

# Curriculum vitae

## Peeter Laas

Date of birth	14.09.1985
Phone	+37256260069
ORCID	0000-0001-9393-9022
E-mail	peeter.laas@ut.ee



## Fields of research

ETIS RESEARCH FIELD: 1. Biosciences and Environment; 1.2. Microbiology;  
CERCS RESEARCH FIELD: B230 Microbiology, bacteriology, virology, mycology

## Institutions and positions

01.01.2026–...	University of Tartu, Faculty of Science and Technology, Institute of Technology, Research Fellow in Molecular Ecology (0,20)
01.06.2025–...	Tallinn University of Technology, FinEst Centre for Smart Cities, Research Fellow (0,80)
01.02.2021–...	University of Tartu, Faculty of Science and Technology, Institute of Technology, Research Fellow in Molecular Ecology (1,00)
01.12.2024– 31.12.2025	University of Tartu, Faculty of Science and Technology, Institute of Technology, Research Fellow in Molecular Ecology (0,20)
01.11.2024– 31.05.2025	Tallinn University of Technology, FinEst Centre for Smart Cities, Research Fellow (0,40)
01.02.2021– 30.11.2024	University of Tartu, Faculty of Science and Technology, Institute of Technology, Research Fellow in Molecular Ecology (1,00)
01.02.2021– 31.10.2024	Tallinn University of Technology, School of Science, Department of Marine Systems, Research Fellow (0,20)
01.02.2020–	Tallinn University of Technology, School of Science,

31.01.2021	Department of Marine Systems, Research Fellow (1,00)
12.06.2017– 31.01.2020	Fort Lauderdale Research and Education Center, University of Florida, Post-Doc (1,00)
01.03.2017– 31.01.2020	Tallinn University of Technology, School of Science, Department of Marine Systems, Junior Researcher (1,00)
01.01.2017– 31.01.2020	Tallinn University of Technology, School of Science, Department of Marine Systems, Junior Research Fellow (1,00)
01.09.2016– 28.02.2017	Leibniz Institute for Baltic Sea Research Warnemünde (IOW), Post-Doc (1,00)
01.01.2013– 31.12.2016	Tallinn University of Technology, Institute of Marine Systems at TUT, Junior Researcher (1,00)
01.09.2010– 31.12.2012	Tallinn University of Technology, Institute of Marine Systems at TUT, Engineer (1,00)
01.07.2009– 01.07.2010	University of Tartu, Faculty of Science and Technology (old), Institute of Ecology and Earth Sciences, Tartu University, Lab assistant (0,50)
01.07.2009– 30.06.2010	University of Tartu, Faculty of Science and Technology (old), Institute of Ecology and Earth Sciences, Tartu University, Laboratory Assistant (0,50)

### R&D related managerial and administrative work

2025–...	Estonian Gene Technology Committee, Chair
2011–...	Estonian Society for Microbiology, member
2019–2023	Organiser of SAME17 (17th Symposium on Aquatic Microbial Ecology)
2014–2017	TUT Marine Systems Institute Scientific Council, member
2011–2025	Estonian Gene Technology Committee, member

### Additional information

### Academic degrees

Peeter Laas, Doctor's Degree, 2016, (sup) Inga Lips, Spatiotemporal Niche-Partitioning of Bacterioplankton Community across Environmental Gradients in the Baltic Sea., Tallinn University of Technology, Faculty of Science, Department of Gene Technology

Peeter Laas, Master's Degree, 2010, (sup) Veljo Kisand; Eve Elken, Pinna-, reo- ja heitvee kultiveeritavad heterotroofsed bakterid, University of Tartu, Faculty of Science and Technology (old), Institute of Molecular and Cell Biology, University of Tartu, Chair of Molecular Biology

## **Honours & awards**

- 2022 The University of Tartu contribution to society award 2021 was granted for introducing the nationwide SARS-CoV-2 wastewater monitoring method.
- 2021 The competition "Tartu Deed of the Year 2021" highlighted nominee "Weekly surveys of coronavirus levels in wastewater: an essential initiative for the whole of Estonia"
- 2014 Scholarship of Doctoral Studies and Internationalisation Programme DoRa Activity 8 Participation on International research conferences. '2014 Ocean Science Meeting', Honolulu, 2014.
- 2013 FEMS Young Scientist Meeting Grant to attend Symposium on Aquatic Microbial Ecology SAME13. Stresa, 2013.
- 2013 Scholarship of Doctoral Studies and Internationalisation Programme DoRa Activity 8 Participation on International research conferences. 'The 13th Symposium on Aquatic Microbial Ecology' (SAME13), Stresa, 2013.
- 2011 Scholarship of Doctoral Studies and Internationalisation Programme DoRa Activity 8 Participation on International research conferences. 'The 8th Baltic Sea Science Congress', Saint Petersburg, 2011.
- 2010 MESOAQUA Transnational Access (Individual grant) to participate in 'LightDynaMIX' mesocosm experiment as a trainee. Crete, 2010.

## **Additional information**

Participated as an expert in the "Multi Country Project - Training of trainers: Science4Policy" events (main event 12-15 June 2023 at JRC, Brussels).

## **Education**

- |           |   |
|-----------|---|
| 2008–2010 | University of Tartu, Gene technology, MSc |
| 2004–2008 | University of Tartu, Gene technology, BSc |
| 2001–2004 | Hugo Treffner Gymnasium                   |
| 1992–2001 | Tartu Secondary School of Business        |

## **Projects in progress**

- TF24032TJ ""FinEsCentre for Smart Cities - implementation of activities" - UrbanSplash pilot project" (01.11.2024–31.10.2027); Principal Investigator: Ciprian Briciu-Burghina; Tallinn University of Technology, FinEst Centre for Smart Cities (partner); Financier: The State Shared Service Center, Ministry of Education and Research; Financing: 1 216 300 EUR.
- MLTTI21694 (project number 315812) "Impact of marine microplastic associated biofilms on environmental and human health" (01.01.2021–31.03.2026); Principal Investigator: Veljo Kisand; University of Tartu, Faculty of Science and Technology, Institute of Technology (partner); Financier: Research Council of Norway; Financing: 41 564 EUR.

## **Completed projects**

- SLTTI21619 "COMplex Biofilms and AMR Transmission" (13.12.2021–13.09.2025); Principal Investigator: Veljo Kisand; University of Tartu, Faculty of Science and Technology, Institute of Technology (partner); Financier: Estonian Research Council; Financing: 100 000 EUR.
- LLTTI24238 "Development of tools to sequence SARS-CoV-2 from wastewater samples" (01.01.2024–30.04.2024); Principal Investigator: Veljo Kisand; University of Tartu, Faculty of Science and Technology, Institute of Technology (coordinator); Financier: Health Board; Financing: 24 582 EUR.
- SLTTI21268T (2014-2020.15.01.22-0162) "Development of surveillance system of SARS-CoV-2 based on waste water analysis" (01.05.2021–31.12.2022); Principal Investigator: Tanel Tenson; University of Tartu, Faculty of Science and Technology, Institute of Technology (coordinator); Financier: Ministry of Education and Research; Financing: 1 179 563 EUR.
- LLMEE20050 "Updating Estonian marine strategy programme of measures" (18.05.2020–28.12.2022); Principal Investigator: Urmas Lips; Tallinn University of Technology, School of Science, Department of Marine Systems (coordinator); Financier: Estonian Environmental Research Centre; Financing: 79 200 EUR.
- VLTTI21503 "Isochronous stability study of WWTP influent samples" (24.09.2021–24.10.2021); Principal Investigator: Veljo Kisand; University of Tartu, Faculty of Science and Technology, Institute of Technology (coordinator); Financier: European Commission; Financing: 14 000 EUR.
- SLTTI21018 "Building up the early warning surveillance of SARS-CoV-2 based on waste water analysis-2" (01.01.2021–30.04.2021); Principal Investigator: Tanel Tenson; University of Tartu, Faculty of Science and Technology, Institute of Technology (coordinator); Financier: Ministry of Education and Research; Financing: 372 761 EUR.
- SLTTI20415 "Building up the early warning surveillance of SARS-CoV-3 based on waste water analysis" (01.08.2020–28.02.2021); Principal Investigator: Tanel Tenson; University of Tartu, Faculty of Science and Technology, Institute of Technology (coordinator); Financier: Ministry of Education and Research; Financing: 868 121 EUR.
- KIK19024 "Innovative tools for assessing benthic communities at the border of deep layer hypoxia" (01.07.2019–30.11.2020); Principal Investigator: Urmas Lips; Tallinn University of Technology, School of Science, Department of Marine Systems (coordinator); Financier: Environmental Investment Center; Financing: 129 529 EUR.
- LMIN18024 "The role of microorganisms in determining the ecological state of the Estonian coastal sea, the type of substance cycle and the ability to self-purification" (23.03.2018–08.06.2020); Principal Investigator: Peeter Laas; Tallinn University of Technology, School of Science, Department of Marine Systems (coordinator); Financier: Ministry of Environment; Financing: 141 666 EUR.
- IUT19-6 "Multi-scale physical processes controlling the biogeochemical signal dynamics in the stratified Baltic Sea" (01.01.2014–31.12.2019); Principal Investigator: Urmas Lips; Tallinn University of Technology, Institute of Marine Systems at TUT (coordinator), Tallinn University of Technology, School of Science, Department of Marine Systems (coordinator); Financier: Estonian Research Council; Financing: 1 763 295 EUR.

- ETF9023 "Clines in stratified estuaries – implications to ecosystem functioning" (01.01.2012–31.12.2015); Principal Investigator: Urmas Lips; Tallinn University of Technology, Institute of Marine Systems at TUT (coordinator); Financier: Estonian Science Foundation, Estonian Research Council; Financing: 48 000 EUR.
- ETF8930 "The relative importance of mixotrophy in the eutrophic Gulf of Finland" (01.01.2011–31.12.2014); Principal Investigator: Inga Lips; Tallinn University of Technology, Institute of Marine Systems at TUT (coordinator); Financier: Estonian Science Foundation, Estonian Research Council; Financing: 48 000 EUR.
- Lep14070 "Integrated marine monitoring programme including all descriptors of good environmental status and being cost-effective and coordinated with the neighbouring countries with shared marine areas." (8.05.2014–31.12.2014); Principal Investigator: Urmas Lips; Tallinn University of Technology (partner), Tallinn University of Technology , Institute of Marine Systems at TUT (partner); Financier: Estonian Environmental Research Centre; Financing: 58 600 EUR.
- AR12042 "Estonian observatory of aquatic environment (VeeOBS)" (1.01.2012–31.12.2014); Principal Investigator: Inga Lips; Tallinn University of Technology , Institute of Marine Systems at TUT (partner); Financier: European Regional Development Fund; Financing: 138 448 EUR.
- VA667 "Mikroben-Verbindung 2014" (07.07.2014–01.12.2014); Principal Investigator: Peeter Laas; Tallinn University of Technology (coordinator), Tallinn University of Technology, Institute of Marine Systems at TUT (coordinator); Financier: Baltisch-Deutsches Hochschulkontor; Financing: 4 307 EUR.
- Lep14059 "Study cruises for schools in the frame of Gulf of Finland Year 2014" (11.04.2014–30.06.2014); Principal Investigator: Inga Lips; Tallinn University of Technology (partner), Tallinn University of Technology , Institute of Marine Systems at TUT (partner); Financier: Estonian Museum of Natural History; Financing: 10 752 EUR.
- SF0140017s08 "Baltic Sea water and matter exchange processes in conditions of changing external forcing" (01.01.2008–31.12.2013); Principal Investigator: Jüri Elken; Tallinn University of Technology, Institute of Marine Systems at TUT (coordinator); Financier: Ministry of Education and Research; Financing: 1 016 458 EUR.
- Lep12082 "Assembling selected chapters to the ‘Initial Assessment of the Estonian Sea Areas’ report and ‘Determining Good Environmental Status and Establishing of Environmental Targets’ report" (6.05.2012–17.10.2012); Principal Investigator: Urmas Lips; Tallinn University of Technology , Institute of Marine Systems at TUT (partner); Financier: University of Tartu; Financing: 16 560 EUR.
- ETF7581 "Influence of pelagic-benthic-littoral coupling on nutrient dynamics in the coastal zone of the southern Gulf of Finland" (01.01.2008–31.12.2011); Principal Investigator: Gennadi Lessin, Madis-Jaak Lilover; Tallinn University of Technology, Institute of Marine Systems at TUT (coordinator); Financier: Estonian Science Foundation; Financing: 71 050 EUR.

## **Supervised dissertations**

- Karolin Kullison, Master's Degree, 2025, (sup) Peeter Laas; Natalja Buhhalko, Mere plastifäéri esmane bakteriaalne kolonisatsioon (Initial bacterial colonization of the marine plasticsphere), Tallinn University of Technology, FinEst Centre for Smart

## Cities

- Līva Kristiāna Lukaša, Master's Degree, 2024, (sup) Peeter Laas; Veljo Kisand, Exploring the Microbial Communities of Ferromanganese Concretions and Pockmarks in the Gulf of Finland, University of Tartu, Faculty of Science and Technology, Institute of Technology
- Elina Šatova, Master's Degree, 2015, (sup) Inga Lips; Peeter Laas, Spatio-temporal variation of bacterioplankton community composition across vertical clines in the Gulf of Finland., Tallinn University of Technology Faculty of Science, Department of Gene Technology.

## Teaching

### Modern Methods in Molecular Ecology

Master level Course at Tallinn University (2020 - ) that covers modern molecular methods in ecology (mainly DNA/RNA-based) and consists of theoretical lectures/seminars part and practical part in a lab.

## Public outreach

### Expert for "How do you know?" initiative

Environmental microbiology, modern molecular methods and GMOs

## Publications

### 2025

Killian, Christina; Macori, Guerrino; Centeleghe, Isabella; Laas, Peeter; Lewis, Rebecca; van Leuven, Nicole; Wall, Katie; Abbara, Razan; Lucassen, Ralf; Hagström, Marja; Bockmuehl, Dirk; Fielder, Mark; Perkola, Noora; Kisand, Veljo; Malliard, Jean-Yves; Fanning, Séamus (2025). Deciphering the microbiota compositions of complex biofilms from hospital and domestic settings across Estonia, Germany and the United Kingdom. *FEMS Microbiology Letters*, 372, fnaf118. DOI: 10.1093/femsle/fnaf118.

### 2024

Tedersoo, Leho; Moghaddam, Mahdieh S Hosseyni; Mikryukov, Vladimir; Hakimzadeh, Ali; Bahram, Mohammad; Nilsson, R Henrik; Yatsiuk, Iryna; Geisen, Stefan; Schwelm, Arne; Piwosz, Kasia; Prous, Marko; Sildever, Sirje; Chmolowska, Dominika; Rueckert, Sonja; Skaloud, Pavel; Laas, Peeter; Tines, Marco; Jung, Jae-Ho; Choi, Ji Hye; Alkahtani, Saad ... Anslan, Sten (2024). EUKARYOME: the rRNA gene reference database for identification of all eukaryotes. *Database*, 2024 (baae043). DOI: 10.1093/database/baae043.

### 2023

Kisand, Veljo; Laas, Peeter; Palmik-Das, Kadi; Panksep, Kristel; Tammert, Helen; Albreht, Leena; Allemann, Hille; Liepkalns, Lauri; Vooro, Katri; Ritz, Christian; Hauryliuk, Vasili; Tenson, Tanel (2023). Prediction of COVID-19 positive cases, a nation-wide SARS-CoV-2 wastewater-based epidemiology study. *Water Research*, 231, ARTN 119617. DOI: 10.1016/j.watres.2023.119617.

Tavazzi, S.; Cacciatori, C.; Comero, S.; Fatta-Kassinos, D.; Karaolia, P.; Iakovides, I.C.; Loutsiou, P.; Gutierrez-Aguirre, I.; Lengar, Z.; Bajde, I.; Tenson, T.; Kisand, V.; Laas, P.; Panksep, K.; Tammert, H.; Mariani, G.; Skejo, H.; Gawlik, B.M. (2023). Short-term stability of wastewater samples for storage and shipment in the context of the EU Sewage Sentinel System for SARS-CoV-2. *Journal of Environmental Chemical Engineering*, 11 (2), 109623. DOI: 10.1016/j.jece.2023.109623.

Salamon Slater, Ellen R.; Turk-Kubo, Kendra A.; Hallstrøm, Søren; Kesy, Katharina; Laas, Peeter; Magasin, Jonathan; Zehr, Jonathan P.; Labrenz, Matthias; Riemann, Lasse (2023). Composition and distribution of diazotrophs in the Baltic Sea. *Estuarine, Coastal and Shelf Science*, 294, #108527. DOI: 10.1016/j.ecss.2023.108527.

## 2022

Laas, P.; Ugarelli, K.; Travieso, R.; Stumpf, S.; Gaiser, E. E.; Kominoski, J. S.; Stingl, U. (2022). Water Column Microbial Communities Vary along Salinity Gradients in the Florida Coastal Everglades Wetlands. *Microorganisms*, 10 (2), #215. DOI: 10.3390/microorganisms10020215.

Laas, Peeter; Künnis-Beres, Kai; Talas, Liisi; Tammert, Helen; Kuprijanov, Ivan; Herlemann, Daniel P.R.; Kisand, Veljo (2022). Bacterial communities in ballast tanks of cargo vessels - Shaped by salinity, treatment and the point of origin of the water but “hatch” its typical microbiome. *Journal of Environmental Management*, 324, 116403. DOI: 10.1016/j.jenvman.2022.116403.

## 2021

Sildever, Sirje; Laas, Peeter; Kolesova, Natalja; Lips, Inga; Lips, Urmas; Nagai, Satoshi (2021). Plankton biodiversity and species co-occurrence based on environmental DNA – a multiple marker study. *Metabarcoding and Metagenomics*, 5, e72371. DOI: 10.3897/mbmg.5.72371.

Laas, P.; Ugarelli, K.; Absten, M.; Boyer, B.; Briceno, H.; Stingl, U. (2021). Composition of Prokaryotic and Eukaryotic Microbial Communities in Waters around the Florida Reef Tract. *Microorganisms*, 9 (6), #1120. DOI: 10.3390/microorganisms9061120.

## 2019

Ugarelli, K.; Laas, P.; Stingl, U. (2019). The Microbial Communities of Leaves and Roots Associated with Turtle Grass (*Thalassia testudinum*) and Manatee Grass (*Syringodium filiforme*) are Distinct from Seawater and Sediment Communities, but Are Similar between Species and Sampling Sites. *Microorganisms*, 7, 1–20. DOI: 10.3390/microorganisms7010004.

Tamm, Marju; Ligi, Martin; Panksep, Kristel; Teeveer, Karolin; Freiberg, Rene; Laas, Peeter; Paavel, Birgot; Kutser, Tiit; Reinart, Anu; Tõnno, Ilmar; Nõges, Tiina (2019). Boosting the monitoring of phytoplankton in optically complex coastal waters by combining pigment-based chemotaxonomy and in situ radiometry. *Ecological Indicators*, 97, 329–340. DOI: 10.1016/j.ecolind.2018.10.024.

## 2018

Tamm, M.; Laas, P.; Freiberg, R.; Nõges, P.; Nõges, T. (2018). Parallel assessment of marine autotrophic picoplankton using flow cytometry and chemotaxonomy. *The Science of The Total Environment*, 625, 185–193. DOI: 10.1016/j.scitotenv.2017.12.234.

Möller, L.; Laas, P.; Rogge, A.; Goetz, F.; Bahlo, R.; Leipe, T.; Labrenz, M. (2018). *Sulfurimonas* subgroup GD17 cells accumulate polyphosphate under fluctuating redox conditions in the Baltic Sea: possible implications for their ecology. *The ISME Journal*. DOI: 10.1038/s41396-018-0267-x.

## 2017

Ugarelli, K.; Chakrabarti, S.; Laas, P.; Stingl, U. (2017). The Seagrass Holobiont and Its Microbiome. *Microorganisms*, 5 (4). DOI: 10.3390/microorganisms5040081.

## 2016

Laas, Peeter; Šatova, Elina; Lips, Inga; Lips, Urmas; Simm, Jaak; Kisand, Veljo; Metsis, Madis

(2016). Near-Bottom Hypoxia Impacts Dynamics of Bacterioplankton Assemblage throughout Water Column of the Gulf of Finland (Baltic Sea). PLoS ONE, 1–19. DOI: 10.1371/journal.pone.0156147.

Ptacnik, Robert; Gomes, Ana; Royer, Sarah-Jeanne; Berger, Stella A.; Calbet, Albert; Nejstgaard, Jens C.; Gasol, Josep M.; Isari, Stamatina; Moorthi, Stefanie D.; Ptacnikova, Radka; Striebel, Maren; Sazhin, Andrey F.; Tsagaraki, Tatiana M.; Zervoudaki, Soultana; Altoja, Kristi; Dimitriou, Panagiotis D.; Laas, Peeter; Gazihan, Ayse; Martínez, Rodrigo A.; Schabköhl, Stefanie ... Pitta, Paraskevi (2016). A light-induced shortcut in the planktonic microbial loop. Scientific Reports, 1–10. DOI: 10.1038/srep29286.

## 2015

Laas, Peeter; Simm, Jaak; Lips, Inga; Lips, Urmas; Kisand, Veljo; Metsis, Madis (2015). Redox-specialized bacterioplankton metacommunity in a temperate estuary. PLoS ONE, 10 (4), e0122304. DOI: 10.1371/journal.pone.0122304.

## 2014

Laas, Peeter; Simm, Jaak; Lips, Inga; Metsis, Madis (2014). Spatial variability of winter bacterioplankton community composition in the Gulf of Finland (the Baltic Sea). Journal of Marine Systems, 129, 127–134. DOI: 10.1016/j.jmarsys.2013.07.016.