

Mentor

Prof. Štefko Miklavič; PhD

Research field

1.01.04 - Natural sciences and mathematics / Mathematics / Algebra

1.01.05 - Natural sciences and mathematics / Mathematics / Graph theory

Faculty member of UP and the research programme

UP Andrej Marušič Institute, research programme: P1-0285 Algebra, Discrete Mathematics, Probability and Game Theory

Other information about the mentor

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A brief description of the future young researcher training

The framework of the training programme:

The young researcher (YR) will join the research program P1-0285 Algebra, Discrete Mathematics, Probability and Game Theory and the research projects listed below, as well as to numerous bilateral projects implemented at UP IAM (<http://p1-0285.iam.upr.si/en/bilateral-projects>). YR will also be actively involved in new projects applications and organization of international conferences at UP IAM.

Within the research program and projects, various areas of mathematics are considered: YR's work will be primarily performed within the theory of distance-regular graphs and theory of permutation groups. The research program P1-0285 has diversified research cooperation with similar research groups abroad (USA, Canada, Spain, China, South Korea, Australia, New Zealand, Israel, Austria, Slovakia, Italy and Hungary). YR will actively participate in this international scientific and research cooperation.

In the course of his/her training, YR will discuss current open problems from algebraic graph theory, with emphasis on open problems about Terwilliger algebras of distance-regular graph and pseudo distance-regular graphs. Terwilliger algebra of (pseudo) distance-regular graphs will be studied via its irreducible modules.

List of research programmes and projects:

P1-0285	Algebra, discrete mathematics, probability and game theory	1.1.2004—31.12.2020
N1-0062	Oddness degree of transitive permutation groups	1.6.2017—31.5.2020
J1-9110	Traversability in vertex-transitive graphs	1.7.2018—30.6.2021

Preferable area of study for the young researcher

Mathematical Sciences, doctoral degree study programme Mathematical Sciences, UP FAMNIT

Other useful skills and competences for the position:

English language (advance - intermediate level)

Useful links

UP Andrej Marušič Institute (<http://www.iam.upr.si/en/>)

UP The Faculty of Mathematics, Natural Sciences and Information Technologies

(<https://www.famnit.upr.si/en>)

Algebra, discrete mathematics, probability and game theory (<http://p1-0285.iam.upr.si/sl/>)