle



Citytrip to Liège



Amazon goes Drone

April

- 2 English Rock 'n Roll Cantus**
- 21 VTK&Medica Cantus @ Alma 2**
- 23 Beachvolley & BBQ**
- 29 The Final International Cantus**

More info on vtk.be

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Word from the president

Dear internationals,

I noticed that more than a few of you have attended the firing of the jet engine in the first week of April, a wise decision. You don't often get a chance to see such a demo and it is a must see if you are studying engineering science. Professor Van den Bulck fired it this time, but until three years ago, it was the legendary Theodoor Van der Waeteren who did the demonstrations. It is no coincidence that our sandwich bar is called the Theokot: as he helped us to get permission to use this space, it was named after him.

But who was this Theo? He was an emeritus professor, but in his heart he always stayed a student. When he was eighty, he still went to cantuses of VTK for example, and ran a lap with run for specials at the 24 hour run. It's sad that we lost our Theo, but he had a wonderful life, and enjoyed it to the fullest until the end. He once told me that the doctor said he had to choose: no more beer and steak, or he had to take pills. So from then on, he was taking pills every day.

To me, he was more than the awesome old guy who went to the fakbar and told epic stories, as by some strange coincidence, he was my neighbour. I first met him when I was about eleven or twelve. He had made a bet with a colleague that he could teach a kid of that age how to solve algebraic equations. Unfortunately, he had a massive garden and I was way more interested in what lived in its ponds. He had the kind of garden you would expect from a crazy professor. One corner was overgrown with 'wine raspberries', in the middle of which was a greenhouse, with broken windows and kiwi plants growing through them. On both sides there was a pasture, where someone else's donkeys or lamas were usually grazing. In the center, there was an old walnut and mulberry tree. Maybe you haven't ever seen a mulberry tree, it's like a big tree with raspberries growing in it. Next to it was a second greenhouse, where he used to read, with part of a trailer mounted to a side, so he could roll it open. The most interesting tree wasn't even the mulberry one, but the tree with a knot in it. He carefully made it grow that way when it was young. The pathways, where he didn't want anything to grow, were covered with old carpets.

Now back to the jet engine (which he luckily didn't have at home). The Rolls-Royce Derwent 8 you saw in action, was used for lab exercises in the past, engineering students from all over the country came to our Thermotechnical Institute to study it. More recently, it was only fired about twice a year as a demo, I vividly remember him shouting "imagine 5000 horses blowing over here".

He was a real crazy inventor, once he tried to cut the top of a tree by mounting a moving platform with a chainsaw on it, and pulling it forward with a rope. Another interesting fact, is that he made news by assigning his students to calculate what the middle of Flanders was, which was never done before.

Writing this makes me wish he was here again to share his stories, but I'm happy to be privileged to have met him in my lifetime.

Manu (praeses@vtk.be)

Word from the vice-president

Dear internationals,

You have already been here for a couple of months now and a great part of you will also be staying here next year. You have had the time to get to know Leuven and I hope you have found your way to VTK activities as well.

Nevertheless I think that only a few of you already know what my function is in VTK. You obviously know that I'm vice-president but what is it that I do? Well as vice-president I am responsible for all the internal affairs of VTK. This means it is my responsibility to look after every praesidium member, to make sure that (s)he is doing his/her work good and gladly. I am also helping and supporting our working groups and year groups. Last but not least, I make sure that all our volunteers are being pampered with coupons, parties and goodies.

Do you want some free beers in 't Elixlr, some free sandwiches in Theokot, an exclusive very cheap volunteers' party or some extra free goodies and you want to help VTK? Then you should become a VTK volunteer! For all the activities we organize, we need some volunteers because our praesidium just isn't big enough to do everything ourselves. Therefore we work with a volunteering system. For almost every event we have some extra shifts that can be filled up by students. You can find the shifts on our site: go to your account (the little person right on top of the page), click on 'My Shifts', there you can search by date, event or unit. For every shift you get some coupons (1 coupon is €1), normally you will get 1 coupon per hour shift, with these coupons you can buy food en drinks in Theokot and 't Elixlr. When you have done a shift, you can collect your coupons with me. You can find me at 'Blok 6', Studentenwijk Arenberg 6, on the ground floor.

But that's not all, I also organize an exclusive volunteering party with very, very cheap beer. Doing only 1 shift will give you access! This year this party will be hold on Thursday, the 23rd of April. The volunteers who help us regularly can even collect some goodies. There are goodies when you have done 5, 10 or 20 shifts.

Without our volunteers we wouldn't be able to organize so many and big activities, they are our heroes. It would be great to also have some international volunteers!

Love,

Emily (vice@vtk.be)

CityTrip: Liège

As the <Gopass 10> allows people under the age of 26 to travel anywhere in Belgium for only five euros, most of you will find it very easy to take a day off on the weekend and visit one of Belgium's beautiful cities. Every month, we'll give some practical information and background on one of these Belgian cities, and this month we'll introduce you to the largest city in Wallonia: Liège.



The city of Liège is the largest city in Wallonia, and has been an important economic and cultural city ever since the Middle Ages. Whereas the city was initially a powerful Catholic stronghold ruled by prince-bishops, it later became a key city in the industrial revolution by its rapidly expanding mining and steel industries. But Liège keeps with the times – which you can clearly see when you arrive at the train station. The contemporary station of Liège-Guillemins, designed by Santiago Calatrava, has only been completed six years ago. It surely is a magnificent building to behold the first time you arrive, and also an important hub for Walloon and international travel. From the station you can take the train to Liège-Palais, but you can just as well walk to the city center, passing by the parks and the observatory, or the river Meuse, depending on your preference.

Arriving in the center, you'll go past the cathedral of St. Paul straight into the center of the action: Le Carré. Filled with bars, restaurants, theaters and cinemas, this part of the city is definitely where you'll want to go in the evening. The students of Liège spend their pastime here, and when the weather is good and summer is coming, the streets are filled with musicians and other performers.

Past the Carré you'll find the central squares of the city, where two of the most splendid buildings can be found: the Royal Opera and the Prince-Bishop's palace. These buildings are impressive to behold from the outside, and if you're feeling fancy, you can even dress up and go to the opera in the evening. If you're feeling adventurous, you can follow the Couteaux, a famous route to the top of the old city. You'll have to climb the Mon-

tagne de Bueren, a famous staircase leading to the Citadel de Liège. From the medieval fortress, you can get a breathtaking view of the city, which spreads in all directions over the hilltops marking the start of the Ardennes.

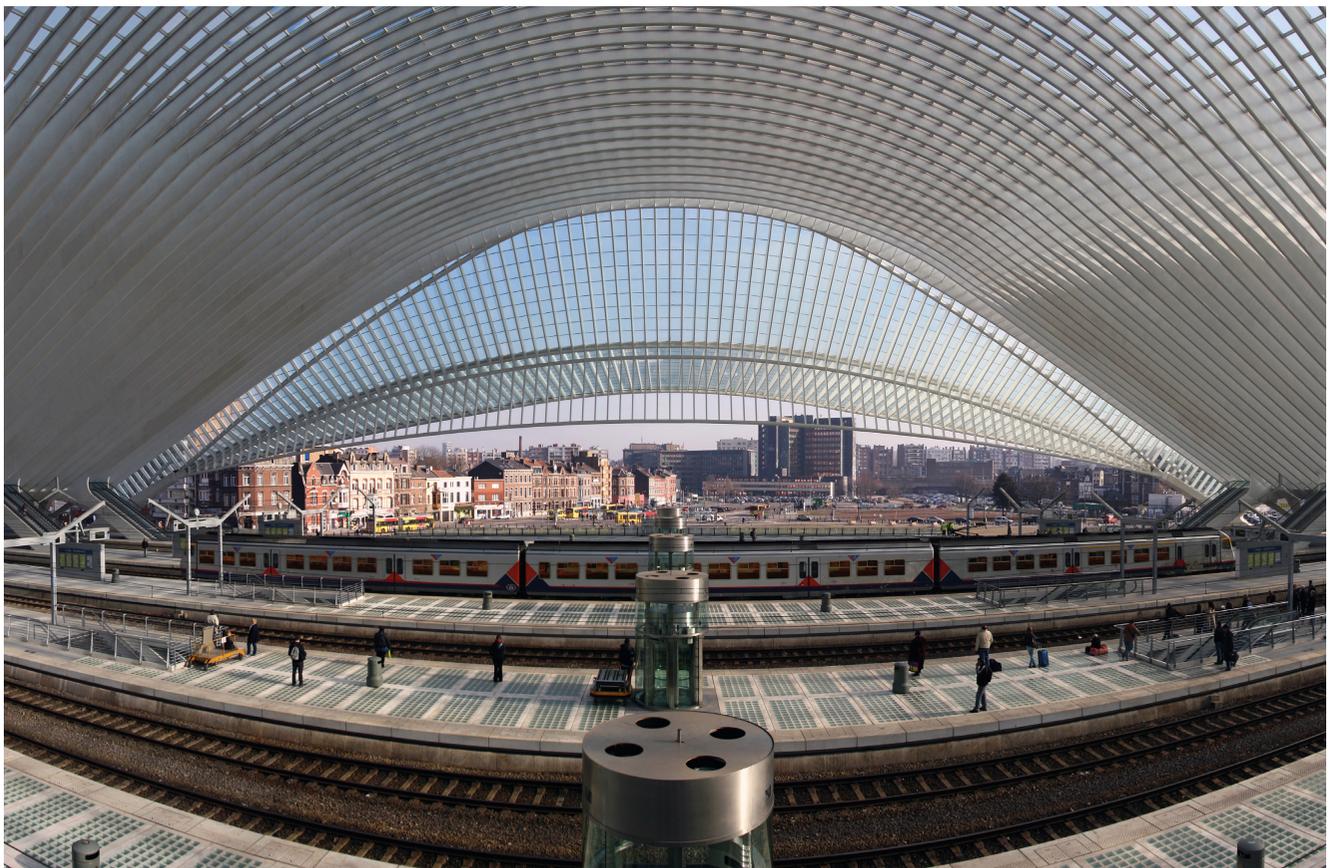
Walking a little past the Palace you'll find the city's most prominent museums near the bank of the Meuse river. There's the Musée des Beaux-Arts (Museum of the Fine Arts), which houses a collection of Walloon painters as well as renowned artists like Monet and Picasso. The most renowned museum however is the Grand Curtius, a distinguishable red brick house on the side of the river. It houses one of the best collections of Mosan art as well as the famous collection of the former museum of weaponry.

Apart from the regular sights, you can also climb one of the other hills to visit other places of interest. On the hill behind the central train station, there's the monument for the fallen in the First World War, consisting of a church and a lighthouse on the top of the hill. If you're already in the center, you can cross the Meuse and visit Médiacité, the city's largest shopping center. If you're interested, you can even visit the city on a Sunday to see the Batte, Belgium's largest fair. Shopping on



the Batte is especially nice when the weather is good, as the market is located near the beautiful riverside. For something different, you can also take the bus from Liège-Palais to the mine of Blegny, and experience the riches of the industrial revolution firsthand.

All in all, the city of Liège is a nice deviation from the historic cities of Flanders, and offers an entirely different view on Belgium. The French language, combined with the urban, industrial atmosphere makes for a different branch of tourism, and is perfect for a day of ultimate riverside relaxation.



20 years of Existenz

An Existenz-team organizes all year long. After a year of lectures, debates, workshops, cafés, parties and more, a fresh group of 1st master students of Architecture is ready to take on next year's challenges. They have seen what their predecessors have accomplished and want to do even better. That's why they start early. The fresh new team starts meeting as soon as the summer break starts. A year of design courses hasn't depleted their energy, but only strengthened it. They wander off the beaten track and start moving in their own direction. Ambitions are high, leading to a vast pool of ideas.

This year marks the 20th edition of Existenz. This made us wonder what Existenz really means, and has meant for the past two decades. The meaning certainly hasn't remained the same, and 20 years certainly is a lot of time. We'll take you back to 1994. Proximus



Planning designs in the Diestsestraat (2002)

opens up the first Belgian mobile phone network. Kurt Cobain is found dead in his house in Seattle. Leuven's stores are experiencing new forms of electronic payment. This is the year in which a couple of architects wanted to put the castle windows wide open. They organised a week of activities, including workshops, interviews, concerts, impromptu constructions and a huge exhibition of students' work.

This event marked the start of a new tradition: Existenz..

The annual week of activities was initially called the Existenz Maximumweek. This is a reference to the avant-garde behaviour of the modern art movement Existenzminimum, which resulted from the need for new housing after the first World War. The name was also meant to criticize, as Existenzminimum doesn't sound like it has a lot to offer. The first Leuven Existenzers wanted to search for the boundaries of what was possible, and to find parallels between architecture and other forms of art. This idea is very much alive in Existenz even until today.

From 1996 onward, the brave adventurers of Existenz ventured out of their safe castle to find a location in the city center. The Arenberg Institute



Bringing down the walls in the former institute for Earth Sciences (2007)



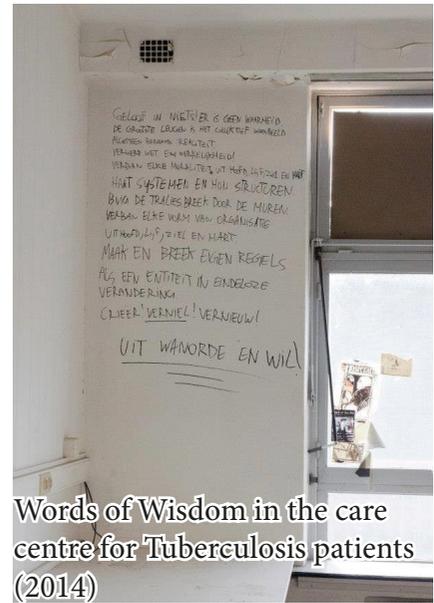
The huge halls of the bottlery (2013)

was only partly used by the KU Leuven at the time, and was therefore occupied by the architects. This institute is now known as STUK. The Vaart also received attention among the students of architecture. When the big companies moved away from the Vaart, large, empty buildings were left without purpose. It is in this post-industrial environment that the students found empty spaces large enough to truly demonstrate their skills.

While looking for new locations, Existenz found many buildings that were empty or awaiting use. Often, these buildings had been occupied before by a group of Leuven 'rebels' who wanted to criticize the amount of empty buildings. The vibe during the

Existenzweek is one of illegitimate entry, one of adventure into deserted hallways and chambers. The empty buildings are perfectly suited for architectural experimentation. But the work doesn't end with a critique on the emptiness. People are invited to read and think about the problems that these buildings face, and how we can solve them. What could we possibly do now to give this space a new purpose that fits the times? This pondering led to a renewed affinity between the students and the fabric of the city.

Existenz keeps on ever improving, and every year the results look even more professional. They should however never forget, being a student is not only about preparing



Words of Wisdom in the care centre for Tuberculosis patients (2014)

for your career, enjoying your time with friends and fellow students is certainly as important. This year too, we try to remember this as we plan the most awesome events we can possibly imagine. If you want to see what we're doing right now, like us on facebook, and certainly don't forget to visit us during the Existenzweek. After 20 years of history, we are motivated to give you nothing but the very best. See you there!

Text: Siem Rombaut
Sources: Unité year 1, edition 1



Legendary cocktail party in the empty city pool (2005)

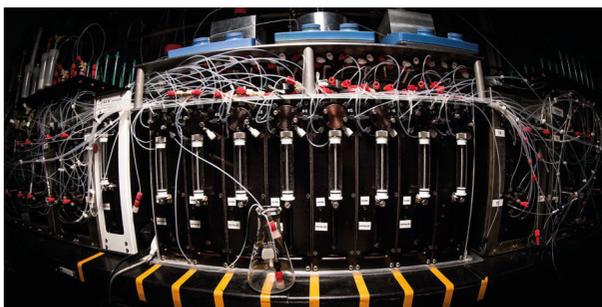
Last month in engineering

Boeing patents a Star-Wars like **force field**, which neutralizes incoming shockwaves at the target. The system senses shockwaves and produces a plasma barrier, which has properties that diminish the impact of the wave.



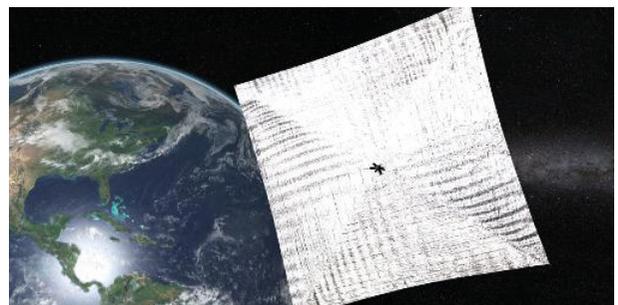
Amazon has received permission to test **drones** for package delivery. Amazon will start testing package delivery by drones in Seattle. For privacy concerns, only one type of drone can be used, and new permission needs to be granted before any modifications can be made.

Chinese scientist have produced the world's first hydrogen-powered **tram**. It can go for about 100 kilometers before refueling, and refueling is fast, easy, and cheap. We can expect these eco-friendly trams to be introduced in the Chinese transport system very soon.

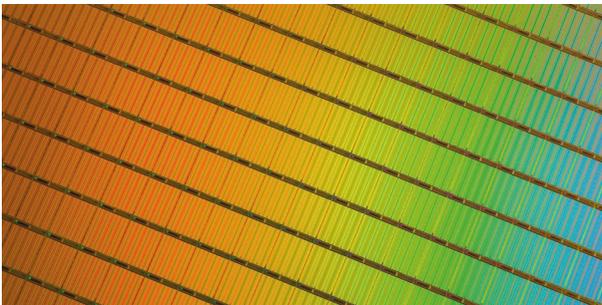


Martin Burke, a chemist from the University of Illinois, has developed a new 3D printer – one that **prints chemicals**. The device can print thousands of different chemicals from only a few starting compounds, some of which have never been synthesized by humans before.

Japanese scientists have successfully transported **wireless energy** over a distance of 55 meters with pinpoint accuracy. The motivation behind the research is to eventually install solar panels in space, so that they can harvest energy for consumers on earth.



An engineer from Brisbane has designed a new type of **bionic heart**. The design does not use pulses to pump the blood around, extending the lifetime of bionic hearts by an expected ten years. The heart has been successfully tested in a sheep, and is awaiting human trials.



Intel and Micron announced the production of **3D memory**, raising SSD capacity from 4TB to 10TB while increasing the cost per bit. Their technology is even denser and easier to produce than Samsung's recent VNAND, increasing the market potential for 3D memory.

Australian scientists have developed a new type of **concrete**, which is filled with plastic waste instead of steel. Apart from finding a new use for plastic waste, this material also has a reduced environmental impact due to the lack of steel processing.



For the first time ever, **false memories** have been implanted in the brains of sleeping mice. Pulses were fired to enhance their memory association for a specific place, and when the mice woke up they spent four to five times more time in that specific place.

Researchers from the Human Brain Project have made efforts to make a **virtual mouse** by coupling a virtual mouse brain to a virtual mouse body. Much sensory input and motor output has already been integrated, and more functionality will be added to improve the result.



Leuven Secrets: On the banks of the Dijle

Every historical city is built on a strategic location, and often it is built on the banks of a river. The Dijle used to be the lifeblood of Leuven, and many stories and songs from Leuven folklore tell about the river in one way or another. At present, the river has lost most of its economic importance, and is used for water sports and tourism instead. And where most of Leuven's economy is now in the northeast of the city, the southwest now lies quiet. In 2015, The Dijle calmly moves between old monasteries and gardens, hiding the old city from the modern world.

When I go into the city from Heverlee, I sometimes pass through the Beguinage. The roads are horrible, but I just run across the cobblestone while trying to keep up with the Dijle. The river runs through the city undisturbed, and sometimes splits only to come together a little further. While the southwest of Leuven houses a lot of old monasteries, not a lot of them are occupied by the university. A few have been converted to student residences, but apart from that it's a peaceful neighborhood. And one that houses a lot of treasures too.

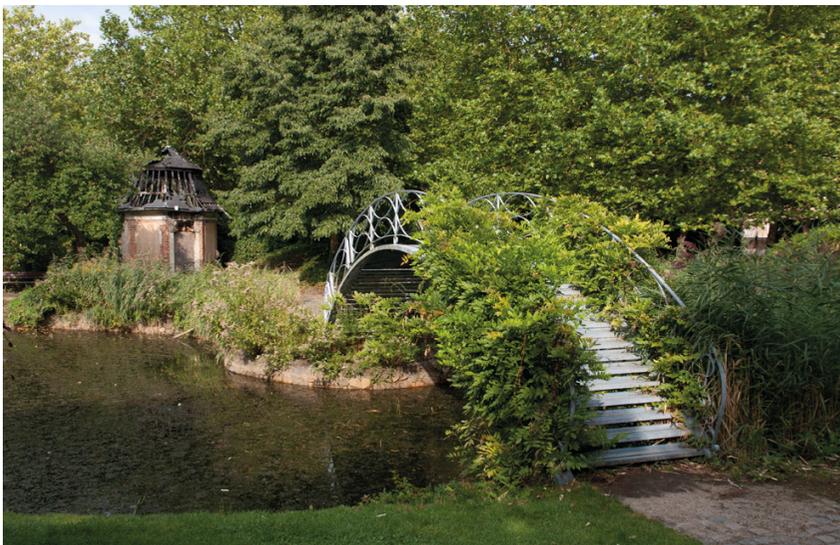
The Grand Beguinage was built in the 13th century, and is one of the largest Beguinages remaining today.



The Beguinage has been very well restored, and we can still walk through the community of religious women, which looks somewhat like a tiny village. The houses are small and have very few windows on the ground floor, because Beguines liked to

keep their privacy. Currently I'm just passing through to reach the city center, but in the evening this place is great for romantic walks. For now, I'm heading north, and pass by the Dijlepark, a very small but pretty park built only recently between the two arms of the Dijle.

As the Dijle becomes almost impossible to follow now, I go west for a bit over the Janseniusstraat, and take a right onto the Kapucijnenvoer. The detour is deliberate, as this brings me to the Jardin Botanique, which is the oldest botanical garden in all of Belgium. The garden is small, but their collection is still enormous, and all the more beautiful in spring. In my first year in Leuven I stu-



died here during the second exam period. When the sun is shining and the libraries are packed, nothing is more soothing than studying between herbs and butterflies.

From here I could go north to St. Jacob's Square, where the church with the strange bell is located. I sometimes go there to visit my favorite store in Leuven, Demospel. As someone who is really into board games, a place where people are playing different games day and night is perfect. However, I go east towards the Parijsstraat because I need coffee. I pass by the anatomical theater, one of the last in the world still standing. It is here that the famous surgeon Andreas Vesalius taught medi-

cine in 1428. I drive into the Parijsstraat and settle at Koffie Onan for my coffee break.

After my coffee I cover the last few meters to the center, and end up at the Brusselsestraat. I'm a little early, so I head west for a bit and find the Dijle again. The Dijleterrassen are where the river is most visible, and there are lots of benches to sit and enjoy the stream. We can also find Fiere Margriet (Brave Margaret) here, the statue of a girl floating on jets of water. To this day she remains one of the most important icons for Leuven folklore, and her tale is definitely one I'll remember.

When I finally go to the Great Market to meet up with my friend, people are everywhere and nothing remains

of the peace and quiet I just came from. But a mixture of vibrant and quiet atmospheres makes life and Leuven interesting, so I enter the square and breathe the morning ambiance. The sun is shining as I pass student after student. I overhear a conversation about why there are too many deadlines, and I agree. But today, the deadlines can wait, if only just for a while.



Photo Report: Pop-up Weekend



