1. Job Title and specifics

Details	
Position title	**PhD position in Neuroscience**
Hours per week	36 to 40
Department	Department of Biology, research group of Dr. Ting-Feng Lin↗

2. Highlight

Dissecting neuronal mechanisms underlying learning and memory through cutting-edge microscopy.

3. Introduction

It is widely accepted that synaptic plasticity constitutes the cellular correlate of learning. Yet, synaptic plasticity alone is insufficient to fully account for learning. Other mechanisms, such as intrinsic plasticity of membrane excitability, have been shown to be necessary for memory formation. Still, it remains unclear how intrinsic plasticity contributes to memory encoding and alters cognitive processes. In this project, we will leverage the advanced voltage imaging in larval zebrafish to investigate how intrinsic plasticity reshapes neuronal behavior.

4. Your Job

In this project, you will contribute to both engineering and neurobiology. First, you will help build a light-sheet microscope optimized for voltage imaging at the single-cell and subcellular level in live larval zebrafish (reference↗). The development of this system will be supported by Dr. Emmanuel Marquez Legorreta↗, Dr. Ernest van der Wee↗, and the Biology Image Center↗ team. Once the microscope is established, you will use it to investigate the electrophysiological properties of cerebellar Purkinje cells with advanced voltage indicators such as Voltron2. The ultimate goal is to uncover how Purkinje cells alter their dendritic signaling and spiking characteristics under different sensory or chemogenetic conditioning paradigms, and to determine how these changes may be mediated through intrinsic plasticity or brain state.

5. Your qualities

We are looking for a collaborative and responsible new colleague who meets several or all of the following criteria:

- Holds a Master's degree in Biology or Engineering. Current Master's students who have completed their first internship are also encouraged to apply!
- Has an interdisciplinary background, preferably with engineering training during either their Bachelor's or Master's program.
- Demonstrates a strong interest in, or prior experience with, neuroscience.
- Show enthusiasm for live imaging at single-cell and subcellular level in larval zebrafish.
- Have programming skills or a strong willingness to learn them.
- Speak and write proficient academic English.

6. Our Offer

- a position for 18 months, with an extension to a total of four years upon successful assessment in the first 18 months;
- a gross monthly salary between € 3.059 and €3.881 in the case of full-time employment (salary scale P under the Collective Labour Agreement for Dutch Universities (CAO NU);
- 8% holiday pay and 8.3% year-end bonus;
- a pension scheme, partially paid parental leave and flexible terms of employment based on the CAO NU.

In addition to the terms of employment↗ laid down in the CAO NU, Utrecht University has a number of schemes and facilities of its own for employees. This includes schemes facilitating professional development↗, leave and sports and cultural activities↗. We also offer access to additional employee benefits through our Terms of Employment Options Model. In this way, we encourage our employees to continue to invest in their growth. For more information, please visit Working at Utrecht University↗.

7. About us

A better future for everyone. This ambition motivates our scientists in executing their leading research and inspiring teaching. At Utrecht University↗, the various disciplines collaborate intensively towards major strategic themes↗. Our focus is on Dynamics of Youth, Institutions for Open Societies, Life Sciences and Pathways to

Sustainability. Sharing science, shaping tomorrow↗.

Working at the Faculty of Science↗ means bringing together inspiring people across disciplines and with a variety of perspectives and backgrounds. The Faculty↗ has six departments: Biology, Pharmaceutical Sciences, Information & Computing Sciences, Physics, Chemistry and Mathematics. Together, we↗ work on excellent research and inspiring education. We do so, driven by curiosity and supported by outstanding infrastructure. Visit us on LinkedIn↗ and discover how you can become part of our community.

You will join the group of Dr. Ting-Feng Lin↗ at the Division of Cell Biology, Neurobiology and Biophysics↗ within the Department of Biology. Our division hosts the state-of-the-art Biology Imaging Center↗, which offers technical supports and training in advanced light and fluorescent microscopy. The Lin group works closely and shares lab space with the group of Dr. Emmanuel Marquez Legorreta↗. In addition, several labs in the department pursue diverse scientific questions using as a zebrafish model system, supported by a dedicated core facility maintained by professional veterinarians and technicians. Being part of this enriching community, our group not only shares the common scientific ambitions but also fosters an environment built on care, respect and collaboration.

8. More information
For more information, please contact Dr. Ting-Feng Lin at t.f.lin@uu.nl.

Do you have a question about the application procedure? Please send an email to science.recruitment@uu.nl.

9. Apply now
As Utrecht University, we want to be a home↗ for everyone. We value staff with diverse backgrounds, perspectives and identities, including cultural, religious or ethnic background, gender, sexual orientation, disability or age. We strive to create a safe and inclusive environment in which everyone can flourish and contribute.

If you are enthusiastic about this position, submit your application to t.f.lin@uu.nl! Please enclose:

- your letter of motivation;
- your Curriculum vitae;
- the names, telephone numbers, and email addresses of at least two references;

If this specific opportunity isn't for you, but you know someone else who may be interested, please forward this vacancy to them.

Some connections are fundamental – Be one of them↗

#FundamentalConnection