StuCom

Newsletter

March 2021

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Introduction

Dear CSDB students,

It is spring! This newsletter is entirely in a Spring theme, to let you enjoy the nice weather with us. We are all looking forward to better weather and being able to enjoy a drink at the cafe terraces. Hopefully the Covid restrictions will get better soon, allowing us to enjoy all of this even more!

This newsletter is stuffed with fun pieces for you to read. We have the returning column of Joost, where he tells us about his PhD and postdoc, but we also have an interview with our future coordinator, Lisa van Weert! Next to that, you get to meet two StuCom members: Farid and Nadine, and see what they are doing.

If you want to know more about what you want to do in your master's and career: check out our interviews with some CSDB students who did a profile.

With Covid and your studying together, it is possible you experience stress. Perfectly normal in these times! We have asked a stresscoach to help you out, and we have also gathered your stats on stress.

Science is also quite a big part of our lives. How are women doing in Science? CSDB student Carla wrote a great piece about that! In addition to that, our Stucom member Alberto wrote a piece on how robots may be taking over our paper writing in the future... strange, huh?

If you are looking for more stuff to enjoy, we have collected three international recipes for you, so you can enjoy some vacation at home, and you can make the puzzles together with that, so that your holiday feeling is complete.

Lots of stuff to enjoy and to read, so have fun!

StuCom 20'-21'
Alberto, Farid, Franka, Ireen, Laura, Nadine, Remco, Rosanne and Tessa

Meet the StuCom

Every newsletter, we will interview some of our StuCom members so you can get to know them a bit better. Next in line are Farid and Nadine!

Hi there! Who are you?
Farid: Hey everyone! My name is Farid Elcure Alvarez and I'm from Colombia.
Nadine: Hi, I am Nadine Aafjes. I am born and raised in Oostknollendam (whereof nobody knows where that is), it is a small village near Zaandam. Since 2018 I am living in Utrecht together with two roommates.

What is your StuCom function? And why did you choose this?
Farid: I share the secretary function of the StuCom with Tessa, she manages our email and I take minutes of every meeting. I like writing things down and I can type fast, so this function was made for me.
Nadine: I am part of the Seminar and Retreat committee. I chose those committees because I like to think about inspiring speakers, institutes and city trips.

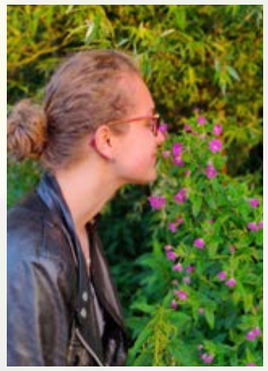
What brought you to the CSDB Master?
Farid: I did a bachelor in Life Sciences before and had a couple of courses and internships related to stem cells, which I enjoyed very much. Thus, CSND was at the top of my list because of their focus on stem cells.
Nadine: At high school I already knew that I really liked developmental biology. When I studied Biomedical Sciences in Utrecht I was starting to like it even more and my interest for genetics grew. So CSND was the best fit!

I have a few would you rather questions in store for you - are you ready?
Farid: I am still in my pyjamas, but I can do this!
Nadine: Always!

Would you rather have a vacation to a tropical island or the snowy mountains?
Farid: Tropical island all the way! Mostly because of the weather :P
Nadine: Without a doubt, a vacation to a tropical island. I really like the warm temperatures! Maybe it is because I never went on winter holidays, but I mostly like the snow when I look through the window.

Farid & Nadine

Would you rather always pipette perfectly, or have antibodies that always work great?
Farid: Antibodies that always work great will make life so much easier. I will get a student or an automatic pipette in that case haha
Nadine: I would want to always pipette perfectly. Most of the time precise pipetting is key and you do not always need antibodies. However, when you need them and they do not work it is really annoying.



Would you rather have all traffic lights you approach be green or never have to stand in line again?
Farid: Lines/Cues are more annoying than traffic lights, so I would rather never have to stand in line again.
Nadine: I would love to have all traffic lights I approach be green, that would save a lot of time and irritations. Besides, I sometimes really like to stand in line so I can think about what I want to get, like which flavour of ice cream.

Would you rather be an average person in the present or the king/queen of a large country 250 years ago?
Farid: Average person in the present. Don't know how much I would enjoy ruling a kingdom.
Nadine: I am really happy with being an average person in the present. I like to choose what I want to do myself and I don't think that is possible when I would be a queen. Moreover, women had far less rights 250 years ago so that is another reason I like to live in the present.

Thank you for participating! Do you have anything left to say to our readers?
Farid: Thanks for reading our newsletter! I wish you all a great start of the spring that hopefully it brings lots of fun, outdoor activities and more interactions with each other. Have a great day!
Nadine: I think we have never spend that much time with our roommates and, unless they are terrible for whatever reason, I would say enjoy that as much as you can! In my house we are really enjoying game, puzzle and Netflix nights. I would also say to enjoy cooking your meal and experiment with new recipes. Try for example the recipes in our newsletter! Stay safe and enjoy the spring!

StuColumn with Joost

As you may all know, our beloved Joost has decided to stop his work as a coordinator of CSDB as of next summer, and he will enjoy an early retirement. Joost has been there for students from the beginning to end, and we will miss him when he will leave! To show our appreciation for Joost as a coordinator, we asked him to write a column for the StuCom Newsletter. In the column he will give you insights of his career as a scientist, teacher, and coordinator.

In this episode, I will recount my adventures as a PhD student and postdoc. In the previous installment, I left off with my graduation ceremony in 1983, and shortly thereafter I started my position as a PhD student in the department of hematology at the Academic Hospital, which was then located on the Catharijnesingel. One of the first and most difficult challenges to me during the next 5 years was working with the technician who was assigned to me. You might think, what a luxury, a PhD student gets his own technician, but I found it difficult to figure out for myself what to do, let alone tell someone else what to do for me. She was an elderly lady who was used to doing things a certain way and I just hadn't learned how to be a good supervisor. Later, when I supervised students with their internships, I found that to be much easier and nicer. Anyway, the work posed its own challenges, because it relied on purifying enough coagulation Factor VIII from blood plasma concentrates to do experiments with. I studied the interaction between this clotting protein and a large multimeric protein called von Willebrand factor. VWF is produced in endothelial cells and blood platelets and plays a role in adhesion of platelets to the damaged vessel wall. I discovered that it also increases the half-life of FVIII in the circulation, mostly by protecting it against proteolytic degradation by an enzyme called activated protein C. Just as I had done during my internship in the same department, I spent a lot of time purifying proteins from plasma, a tedious and failure-prone process. In the end, I had to apply for additional funding to extend my time there, so I could do some more experiments. But I did get some nice results, and an abstract was selected for an oral presentation at a conference in San Diego in 1985. You guys have given many many presentations during your undergraduate and graduate studies, but I had never given a formal talk before. So seeing the huge

Joost's Early Days

ballroom in the convention center where I was to give my talk was quite scary. Perhaps the best part of the meeting was being introduced to 2 researchers from Oklahoma City, because this started a collaboration and led to 2 visits to their lab. No, really the best part was the hike I made afterwards, along a big chunk of the Pacific Crest Trail in the High Sierra. Ever seen the movie "Wild"? Then you get the idea.

Life as a PhD student in a lab with many fellow-sufferers was not very different from the way it is now. Long hours, missed parties and, for me, debilitating migraines (those are gone now, thankfully). I made 2 trips to Oklahoma City, about 2-3 months each. This is redneck country, the 'buckle of the Bible belt', as they call it. But the people were nice and the science fun. I got to go to the slaughter house to collect aortae from newborn calves, from which we cultured bovine endothelial cells. Gross! Also remarkable: I carried a thermos on the plane, filled with reagents and purified proteins, kept frozen with dry ice. The flight attendants even helped me refill the dry ice from the galley. Nowadays, you would never get that past security.

Bible belt, 1986 and 1987

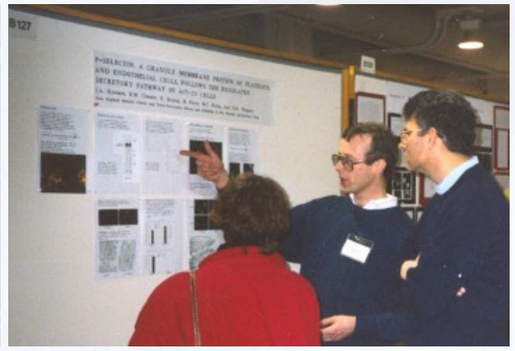
StuColumn with Joost

I presented at several more conferences, in Brussels, Madrid and Talloires, France. And I finally defended my thesis in 1989. Before I left for my postdoc in Boston, I worked in my old lab for a while to learn some new exciting techniques. This involved DNA, restriction enzymes, ligases, plasmids, bacteria and all that new stuff that was just being developed. One guy in the lab did something really strange: he would incubate a rack of Eppendorf tubes in a water bath of a certain temperature, stopwatch in hand, then transfer it to a different water bath set at a different temperature and then again to a third bath. After cycling like this for quite some time, he had miraculously produced a lot of DNA. Once in Boston, I properly mastered the molecular biology techniques, including site-directed mutagenesis and Sanger sequencing with 35S-labeled nucleotides.

PhD ceremony in 1989

The 2 and a half years in Boston were life-changing. Although again I worked my butt off, I found time to pursue my passions of mountains, music and photography. I immediately became a member of the Appalachian Mountains Club, climbed Mount Washington (twice) and several other 4000-footers in the White Mountains, took clarinet lessons at the New England Conservatory of Music and became an incessant visitor to concerts in Symphony Hall and several other venues in the area. The lab was a much more international environment than the one I had encountered in Oklahoma City. I hung out with colleagues from England, France, Italy, Israel, India and Australia. I got to go to conferences, and met up with fellow Dutch postdocs in New York, Los Angeles and Seattle. One of them is now the chairman of our GSLS Board of Examiners! Of course, the life-changing part is also because I met Cathy there, while making music in the mountains in New Hampshire. In 1992 I started my second postdoc, in the Wilhelmina Children's Hospital back in Utrecht, and a year later we got married.

Joost's Early Days



Left picture: Pipetting in Boston (Wagner lab, New England Medical Center)
Right picture: Presenting a poster in 1991. Yes, posters were just a set of separate pieces of paper.

About that second postdoc: Wow, what a culture shock that was! This was a lab where people went home at 5 PM, published in low-impact journals and spent lots of time drinking coffee together. I was happy to be back in Holland, but I struggled with the low energy of the lab. I did manage to publish (or contribute to) 13 papers during those years, though. My work first focused on the interaction between IGFs (insulin-like growth factors) and their binding proteins, and later shifted to the effects of glucocorticoids on the chondrocytes of the growth plate. Since this was an endocrinology lab, I became interested in hormones and their receptors. As a result of many reorganizations, this research was eventually abandoned and I ended up in a metabolic diseases department. That was when I started my new career in teaching, which by about 2004/2005 totally replaced my research activities. That's the story for next time...

Written by dr. Joost Koedam

Coping with Stress

We asked you guys on our Instagram-page (@stucom_CSDB) if and how you are experiencing stress. The responses show that many of you (sometimes) have to deal with a lot of stress - which is completely normal!

If you would like to check your mental health, get more information on what help you can get or how to cope with your stress, you can check out one of the following links:

https://caring-universities.com
Has a mind-health check, information and support possibilities.
https://www.rickhanson.net/being-resilient-during-coronavirus/
Discusses stress management and enlarging your resilience.
https://students.uu.nl/nieuws/leergang-studenten-faculteit-geneeskunde
Only in Dutch; a course in “Stilstaan. Ontspannen. Zijn.”.

To see what Nynke or her colleagues can help you with, visit the website https://studyguidelifesciences.nl/advice-and-counselling!

Nynke Okma

Stressed in these turbulent times? It’s not just you!

Last week I participated in a training with over 120 people (such as therapists, coaches, doctors, teachers and consultants) from all over the world. We explored the impact of the pandemic on ourselves and the people we are working with. I then realized that, amongst others, the unpredictability, uncertainty, fear of the virus and its impact, isolation, monotony, and repetition are taking an emotional toll on everyone - although often unconsciously.

Many of us, both students and employees, are experiencing abnormal levels of stress since the Coronavirus sweeps the globe. Either making us feel nervous, anxious, frustrated and irritable. Or the opposite, making us feel weary, depressed, and bored. These are very normal reactions of our (hard working) nervous system to the changing circumstances and our limited control to influence this. However if we do not bring back our system to a more balanced state this can have a severe impact on our (mental) health & diminishes acces to our prefrontal cortex, the part of our brain that we actually need to come up with new solutions.

Recognizing, allowing and normalizing our reactions also opens us up for exploring how we can deal with this; how to calm down our nervous system, find back our capacities and resources to take control over what we can? Curious how you can make this shift, or need help to come up with practical solutions? My colleagues and me are happy to support by advice, coaching and workshops (see the website for the possibilities and the links on the previous page), and keep an eye on the agenda (which is in Dutch) to stay informed about trainings like Tackle Stress & Resilience. If you have any other ideas for support: let us know.

Let’s work together to stay (mentally) fit!

Written by Nynke Okma, faculty coach

Lisa van Weert

Hi Lisa! We are pleased to welcome you to our CSND family and have you in our newsletter. We would like to start with a few questions about your carreer.
Hi StuCom, thank you for welcoming me. I am very excited to have joined the family and hope to get to know the many of you soon!

We learned from your introductory email that after your PhD you worked as a scientist at the Pivot Park Screening Centre before becoming our new Master's Coordinator. What motivated you to come back to academia in an educational setting?
When working at a company, I was missing the academic environment that stimulates and gives you the opportunity to get to the bottom of things (quality above quantity!). In addition, helping and teaching others is something I do naturally, and interacting with students and seeing them grow has always been very motivating and rewarding to me. A coordinating and advising role suits me well, and I was lucky to find the current position in which I may guide you all through the master's program.

Which particular subject of the CSND master makes you excited? And why?
Genetic aspects (which actually got lost from the program's name) are the most related to my PhD topic and anything that has to do with DNA has my interest. During the introduction course last September and in departmental meetings I have seen many other interesting topics and I am eager to learn more about the various research going on in cancer, stem cells and developmental biology.

What has surprised you the most ever since you started working together with Joost as a CSND Master's coordinator?
The diversity of tasks is even greater than I anticipated. Also, I am happily surprised to see how much you students appreciate Joost! I would love to create a similar relationship.

Who has inspired you throughout your career? And why?
During my BSc/MSc and PhD studies, I met many dedicated scientists in courses, internships and at scientific meetings. A couple of teachers have inspired me the most: in molecular genetics class (Mathieu Noteborn), my promotor (Onno Meijer), and even my high school physics teacher (Patrick van Aarle). Each of them have set a great example, telling about their subject so enthusiastically.

The new CSND coordinator!

Next, we would like to know a bit more about you as a person. We prepared multiple (random) questions, we hope they do not take you by surprise!
Let me see if I can find some proper answers.

What do you like to do in your free time?
I like to cook, enjoy my family (husband Paul and sons Mick & Jurre), and watch Scandinavian shows. For some exercise I join a boot camp group, and during this pandemic we have been doing lessons via zoom (instead of in the fresh air). Going for dinner in a restaurant and attending concerts would be something I look forward to when the COVID situation improves.

What was the worst haircut you ever had?
Actually, I have never dyed my hair and always just get it cut with some layers. When I was in primary school I used to brush my hair (resulting in rather "poofy" hair), but later I learned that this is not working with the curly hair I have.

What did you eat for breakfast?
One sandwich with cheese and another one with salmon salad.

Best book you've ever read?
The Rosie project.

Are you an early bird or night owl?
I am more of a night owl, although I can also fall asleep on the couch in the middle of a movie.

Lisa van Weert

What's the best piece of advice you've ever been given?
Not necessarily advice that I got from someone, but the question made me think of this song (Getting to know you) that I heard on a Broadway musical (The King and I) during a USA-trip:

It's a very ancient saying,
But a true and honest thought
That if you become a teacher
By your pupils you'll be taught

In this edition of our Newsletter we touch upon managing stress and we would like to ask you a couple of questions about it. How do you personally deal with stressful situations?
For me it helps to relax outside (biking, walking in the woods), and make sure that I also have some alone time once in a while to process whatever is going on. Enough sleep and healthy food is always important.

Do you have any tips for avoiding stress in the lab?
Communicate your expectations clearly, and do not hesitate to ask for help if you are somehow stuck.

How do you manage your work-life balance?
That is an interesting question, because with two small kids at home ánd starting a new job, I work on finding a new balance at the moment. Not planning too many things and learning to say no helps, because it is simply not possible to keep everybody satisfied.

Thank you for sharing more about yourself with us, it was great having you in our newsletter. Is there anything else you would like to tell to the current CSND students?
Keep up the good work, you have been doing a great job in this pandemic situation!

Celebrating Women in Science!

Promoting women rights and gender diversity has helped us shape our society towards equality and fairness. The 8th of March, International Women's Day has served as a date to commemorate all efforts of striving for women rights. Joining this cause, the Rios Dream3DLab in the PMC organized a seminar on March 8th 2021 to showcase what it means to be a Woman in the Scientific Community and the value of Gender Diversity in Science.

Four guest speakers joined the seminar to share their different career paths with over 140 participants. Each speaker told us about their career path, who empowered them during their career, how they managed their work-life balance and what women has inspired them. Dr. Veerle Fleskens, a business developer at the Oncode Institute, shared her process of making the decision of becoming a business developer. She told us that one of her advisors encouraged to reflect on where she was in her career and to not be shy away from adventure just because she doubted her qualities. Prof. Linde Meyaard an immunologist and PI at the UMCU said her mentors helped her push herself to her limits regardless of her gender, which was very valuable for her career. Dr. Anne Rios, a imaging expert and junior PI at the PMC emphasized that her family is most important for her despite her immense passion for her work, for which she plans to share a lab with another PI. Finally, Dr. Ellen Wehrends, a scientific writer at the PMC felt like the freedom her lab gave her to focus on writing during her PhD and postdoc was key to discovering her passion for scientific writing.

Lastly, the StuCom wanted to voice the opinion of CSDB students on gender diversity in the scientific community. For this, we invited the first year CSDB student Carla Rios Arceo to address current issues women face in the Science, Technology, Engineering and Mathematics (STEM) field. You can read it on the next page!

Women in STEM

Why so few? The gender gap in STEM fields.
Historically, science fields have been perceived as more masculine, and less than 4% of Nobel Prizes in STEM have been awarded to women. Even though the situation has improved enormously in the last century, there is still a gender gap in math and science jobs.

Nowadays women constitute only 28% of the workforce in STEM fields. The wage gap between men and women in STEM is around $15000 annually, and even though nearly 80% of the healthcare staff is women, only about 21% of health executives and board members are females. The gender gaps are even higher in some of the fastest-growing and highest-paid jobs, like computer science and engineering.

However, one can argue that in modern western societies, women are no longer discriminated against in science. In fact, it seems that we have – fortunately – grown out of the idea that there are cognitive biological differences between men's and women's brains. Most of my female colleagues will luckily say that they have never been rejected from a job based on their gender. So, then… Why so few? What are the causes of this gender gap in STEM?

The root and perpetuation of this gender disparity is systematic. Since an early age, girls are tracked away from science and maths throughout their educations. Their abilities in maths are underestimated already at school, and their training and opportunities are therefore limited when it comes to choosing STEM fields as adults. This is known as the confidence gap.

This inequity is further maintained by the lack of female role models in science. Young girls are exposed to very limited examples of female scientists in books and media, and even fewer role models of black women and other minorities. Furthermore, because of fewer women being trained and inspired to study and work in STEM, these fields maintain maledominated cultures that are unattractive and non-supportive to women and minorities. As a consequence, fewer women decide to enter these fields and we see fewer female role models. The cycle continues.

Carla Rios Arceo

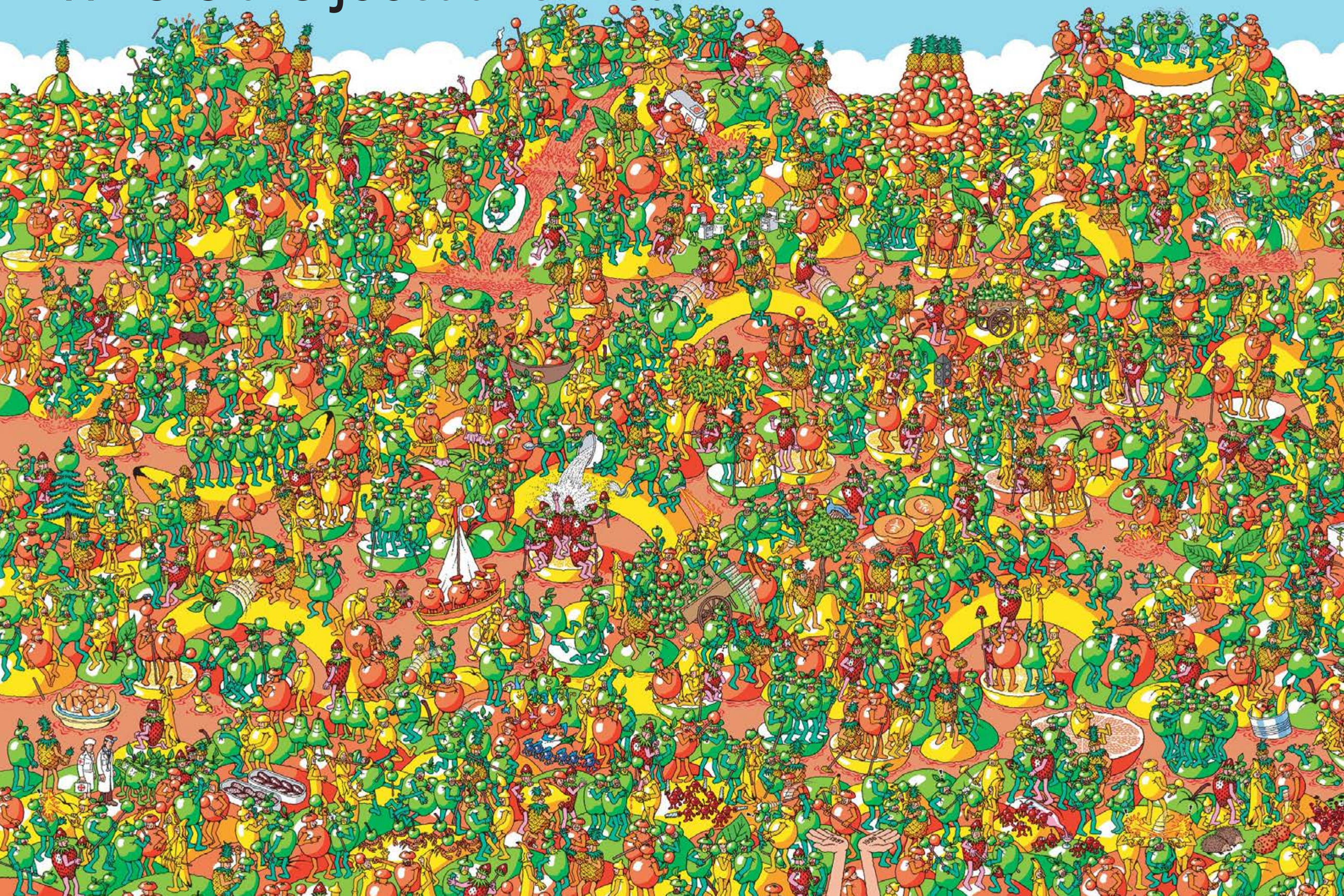
What can we do to close the gender gap?
As a society, we need to give young girls the skills and confidence to succeed in math and science, for example by raising awareness to parents to encourage their daughters as much as their sons. Strong and visible role models of women in STEM should be emphasized in school and university.

Moreover, we can work towards breaking the glass ceiling, by improving job hiring, retention and promotion of women in science and provide inclusive environments. These should encompass pay equity; strong family policies (to avoid discrimination against mums); anti-bias training; mentorship and networking opportunities; and strong anti-discrimination and anti-harassment policies.

As individuals, I encourage you to support your female colleagues and friends. As a man, I encourage you to seek for more information about your own privileges and what you can do to offer more equal opportunities to your female counterparts. As a woman, embrace the challenges you have in front of you and keep pursuing your dreams. Never allow others to diminish your work.
You are worth it, you have the skills and you can do it!

Written by Carla Rios Arceo

Where are Joost and Lisa?!



Profile Experiences

In your master's, there is 33 EC available for you to follow a profile. This profile can be a research profile, where you do a six-month internship, but in the past few years the choices for other profiles have been expanded. Now there are nine profiles to choose from, each in their own specific direction. To name them all: Applied Data Science, Bioinformatics, Communication, Complex Systems, Education, Management, Research, Life Sciences and Society, and Translational Life Sciences. What are these profiles and how are they? In this newsletter we have asked three CSDB students/alumni to share with you their knowledge and experiences on the profiles. For information about the other profiles, check out the GSLS study guide!

Niels Tjoonk - Communication Profile

Tell us who you are, what profile you're doing/have done, and if so, what your job is now?
I'm Niels Tjoonk, UU and CSDB alumnus and ex-StuCom member. I followed the profile of Science Education and Communication (SEC) and am now a programme maker (event curator) and presenter at Studium Generale UU.

Can you explain in a few sentences what this profile is about?
Two paths cross in this profile. You can focus on science education research, e.g. investigating the effectiveness of education innovations in high school. You can also focus on science communication, e.g. design a science event together with a museum or zoo. You learn about the theory behind science education (innovation) and about science communication, and are allowed to perform hands-on education or communication.

What made you choose this profile?
That's a bit serendipitous. I designed and started up the Utrecht Science Free Tour in my free time, and found out that I could use the SEC-profile to better ground the tour in science communication literature and get ECT for my efforts.

Niels Tjoonk Communication Profile

What do you like most about this profile?
You get 20 ECT for a design project, which you can perform at a museum exposition (e.g. NEMO), magazine (e.g. Kennislink or New Scientist), a zoo (think about informative signs), a YouTube channel or your own project -- whatever you can make work.

What do you think are advantages and disadvantages of the profile?
++ You'll experience a science communication or education workplace and environment.

-- Though the teachers involved put in a lot of work and are very involved with the students, I'd say that the quality of the education is a bit lower than most CSDB courses. The difference is this: at the best CSDB courses, you're at the frontier of an established science domain and you're reading topical, high-quality papers. The book at the design course was authored by the teacher and not yet peer-reviewed by other experts, and the social science domain of 'science education and communication' you're presented in the profile seems less established.

Taken together, the profile's value depends mainly on the quality of the internship. But hey, that's the same for the second research internship.

Looking back, would you have preferred to have done a research profile?
No, because I've become a science communicator now and the information from the research profile has helped.

Has following this profile helped you in finding what you are doing now in your career?
Only indirectly. My additional internship has helped me get my job (at the internship address, Studium Generale Utrecht). I could only find the time for this additional internship in combination with this profile, because doing the internship in combination with a second research internship was impossible.

Max Tak
Translational Life Sciences Profile

Max Tak - Translational Life Sciences

Tell us who you are, what profile you're doing/have done, and if so, what your job is now?
Hi, I am Max and I'm currently enrolled in the Translational Life Sciences profile.

Can you explain in a few sentences what this profile is about?
The profile is about learning to become a life scientist that tackles a real-world problem with direct solutions. During the profile, you actually get to come up with such a solution yourself for a client that can range from a doctor at the UMC, to an independent applied scientific research organization like TNO. First off, you and your team of three or four students need to get a clear view of the problem as a whole and consequently zoom in on where you can make a difference. Once you have a specific problem definition, you can start looking at solutions and choose which one you want to pursue. You will have to pitch this solution in a Dragon's Den meeting, yes, like the one on tv. If you survive the onslaught of the Dragons, you get to actually execute the solution and contribute to resolving a real societal issue.

What made you choose this profile?
I wanted to explore a career path which combines the analytical parts of research with team work and tackling concrete issues that directly affect society.

What do you like most about this profile?
That you get to work for an actual client. We work for TNO and it has been really interesting to get more perspective on how such an organization operates.

What do you think are advantages and disadvantages of the profile?
++ It broadens your Life Sciences Master and gives you more insight into differing career opportunities outside of regular academia.
-- The projects you can choose from are limited and thus it's likely that there is not a project which fully fulfills all your wishes.

Veerle de Goederen
Complex Systems Profile

Looking back, or nearing the end of your profile, would you have preferred to have done a research profile?
Currently, I am two months into the project and I am glad I started it, because I want to explore this part of life sciences before I choose which career path I will follow after my masters.

Has following this profile helped you in finding what you want to do next in your career/are doing now in your career?
It's too early to tell, but I think following this profile will allow me to compare the PhD track to translational sciences and, in the end, make a well-informed decision.

Veerle de Goederen - Complex Systems

Tell us who you are, what profile you're doing/have done, and if so, what your job is now?
I just finished the CS&D Master, where I did the Complex Systems profile. I'm about to start a PhD at ETH Zurich (Switzerland), where I will work on salmon muscle stem cells for cultured meat production.

Can you explain in a few sentences what this profile is about?
The complex systems profile is all about trying to understand biology using computational and mathematical models. For example, think of a 3D cell model that mimics tumour growth, a gene network model that predicts cell fate decisions, or a reaction-diffusion model that helps you understand branching patterns during organ development.

What made you choose this profile?
I really enjoy mathematics and programming, and wanted to see if I could use these skills during my research. With cell biology I sometimes feel like I get lost in all the molecular details. Modelling can be a great tool to help you understand a biological process on a deeper level, and can also point you in new directions for wet-lab experiments.

Profile Experiences

What do you like most about this profile?
The Computational Biology course from Paulien Hogeweg. This woman is a living legend! She is one of the people who first coined the term bioinformatics back in the 70s, and I think she has a unique approach to research.

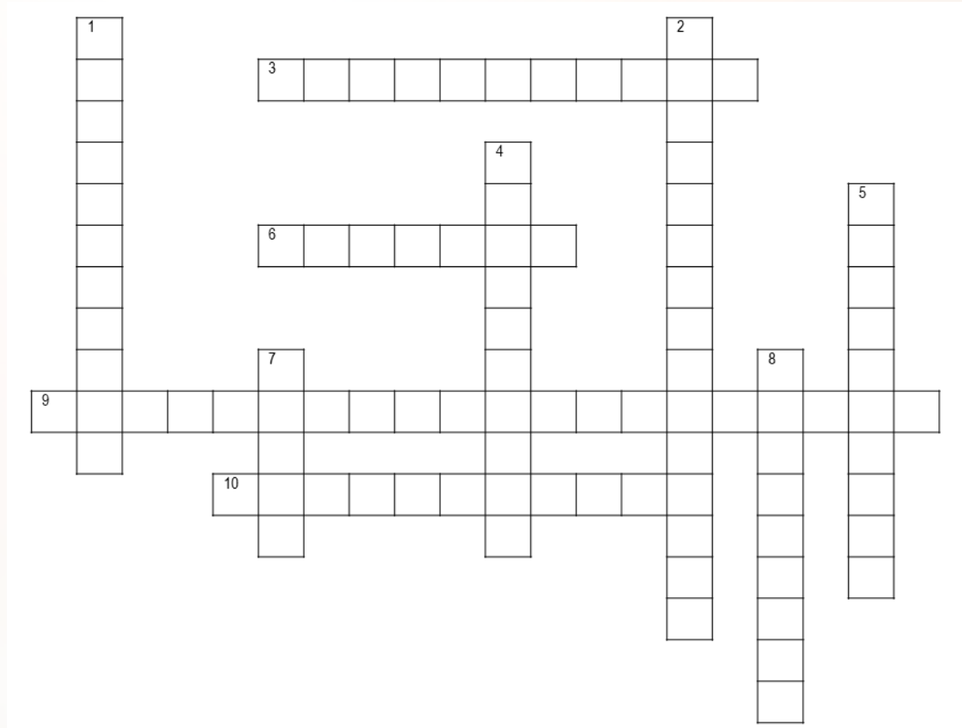
What do you think are advantages and disadvantages of the profile?
++ During the profile I learned to think about biological questions in a systematic, abstracted way. I now know how to interpret modelling studies and can see opportunities for how modelling can be used to complement wet-lab research.
-- If you choose this profile, I recommend sticking with the biology-specific profile courses. I made the mistake of signing up for an “interdisciplinary”, “introductory” course about complex systems. It turned out all students there were mathematicians and physicists! Suddenly I was asked to construct mathematical proofs and build computational models from scratch. I’ve never been happier with a 6!

Looking back, or nearing the end of your profile, would you have preferred to have done a research profile?
No. I chose the extended profile (12 EC courses + 33 EC research project), so I still got to do a 6-month research project.

Has following this profile helped you in finding what you want to do next in your career/are doing now in your career?
During the profile I realized that I want to keep doing computational work (it’s so interesting!) but not full-time (I miss the lab!). I now found a perfect PhD position where I get to combine computational and wet-lab research.

Stem Cells Crossword Puzzle!

Did you follow the Introduction to Stem Cell course before? Or are you simply a stem cell enthusiast? Then this puzzle will be a piece of cake for you. In this edition of the StuCom Newsletter we will test your knowledge of stem cells with this crossword puzzle. Find out how much you really know about stem cell research!



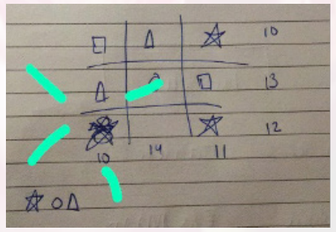
Across
3. _____ Cloning produces embryonic stem cells for experiments aimed at creating tissues to replace injured or diseased tissues
6. Process that can be used to produce genetically identical copies of a biological identity
9. process in which one mature somatic cell transforms into another mature somatic cell without undergoing an intermediate pluripotent state
10. A type of stem cell capable of giving rise to several different cell types

Down
1. Growth of cells in vitro in an artificial medium for experimental research
2. The process of creating specialized cells from unspecialized stem cells
4. Hematopoietic stem cells are blood forming cells located in _____
5. A 3 to 5 day old embryo that can give rise to the entire body of the organism
7. Non embryonic stem cells are also called
8. Types of cells that have the potential to develop into many different cell types

Previous events

Online escape room

February did not only bring some snow, it also brought murder! On Wednesday, the 17th of February more than 25 CSDB students boarded a plane to uncover the mysterious murderer of Mr. Avery Stone. During our second activity of the year, the students were invited to an online murder mystery themed escape room called “CSI: Grounded”, where Mr. Avery Stone was murdered mid-flight and the CSI asked for their help to find the perpetrator. The part-time detective, part-time CSDB students were thrilled to solve the mystery.



After an introduction accompanied by Joost’s together mode backgrounds we boarded a real airplane in Teams. Detectives sitting next to each in the airplane teamed up in groups of 8 people to solve the crime. There were several pieces of evidence in the escape room that could only be solved sequentially. For example, finding secret messages in a menu, looking for totally not obvious clues during police interviews and looking for the accomplice of the murderer. Each piece of evidence led the detectives to a new clue, which finally guided everyone to solve the mystery.
We initially doubted if Joost Koedam was the culprit because of his suspicious behaviour during the welcome to the activity.

However, we learned the truth ... Mr. Avery Stone was killed by one of the aircrew members, who sought REVENGE for her father’s death. In an amazing feat, Business class detectives were the first ones to finish, with Economy class second, followed by First class and lastly, Premium class.
The StuCom was happy to welcome everyone to another exciting event, we would like to thank you for participating and we look forward to seeing you another time.
Congratulations to all the detectives, the case is closed!

Written by Farid Elcure Alvarez

Previous events

Seminar Dr. Joppe Nieuwenhuis

The second StuCom seminar took place on Wednesday February 3rd with Joppe Nieuwenhuis as our speaker. After some technical issues (oops) that were gladly quickly fixed, we listened to his great and inspiring talk!

Dr. Joppe Nieuwenhuis currently works as Director Business Development with Batavia Biosciences in Lausanne, Switzerland. Before this, he was a CSDB student and did a PhD at the Netherlands Cancer Institute, Amsterdam.
He told us about the choices he made in finding a PhD: he wanted something technology driven, with a young PI in a small lab but with a lot of money ;) The first years of his PhD did not give great results, but after all his 10 (!) hour working days lead to the design of successful functional genetic screens and some high impact papers. After his PhD Joppe decided to leave the academia and to work for Batavia Biosciences. This company works on translation of biopharmaceutical ideas to clinical products. His work includes a lot of talking with other companies and clients (pre-COVID mostly on conferences) to make his company work better.

Some career insights Joppe gave us are:

- ‘Sales office’ can just be a telephone somewhere abroad to make the company look more international
- Deal-making is all about making it personal
- Transitioning from academia to (biotech) business was friendly for him: the people are friendly and have a similar background
- There is amazing science outside of academia
- When looking for a PhD go drink coffee with several groups and PIs to get to know them and their work
- Ask lab members or a PI about how much money the lab has: more money can be positive for your PhD
- A young PI during your PhD can be stressful as he/she still needs to prove him/herself
- PhD’s in the Netherlands are really good!

All in all, Joppe gave a very interesting talk and we are happy to have had him as our speaker. We look forward to seeing you at our next seminar!

Written by Ireen Kal

International Recipes

An amazing thing about the CSDB master, is the diversity in nationalities of the students. We took the opportunity to ask the Non-Dutch students to share with us their beloved recipes, so everyone can try them! Enjoy the recipes of three of our CSDB students.

Tinginys - Lithuania

From Severina Pociunaite

Ingredients

400g of biscuits (plain)/ or if you have some, use a tree cake (a very Lithuanian thing)
400g (one can) of sweetened condensed milk
200g of butter
5tbsp of cocoa

Method

1. Crush the biscuits into chunks
2. Melt the butter over medium heat, add the condensed milk and the cocoa powder while stirring.
3. Simmer for a couple of minutes until the mixture thickens.
4. Pour the mixture onto the biscuit chunks. Mix so that everything is coated.
5. Dump the mixture on a cling film or plastic bag and form a sausage shape by pressing it, so that there are no empty spaces left inside.
6. Put the cling film-wrapped sausage into the fridge for at least 6-8 hours or overnight
7. Cut the Tinginys in slices and enjoy!

Tinginys - Lithuania

Authentic Greek Moussaka

From Georgios Dimitrios Chatzoglou - Chef Akis Petretzikis

Ingredients

3 potatoes
5-6 tablespoon(s) olive oil
1 onion
2 zucchinis, medium
2 eggplants
thyme
salt
pepper

For the ground meat

1 onion
2 tablespoon(s) olive oil, for sautéing
1 clove(s) of garlic
3 pinches granulated sugar
1/2 teaspoon(s) nutmeg
1 level teaspoon(s) cinnamon
1 tablespoon(s) tomato paste
500 g ground beef
400 g canned tomatoes
salt
pepper

For the béchamel sauce

100 g butter
100 g all-purpose flour
750 ml milk, 3,5%
pepper, ground
1 pinch nutmeg, ground
100 g parmesan cheese, grated
3 egg yolks

Method

1. Place a deep pan over high heat. Add the sunflower oil and let it get hot.
2. Peel the potatoes and slice them into thin rounds.

Moussaka - Greece

3. Slice the eggplants and zucchini into thin rounds and fry in a separate pan for 5-10 minutes.
4. Remove with a slotted spoon and transfer to a baking pan lined with paper towels.
5. Allow to drain from excess oil.
6. For the ground meat
7. Place a pot over high heat and add the olive oil.
8. Coarsely chop the onion and add to the pan.
9. Finely chop the garlic and add to the pan along with thyme and sugar. Sauté for 2-3 minutes until they caramelize nicely.
10. Add the ground meat and break it up with a wooden spoon. Sauté until golden brown.
11. Add the tomato paste and sauté so that it loses its bitterness.
12. Add the chopped tomatoes, lower heat and simmer for 5-10 minutes until the sauce thickens.
13. Remove from heat and add the parsley and coarsely chopped basil. Season with salt and pepper.
14. For the béchamel sauce
15. Place a pot over medium heat.
16. Add the butter and let it melt.
17. Add the flour and whisk until it soaks up all of the butter.
18. Add the milk in small batches while continuously whisking so that no lumps form.
19. As soon as the béchamel sauce thickens and bubbles start to form on the surface, remove from heat.
20. Add the nutmeg, salt, pepper, 100 g parmesan and 3 egg yolks. Whisk thoroughly.

Tortilla - Spain

To assemble:
1. Preheat oven to 180* C (350* F) Fan.
2. In a 25x32 cm baking pan, spread a layer of potatoes, cover with a layer of eggplants and top with a layer of zucchini. Season in between layers.
3. Add 2-3 tablespoons of béchamel sauce to the ground meat mixture and mix. Spread the ground meat over the vegetables.
4. Cover with the béchamel sauce, spreading it evenly and sprinkle with 50 g of grated parmesan.
5. Bake for 35-40 minutes.
6. When ready, remove from the oven and allow to cool.
7. Serve with fresh herbs and olive oil

Tortilla española (spanish omelette)

From Carla Ríos

Ingredients
300g of potatoes
1 onion
olive oil
5 eggs
Fresh parsley (optional)

International Recipes

Method

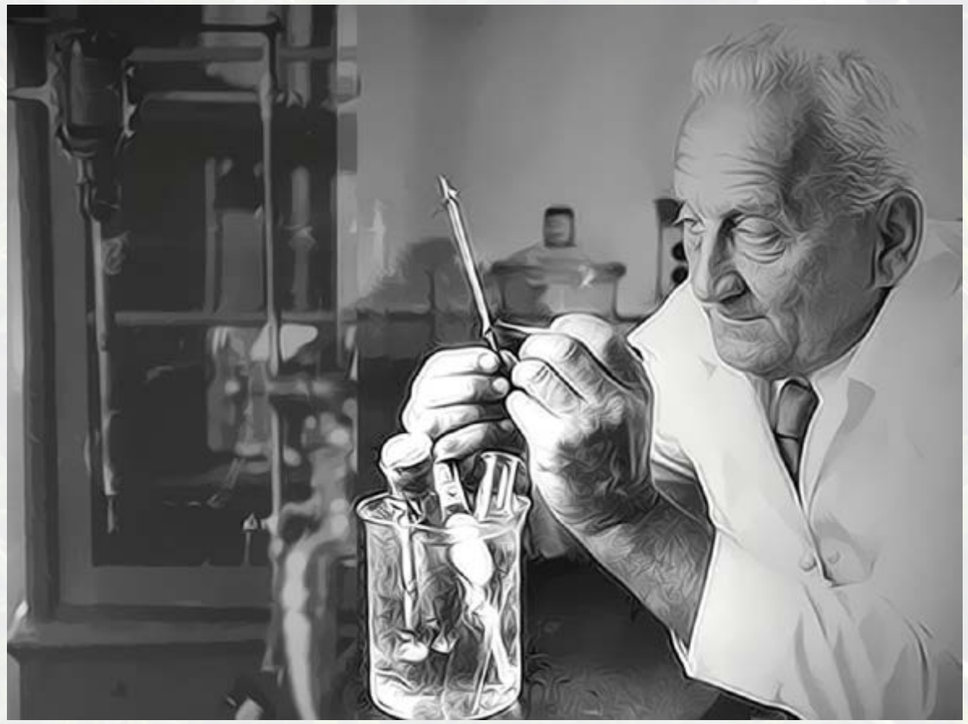
1. Peel the potatoes and carefully cut them into thin slices.
2. Peel and finely slice the onion.
3. Drizzle 2 tablespoons of oil into a small frying pan over a medium heat, then add the onion and potatoes.
4. Turn the heat down to low and cook for 25 to 30 minutes, or until the onions are turning golden and the potato slices are cooked through. It is key that the potatoes do not cook fully. You want them just a bit raw because they will continue cooking with eggs.
5. Crack the eggs into a mixing bowl, season with a tiny pinch of sea salt and black pepper, then whisk together with a fork.
6. When the onions and potatoes are done, remove the pan from the heat and carefully tip them into the eggs.
7. Add fresh parsley to the mixture. Transfer the mixture back into the frying pan and place it over a low heat. Cook for around 20 minutes, or until there's almost no runny egg on top. Do not let it cook for too long or it will become dry!
8. Use a fish slice to slightly lift and loosen the sides of the tortilla. Carefully flip the pan over a dinner plate and tip out the tortilla, then slide it back into the pan and cook for another 5 minutes, or until golden.
9. Take out the tortilla onto a serving plate, and here you go!

¡Que aproveche!

Find the Quote!

Lacking inspiration? Find out the quote this amazing scientist has in store for you to lighten up your week. In this quote, each word will be encoded as a combination of emojis and letters. We will do more quotes in the next newsletter!

– Albert Szent-Györgyi



Science

Recently a new language generation model, called GPT-3, has been unveiled by OpenAI, a non-profit that develops AIs. GPT-3 is the newest frontrunner in the race to build language models capable of reading and writing like we do. GPT-3 can read and write text, including poems, satire, stories, computer code (while we struggle with R) and even answer questions. Tools such as this are becoming increasingly common, including in writing and evaluating companies quarterly results, in translations (think Google Translate), news stories, and are being trialed in the legal field for preparing briefs.

Language model are a specialized application of neural networks, a machine learning method in which the nodes of the networks are adjusted and connected - with no human input, hence machine - to maximize the fit of the statistical model to the data, in this case predicting which words come after the previous one, hence "learning". Think of the autocomplete function of your browser, but instead of recycling frequent questions it's writing an entire original essay with human-like structure, narrative, arguments, figures of speech. While we could not get GPT-3 to write this article for us like the Guardian, we can include some of its satiric "thoughts" on science (more available at gwern.net)

"Science"
A complex web of data, opinions, lies, and errors, now considered the most important (because most expensive) technology in the modern society. To remind you of this, you will frequently see scientists and editors use the word, claim to do something for the sake of science, or see it used as an adjective.

"Researcher"
[noun] A form of modern industry based on a mix of small molecules of grant money and arbitrary experimental methods.

"Cite"
[verb] To refer to a paper or journal as a source for support, when in reality you have never read it and did not understand it.

Written by Alberto Griffa

Are robots going to write our papers?

You might be convinced by now that GPT-3 is not just an highly advanced piece of technology, but maybe also a tool we can turn writing papers to. But the shiny facade of witty remarks and engaging prose hides that these models are just, in the words of its critics, "stochastic parrots", merely regurgitating words, with no understanding nor reasoning behind it, "a mouth without a brain". For example, GPT-3 can sometime answer that "A pencil is heavier than a toaster" and, more worryingly, it replied, "I think you should." to the question "Should I kill myself?".

Clearly, GPT-3 cannot be trusted to do any job that requires empathy, reason or just basic common sense. Thankfully for us, scientific writing and science in general quintessentially require these qualities, for which there is no easy way for machine to learn.

StuColophon

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This StuCom Newsletter was written and designed by Farid Elcure Alvarez, Franka de Jong and Tessa Vreeman, unless otherwise specified.

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