

Events & meetings

What	When	Where	More information
International European Light Microscopy Initiative Meeting	22-25 June 2021	Online	https://www.elmi2021.org/
DutchBiophysics 2021	11 and 12 October 2021	Online	https://www.nwo.nl/en/meetings/dutchbiophysics
Dutch Chromatin Meeting	12 November	Nijmegen	https://nvbmb.kncv.nl/chromatin

Meetings

Open Platform Meeting Physics of Life On May 31 a couple of biophysicist tuned in to attend the first Open Platform session that was held independent from the DutchBiophysics conference. We have been updated by two NWO employees, who gave us an update about the Building Blocks of Life Programme and the National Growth Fund. More information was provided about the processes of such large initiatives and the community discussed their role in connecting researchers within the community to establish political weight in order to lobby at a political level. The overall conclusion was that your network is key. Both with each other, with industry contacts, but also keep in touch with NWO. To help you establish new industry connections NWO also organises a session during DutchBiophysics 11 October 'Teaming up with Industry'.

Funding updates

Growth Fund Until 31 May ideas could be submitted¹. These are now published. Special attention for our community to idea #22: [biotech booster](#). Ministries will prepare full proposals of a subset of these ideas together with experts and organisations. The deadline to submit a full proposal is 31 October.

¹ <https://www.nationaalgroefonds.nl/over-het-nationaal-groefonds/hoe-werkt-aanvragen>

New appointments, grants, prizes, and other news.

- The David Dulan lab moved to VU Amsterdam²

Vacancies

Call for new committee members

The Advisory committee Physics of Life (PoL) is looking for new committee members. Are you interested in the both the scientific and policy developments important for the biophysics field and would you like to represent your discipline? Submit your CV and short (max. ½ A4) motivation to ResearchCommunity-PoL@nwo.nl. The members will assess the applications and aim for a balanced committee, in terms of expertise, affiliation, and gender. If you have questions about what to expect from being a committee member, please send us a message or give us a call.

<https://www.nwo.nl/en/physics-life-pol>

Deadline application: 16 August

Start appointment: 1 January 2022

New colleagues

Kristin Großmayer (TUD)

I first visited the TU Delft campus during the Quantitative BioImaging conference at the end of my PhD. Delft, the city of van Leeuwenhoek - pioneer of cell and microbiology, felt like the right place to discuss new imaging techniques and biological findings.

I studied at Heidelberg University since it was one of the few in Germany that offered a specialization in Biophysics. During an exchange year at Cornell University, I fell in love with single-molecule imaging. I worked with transcription factor DNA biosensors and followed my interest in quantitative microscopy during a PhD at the BioQuant in Heidelberg. I exploited photon-antibunching – a fundamental quantum property of fluorescent dyes – to establish a method for counting molecules for quantification in biological systems and material science. When I was reaching for first experiments in cells to analyze clustering of membrane receptors, I realized I was limited by the conventional resolution of confocal microscopy. Thus, in my postdoc at EPFL in Switzerland, I became an expert in super-resolution and 3D multiplane imaging. My main interest is in super-resolution approaches based on single-molecule imaging such as localization microscopy and super-resolution optical fluctuation imaging (SOFI). We are always on the quest to learn more about the underlying sample than just producing an image at higher spatial resolution. As a Horizon 2020 Marie-Curie fellow, I also discovered the advantages of quantitative phase and collaborated with neurobiologists. In February this year, I started as assistant professor at the Department of Bionanoscience and the Kavli Institute of Nanoscience Delft. My lab develops microscopy and analysis tools, establishes new classes of fluorescence probes, and applies them to address relevant questions in molecular and cell biology like neurodegeneration. After all, imaging live cells at high spatial and temporal resolution remains a formidable challenge. I love to spend time outdoors with my family and we are still discovering Delft and the Netherlands. I am looking forward to immersing myself into the Dutch Biophysics community and to delve further into the Physics of Life!



Assistant Professor

TU Delft / Department of Bionanoscience; Kavli Institute of Nanoscience; Faculty of Applied Sciences

² <https://daviddulinlab.com/>

Louise Jawerth (LEI)

Louise Jawerth recently joined Leiden University as an assistant professor of physics in the soft and biological matter group. Her research focuses on uncovering the physical principles that govern how small-scale processes give rise to large-scale bulk behavior in important biological phenomena. Currently she uses this approach to study biological proteins which condense out of solution and form small liquid-like compartments called protein condensates. Since their recent recognition, protein condensates have been discovered in myriad important biological processes which has led to a paradigm shift in modern cell biology. Furthermore, it is becoming increasingly clear that the material properties of the protein condensates are key for their proper function in vivo and that aberrations of these properties can lead to disease. Through in vitro work, material properties are still being discovered; however, thus far, it is already known that these



protein condensates exhibit a broad diversity of intriguing features, such as glass-like aging, growth of well-ordered fibers, ultra-low surface tensions, etc. Although approaches developed to describe synthetic polymers work relatively successfully to predict some material properties, much of the diversity of material properties arises from the intricate amino-acid sequence only achievable in biological proteins and are not well-described by existing theories. The focus of Louise Jawerth's research is to uncover how microscopic features, such as those specified by amino acid sequence, give rise to this diversity of material behaviors in protein condensation. This is a very exciting direction for soft condensed matter physics but is also important for our understanding of how biological systems can harness similar principles to achieve specificity. Her group uses quantitative microscopy along with the development of novel experimental tools that allow the quantitative manipulation and measurement on the micron-scale.

Before her position at Leiden University, Louise Jawerth studied biopolymer networks at Harvard University (Cambridge, USA) where she received her PhD in Physics. Subsequently, she moved to Dresden (Germany) where she investigated protein condensation as an ELBE post-doctoral fellow in the groups of Anthony Hyman and Frank Jülicher shared between two Max-Planck-Institutes.

Granted projects NWO

Vici 2020³

Sequencing proteins one molecule at a time using ultra-accurate fluorescence microscopy

Dr. C. (Chirlmin) Joo (m), TU Delft

Protein sequencing is important in fundamental sciences and medicine; however, realizing it is extremely difficult. The proposed technique will combine advanced microscopy, chemistry, engineering and biology to develop a platform, which will be able to sequence proteins one molecule at a time, revolutionizing the field of

Reading the epitranscriptome

Prof. Dr. M. (Michiel) Vermeulen (m), Radboud Universiteit – Dept. Mol. Biol.

Recently it became apparent that RNA modifications play an important role in regulating gene expression in health and disease. In this project, the underlying molecular mechanisms will be studied in great detail during blood cell differentiation. Furthermore, aberrant RNA modification patterns will also be studied in leukemia.

³ <https://www.nwo.nl/en/onderzoeksprogrammas/nwo-talentprogramma/projecten-vici/2020>

Electron microscope for the dynamic recording of biomaterials

Prof. dr. N.A.J.M. Sommerdijk (Nico), Radboud university medical center, Life Sciences

Our understanding of diseases such as cancer and Alzheimer's is improving thanks to the development of increasingly better microscopes that make it possible to observe what happens exactly inside cells.

Unfortunately, current techniques can often only produce static images and not (focussed) "videos". This electron microscope for the dynamic recording of biomaterials will make this possible and is therefore one of the first in the world to apply this new technique.

Message from the Round Table Physics

Dear colleagues,

The Group Leader meeting at Physics@Veldhoven seems already a long time ago and so many things have happened in the meantime. Nevertheless, we hope you had a nice afternoon with fruitful discussions around the theme 'commonality'. The Round Table Physics is looking back on a lively discussion with you in a new online setting. We want to thank you all for your valuable input. We have summarised and discussed what we have heard. Taking your views together with the vision papers the Research Communities for Physics have written, we will work on a joint vision for the Physics community which we will offer to the Science board. We will also team up with the Dutch Physics Council and exchange relevant information with them. They can take along such information in their own encounters with the science deans and other relevant parties.

We see the Physics@Veldhoven Group Leader meeting as an important opportunity every year to discuss pressing issues for our field and relevant developments within NWO. To make sure the next edition is maximally fruitful for everyone, we will come back to you after the summer to hear what you would like to discuss at the 2022 edition.

In the meantime, if you have any questions or concerns or if you want to alert us to important developments, please send us a message via physics@nwo.nl.

At <https://www.nwo.nl/en/news/nwo-network-hacked> you can find relevant information about the recent hack including the updated call planning.

We are looking forward to seeing you next year at Physics@Veldhoven.

Best regards,
Members of the Round Table Physics

⁴ <https://www.nwo.nl/en/researchprogrammes/nwo-investment-grant-large/grants>

NWO calls

Instrument	Deadline	Phase	Domain
Open competition Domain Science – M	Continuous submission until 31-7-2021	Full proposals	Science
	2-11-2021	Full proposals	
NWO Open Competition Domain Science - XL	20-5-2021	Pre-proposals	Science
	25-1-2022	Full proposals	
KIC: Long Term Programs	26-1-2021	Letter of intent	KIC
	27-5-2021	Pre-proposals	
	1-9-2022	Full proposals	
KIC E&D: Circularity	26-1-2021	Pre-proposals	KIC
	31-8-2021	Full proposals	
KIC G&Z: Lifestyle and living environment	26-1-2021	Pre-proposals	KIC
	31-8-2021	Full proposals	
KIC: Key Technologies	19-1-2021	Pre-proposals	KIC
	28-9-2021	Full proposals	
NWA-ORC 2020/21	1-10-2020	Letter of intent	NWA
	14-1-2021	Pre-proposals	
	7-10-2021	Full proposals	
Open Technology Programme	Continuous submission until 31-12-2021	Full proposals	AES
Women in STEM	Continuous submission until 31-12-2021	Full proposals	Science

The full list can be found [here](#).

For questions, ideas, announcements, new appointments, grants, and other news items, please contact:

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