

Masaryk University	
Faculty	Faculty of Science
Procedure field	Cartography, Geoinformatics and Remote Sensing
Applicant	doc. RNDr. Tomáš Řezník, Ph.D.
Applicant's home unit, institution	Faculty of Science, Masaryk University
Board members	
Chair	prof. RNDr. Petr Dobrovolný, CSc. <i>Faculty of Science, Masaryk University</i>
Members	prof. RNDr. Vít Voženílek, CSc. <i>Palacký University Olomouc</i> prof. Ing. Jiří Cajthaml, Ph.D. <i>Czech Technical University in Prague</i> Prof. Anne Gobin, PhD. <i>Katholieke Universiteit Leuven, Belgium</i> Prof. Georg Gartner, PhD. <i>Technische Universität Wien, Austria</i>

Evaluation of the applicant's scholarly/artistic qualifications

Tomáš Řezník graduated in Geography and Cartography in 2005, defended his PhD in Cartography, Geoinformatics and Remote Sensing in 2008 (thesis entitled Metadata flow in Crisis Management) and became an Associate Professor of Geodesy and Cartography in 2013. Recently (January 2022), he has 28 publications in the WoS database (17 research articles; out of which eight are above the median in the given field when being the first and/or corresponding author at the same time) and 34 publications indexed in Scopus. His work has been linked with 136 WoS citations and 163 Scopus citations (both without self-citations). He is an author of five certified methodologies used at Czech Ministries and the Czech national mapping organisation.

His research portfolio comprises spatial data infrastructures, metadata workflows, mapping for users with limited mobility, precision agriculture, soil information modelling, environmental burden studies, crisis and emergency management. He has been conducting basic as well as applied research.

Tomáš Řezník is an author of ISO 28258 on Digital exchange of soil-related data. His achievements in environmental geoinformatics also comprise a patent candidate for coverage path planning optimisation in 3D to lower the environmental burden caused by agricultural activities (e.g. H2020 DataBio, H2020 STARGATE, H2020 SIEUSOIL), and revealing the 'memory of landscape' concerning the societal actions (H2020 SIEUSOIL). His developments on an unmanned aerial vehicle equipped with an IMSI catcher (cell-phone detection) in the FP7 ESS project helped to save human lives after the Haiti earthquake in 2011.

Tomáš Řezník has been active in global, European and national research and innovation projects since 2005. He has participated and led research teams in 15 international projects since the Seventh Framework Programme (FP7) of the European Community. Most commonly, he is in the role of a Work Package leader.

His personal achievements as well as those of the research team he established at Masaryk University represent worldwide cutting-edge science in the fields of soil information modelling and environmental geoinformatics, with strong international connections, e.g., Wageningen University, University of Cambridge, Katholieke Universiteit Leuven or Ghent University. Tomáš Řezník's scientific impact is demonstrated by publications in highly-evaluated journals, large funded EU projects, invited speeches abroad or from his typical role as a team leader.

Conclusion: The applicant's scholarly/artistic capabilities **meet** the requirements expected of applicants participating in a professor appointment procedure in the field of Cartography, Geoinformatics and Remote Sensing.

Evaluation of the applicant's pedagogical experience

Tomáš Řezník is pedagogically active since 2005. His pedagogical experience comprises 24 taught semesters of lectures and 30 semesters of seminars/exercises. He has led six lectures and twelve seminars/exercises throughout his career, out of which he has established three new courses: two for PhDs (Research projects preparation and management, Information law) and one course in English for Master studies (Introduction to spatial data infrastructures in Europe).

He is a co/author of one textbook on semantic metadata management and three educational texts on spatial data infrastructures. These have been written mainly in the international environment, e.g. with KU Leuven. Tomáš Řezník has been throughout his career accenting synergy of his topical research and education. His primary pedagogical interest has been in spatial data infrastructures, Web cartography, information modelling, metadata and applied geoinformatics in general. He has taught and/or been in the commission for PhD graduates, e.g., in Belgium (KU Leuven), five Czech, and two Slovak universities. His internship at KU Leuven aimed to innovate education of spatial data infrastructures.

So far, he has successfully supervised 2 PhDs, 28 Master's and 35 Bachelor theses, mostly related to his research topics. He currently supervises five PhD candidates. Tomáš Řezník has served at Masaryk University as the Guarantor of the 'Applied Geography and Geoinformatics' study programme since its establishment in 2018. He is a member of the study programme boards 'Geography

and Cartography' (Bachelor), 'Cartography and geoinformatics' (Master), 'Physical geography' (Master), 'Social geography and regional development' (Master) and 'Joint doctoral Board of geographical programmes' (PhD).

Tomáš Řezník prefers to work closely and intensively with his students and young researchers in a synergy of academic teaching and the latest research. He has been nominated for the best teacher at the Department of Geography four times within the last five years.

Conclusion: The applicant's pedagogical capabilities **meet** the requirements expected of applicants participating in a professor appointment procedure in the field of Cartography, Geoinformatics and Remote Sensing.

Evaluation of the applicant as a respected and recognized scholarly or artistic figure in a given field

Tomáš Řezník significantly contributed to soil information modelling and harmonisation on the global as well as European levels (e.g. eContent^{plus} GS Soil, FP7 FOODIE, Support to FAO for the implementation of the Global Soil Partnership) acknowledged by the scientific community. The applicant has been an international consultant and a team leader at the Food and Agriculture Organization of the United Nations. He has been the principal investigator of the joint soil data exchange model development as a basis for the Global Soil Information System (GloSIS).

He led four teams of EU experts in data modelling of environmental geospatial information (INSPIRE) when being a scientific/technical officer at the European Commission, Directorate General Joint Research Centre. He is a co-author of pan-European legislation on spatial data harmonisation and interoperability (Commission Regulation No 1253/2013).

Tomáš Řezník has been invited as a speaker, e.g., to the G20 summit Meeting of Chief Agricultural Scientists or Ministerial Summit of 97 countries (GEO-XII). Tomáš Řezník has been an evaluator of Horizon 2020/Europe research & innovation projects. He is a topic editor in the peer-reviewed journal Electronics (Q3 in Computers Sciences, Information Systems) and a Reviewer board member in the peer-reviewed journals Sensors (Q1 in Instruments and Instrumentation) and Remote Sensing (Q1 in Geosciences, multidisciplinary).

Tomáš Řezník was awarded in 2021 by the MUNI Innovation Award and the gold medal of Masaryk University.

Conclusion: The applicant **is** a respected and recognized scholarly figure in his/her field. The applicant **has** made a significant contribution to the development of his/her field. The applicant **constitutes** a leading figure in his/her field of scholarship or research.

Secret vote results

Voting took place: electronically

Number of board members		5
Number of votes cast		5
of which	in favour	5
	against	0

Board decision

Based on the outcome of the secret vote and following an evaluation of the applicant's scholarly or artistic qualifications, pedagogical experience and role as a respected and recognized scholarly or artistic figure, the board hereby submits a proposal to the Scientific Board of the Faculty of Science of Masaryk University to **appoint the applicant professor** of Cartography, Geoinformatics and Remote Sensing.

In Brno on 08.03.2022

prof. RNDr. Petr Dobrovolný, CSc.