Position Description

1. General Information

Name of the position	**Digital Ecosystems**
Foreseen enrolment date	September 2025
Position is funded by	• COFUND, Marie Skłodowska-Curie Actions (MSCA), Horizon Europe, European Union • TalTech • RMIT University
Research Host	TalTech
PhD awarding institutions	TalTech & RMIT University
Locations	Primary: Tallinn, Estonia Secondary: Melbourne, Australia
Salary	32,400 EUR annual **gross** salary (2,700 EUR monthly gross salary)
Supervisors	• Tanel Kerikmäe, Professor, TalTech • Ondrej Hamulak, Adjunct Professor, TalTech • Jonathan Kolieb, Associate Professor, RMIT University • Nicole Shackleton, Dr., Lecturer, RMIT University
Group of discipline	Digital Restoration, Artificial Intelligence, Sustainability

2. Research topics (only one of these projects will be funded)

Project 1: *Deconstructing Digital Colonialism for Equitable Sovereignty*
This Ph.D. project proposal aims to examine the phenomenon of digital colonialism, whereby global technology powers exert control over digital infrastructure and resources, thereby undermining local economies and cultural autonomy (Kwet, 2019; Couldry & Mejias, 2019). The research should undertake a critical analysis of the economic, social, and environmental impacts of digital hegemony on developing regions (Jin, 2015; Milan & Treré, 2019). It should investigate strategies for promoting digital sovereignty (Gábriš & Hamuľák, 2023), including community- driven data governance (Troitiño, D.R. & Mazur, V. & Kerikmäe, T., 2024), open-source technology adoption, and equitable digital wealth distribution (Pohle & Thiel, 2020). Using a combination of case studies, policy analysis, and theoretical research, the project shall propose frameworks that support the development of local digital ecosystems, enhance cultural preservation, and foster resilience against exploitative practices (Avgerou, 2010; Graham, 2019). The objective is to contribute to a more balanced and regenerative global digital landscape (Thatcher et al., 2016).

This project has received funding from the European Union's Horizon Europe research and innovation programme under the Marie Skłodowska-Curie grant agreement № 101179842

Supervisors: Tanel Kerikmäe (TalTech), Ondrej Hamulak (TalTech), Jonathan Kolieb (RMIT), Nicole Shackleton (RMIT)
Research Fields: Digital Ecosystems, Digital Colonialism, Regeneration

Project 2: ***Digital Rights Restoration for Community Resilience and Sustainability***
This Ph.D. project propose to investigate the potential of digital rights frameworks to revitalise communities and promote sustainable economic development (Redden & Brand, 2021; Zuboff, 2019). The research should examine case studies in which investments in digital infrastructure and the implementation of equitable data-sharing models have resulted in the transformation of local economies (Troitiño & Kerikmäe & Hamuľák, 2023), particularly in regions that have been underserved or marginalised (Roberts et al., 2021; Ragnedda & Muschert, 2018). The investigation should also examine concepts such as data dividends, community-owned digital platforms and policy measures aimed at closing the digital divide (Wylie & McDonald, 2018; van Dijck et al., 2018; Vardanyan & Hamuľák & Kocharyan, 2024). The study should develop guidelines for the creation of resilient, community-centred digital ecosystems through the utilisation of mixed- methods research (Calzada, 2021; Treré, 2020). These guidelines should empower citizens, enhance local productivity and promote long-term social and economic sustainability (Taylor & Purtova, 2019; Kerikmäe & Pärn-Lee, 2021).
Supervisors: Tanel Kerikmäe (TalTech), Ondrej Hamulak (TalTech), Jonathan Kolieb (RMIT), Nicole Shackleton (RMIT)
Research Fields: Digital Restoration, Economic Sustainability, Digital Ecosystems

Project 3: ***AI for Economic and Environmental Regeneration***
This Ph.D. project propose to investigate the potential of AI technologies to facilitate simultaneous economic growth and environmental restoration (Vinuesa et al., 2020; Rolnick et al., 2019). The research should develop a theoretical and empirical understanding of the ways in which AI-driven models (e.g. precision agriculture, waste reduction in supply chains) can be regulated (Kerikmäe & Pärn-Lee, 2021) in order to ensure sustainability (Reichstein et al., 2019; Kamilaris et al., 2017). The study should examine the regulatory frameworks required to ensure a balanced approach to the opportunities and risks associated with AI, with a particular focus on transparency, accountability, and alignment with environmental goals (Jobin et al., 2019). Furthermore, the research should analyse the impact of circular economy practices facilitated by AI and propose comprehensive policy recommendations that enhance resilience and sustainability across industries (Kirchherr et al., 2017; Ellen MacArthur Foundation, 2019; Troitiño & Kerikmäe & Hamuľák, 2023).
Supervisors: Tanel Kerikmäe (TalTech), Ondrej Hamulak (TalTech), Jonathan Kolieb (RMIT), Nicole Shackleton (RMIT)
Research Fields: Environmental Regeneration, Artificial Intelligence, Sustainability

3. Employment Benefits and Conditions

TalTech offers a 48-months full-time work contract, and the total working hours per week are 40.
The remuneration, in line with the European Commission rules for Marie Skłodowska-Curie grant holders, will consist of a **gross annual salary** of yearly 32,400 EUR (which is of monthly 2,700 EUR).

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Of this amount, the estimated net salary to be perceived by the Researcher is 2,082 EUR per month. However, the definite amount to be received by the Researcher is subject to national tax legislation.

Benefits include:

- Becoming a Marie Skłodowska-Curie fellow and be invited to join the Marie Curie Alumni Association
- Access to all the necessary facilities at TalTech and RMIT University
- Tuition fees exemption at both PhD awarding institutions
- Travel allowance to cover flights and accommodation for participating in DREAM+PLAN events
- Up to 12 months in Australia
- 42 calendar days paid holiday leave
- Social security coverage
- Sick leave
- Parental leave

4. PhD enrolment

Successful candidates for this position will be enrolled by the following institutions and must comply with their specific entry requirements, in addition to DREAM+PLAN's conditions.

TalTech

To enrol in a Doctorate program, you must meet the general conditions, namely:

(1) Persons who hold a master's degree or an equal qualification have the right to apply for doctoral studies.

(2) A candidate from a foreign country applying for a doctoral student position must have a valid Estonian residence permit or right of residence and a permanent legal income in accordance with the provisions of the Aliens Act, except in the case of a doctoral student studying under a joint supervision or any other cooperation agreement.

(3) A public competition is announced based on doctoral thesis topics for early stage researcher and industrial Ph.D. positions where there is no definite candidate. An applicant can apply for one competition at a time.

(4) Notices of the competitions by topics, including the names of the supervisors, shall be published on the websites of the Schools and doctoral studies websites, international websites and in the online environment for applying for doctoral studies.

(5) The documents required for application are the following:

1) an application;
2) a curriculum vitae, incl. data on education and research and development activities;
3) a copy of an education certificate and a diploma supplement;
4) a copy of the passport, identity card or residence permit card:

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5) a motivation letter in English;
6) other documents required by the supervisor to determine eligibility of the applicant. Additional documents may be requested during the competition period.

(6) Applicants who do not have Estonian citizenship, a long-term resident's residence permit or permanent right of residence must prove their English language skills with at least a B2 level certificate.

(7) If an education certificate acquired in a foreign country is submitted, the university has the right to request assessment of compliance of the qualification from the Estonian ENIC/NARIC Centre.

(8) If an applicant cannot submit an education certificate as proof of completing the previous academic cycle, the applicant must provide evidence of his/her academic results. An admission decision can be made once the education certificates have been duly submitted. [entry into force 23.01.2024]

(9) Application documents shall be submitted electronically via the online application environment. If necessary, the applicant who has received the admission decision, shall submit his/her education certificates on paper to the Research Administration Office in accordance with the instructions received from the Research Administration Office. The university reserves the right to revoke the admission decision if the applicant fails to submit paper documents meeting the specified requirements to the Research Administration Office. The university also reserves the right to revoke the admission decision if the applicant is an alien and after the decision has been made, the university becomes aware of facts that give rise to suspicion that the alien may pose a threat to public order, national security, international relations or public health.

More information: https://taltech.ee/en/phd-admission

RMIT University

Visit the website: https://www.rmit.edu.au/research/research-degrees/how-to-apply

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