

PUBLIC LECTURE EVALUATION

Masaryk University

Faculty	Faculty of Science
Procedure field	Cartography, Geoinformatics and Remote Sensing
Applicant	doc. RNDr. Tomáš Řezník, Ph.D.
Lecture date	3 March 2022
Lecture topic	Environmentally-oriented geospatial modelling in precision agriculture
Persons present (number)	31 (18 on site plus 13 on line)
Designated evaluators (board members)	prof. RNDr. Vít Voženílek, CSc. (on-site) prof. Ing. Jiří Cajthaml, Ph.D. (on-site) prof. RNDr. Petr Dobrovolný, CSc. (on-site)

Tomáš Řezník initiated his public lecture with motivation towards the research of 'memory of landscape', a synergizing topic across the environmentally-oriented modelling in precision agriculture. The candidate emphasized societal challenges' point of view and their environmental consequences.

The lecture was structured into three scientific pillars: (1) yield modelling (prediction) by means of Remote Sensing, (2) sensor measurements, verification and cartographic representations and (3) geoinformatics optimization of farm machinery trajectories in 3D. The presentation of all these scientific pillars has been intensively supported by references to publications of the team lead by Tomáš Řezník. His team's achievements were commonly confronted with achievements of other researchers in cartography, geoinformatics and Remote Sensing.

Special attention was paid to the foreseen research activities, namely further progress on the memory of landscape investigation, reconstruction of a spatial pattern when combining means of Remote Sensing and in-situ sensor measurements, joint soil compaction measurement experiment with Ghent university and patent preparation.

The audience was attended by students, staff of the department, and participants outside the academic sphere. After the presentation, a discussion followed, which mainly concerned the following issues: new remotely sensed data sources, methods of their analysis such as interpolation using geostatistics, problems related to the spatial and temporal data resolution, data uncertainty, inclusion of the meteorological data, problems of landscape sustainability, practical applications etc. The candidate responded in detail to all questions and topics raised in the discussion.

Conclusion

The lecture delivered by Tomáš Řezník, entitled "Environmentally-oriented geospatial modelling in precision agriculture" and delivered as part of the professor appointment

procedure, **demonstrated** sufficient scholarly qualifications and pedagogical capabilities expected of applicants participating in a professor appointment procedure in the field of Cartography, Geoinformatics and Remote Sensing.

The lecture took place in a hybrid form at 15:00 CET. The above-mentioned members of the board attended the lecture and provided its evaluation. All designated evaluators are familiar with the text of the evaluation and agree with it.

Date: 3. 3. 2020

Vít Voženílek

Jiří Cajthaml

Petr Dobrovolný