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Annex No. 11 to the MU Directive on Habilitation Procedures and Professor Appointment Procedures

PUBLIC LECTURE EVALUATION

Masaryk University	
Faculty	Faculty of Science
Procedure field	Mathematics – Mathematical Analysis
Applicant	Phuoc Tai Nguyen
Lecture date	September 15, 2021
Lecture topic	Semilinear elliptic equations with a singular potential
Persons present (number)	16 on-site, 6 online
Designated evaluators (board members)	prof. RNDr. Pavol Quittner, DrSc. (on-site) prof. RNDr. Zuzana Došlá, Dsc. (on-site) doc. RNDr. Martin Kolář, Ph.D. (on- site)

The lecture dealt with a modern and intensively studied topic. Dr. Nguyen first introduced the basic concepts and put his research into wider perspective. In the second part he discussed the differences between the free potential and singular potential cases, in particular he explained the case of the Hardy potential in detail. Then he considered both linear and semilinear problems and his contributions to this field. Finally he discussed two interesting open problems for semilinear problems with general singular potentials.

During the lecture, Dr. Nguyen demonstrated his teaching skills. Both his slides and oral presentation were at a high level. The lecture was presented in a clear way and it was understandable not only for the experts in the field but also to broad mathematical audience. During the rich discussion after the lecture, Dr. Nguyen responded competently to all comments and questions. After that discussion, Dr. Nguyen also answered the questions raised by the referees of his habilitation thesis.

Conclusion

The lecture delivered by Phuoc Tai Nguyen, entitled "Semilinear elliptic equations with a singular potential" and delivered as part of the habilitation procedure, **demonstrated** sufficient scholarly qualifications and pedagogical capabilities expected of applicants participating in a habilitation procedure in the field of Mathematics – Mathematical Analysis.

The lecture took place in a hybrid form at 4 pm. 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.

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Date: September 15, 2021

Pavol Quittner

Zuzana Došlá

Martin Kolář