

Profesní životopis, předložení seznamu vědeckých prací, přehledu projektů
DIANA SCHNEIDEROVÁ (BARSEGHYAN)

Vzdělání:

2001-2007, Jerevanská státní univerzita, Arménie

2007-2010, Moskevská státní univerzita M. V. Lomonosova

Akademické tituly:

2007 - Mgr., Jerevanská státní univerzita, Obor Matematika

2010 - Ph.D., Moskevská státní univerzita M. V. Lomonosova, Obor Matematika

2015 - doc., obor Aplikovaná matematika, Ostravská univerzita

Zaměstnání, praxe:

2011 - 2013– Ústav jaderné fyziky AV ČR (postdoktorand)

2013 – Mittag-Leffler Institute, (postdoktorand)

2013 - 2014 – Friedrich-Alexander Universität Erlangen-Nürnberg (postdoktorand)

2014 - 2016– Ostravská univerzita (vědecký pracovník)

2014 - 2023– Ústav jaderné fyziky AV ČR (vědecký pracovník)

2016– dosud, Ostravská univerzita

Odborné zaměření:

Spektrální teorie

Schrödingerovy operátory, magnetické Schrödingerovy operátory

Lieb-Thirringovy nerovnosti

Kvantové grafy

Účast v projektech:

Ministerstvo školství, mládeže a tělovýchovy, projekt LC06002

Grantová agentura České republiky, projekt P203/11/0701

ERC STARTING GRANT 258685

Grantová agentura České republiky, projekt 14-02476S

Grantová agentura České republiky, projekt 14-06818S

Projekt "Podpora vědy a výzkumu v Moravskoslezském kraji 2013"

Projekt SMO "Posílení mezinárodního rozmeru vědeckých aktivit na Přírodovědecké fakultě OU v Ostravě"0924/2016/SaS

Projekt: Posilování mezinárodní spolupráce v oblasti vědy, výzkumu a vzdělávání 01211/2016/RRC

Czech-Austrian Grant CZ 02/2017

Grantová agentura České republiky, projekt 21-07129S

Czech-Polish project BPI/PST/2021/1/00031

Publikační činnost:

Diana Barseghyan, Swanhild Bernstein and Baruch Schneider, Magnetic Neumann Laplacian on a domain with hole. To appear in Reports on Mathematical Physics.

Diana Barseghyan, Pavel Exner, Spectral estimates for Dirichlet Laplacian on spiral-shaped regions. To appear in Journal of Spectral Theory.

Diana Barseghyan, Baruch Schneider and Ly Hong, Hay, Neumann Laplacian in a perturbed domain. Mediterranean Journal of Mathematics Vol. 19(126), pp. 1–17 (2022).

- Juan Bory Reyes, Diana Barseghyan, Baruch Schneider, Dirichlet-type problems for certain Beltrami equations, *Mediterranean Journal of Mathematics* 2021, 18(3), 1-14. ISSN 1660-5446.
- Diana Barseghyan, Pavel Exner, Magnetic field influence on the discrete spectrum of locally deformed leaky wires, *Reports on Mathematical Physics*. 2021, 88(1), 47-57. ISSN 0034-4877.
- Diana Barseghyan, Baruch Schneider, Eigenvalue bound for Schrödinger operators with unbounded magnetic field, *REP MATH PHYS* 2020, 85(2), s. 239-251. ISSN 0034-4877.
- Diana Barseghyan, Françoise Truc, Magnetic Schrödinger operators with radially symmetric magnetic field and radially symmetric electric potential. In: *Operator Theory: Advances and Applications*, Springer Nature Switzerland AG, 2020. s. 154-161. 276. ISBN 978-3030315306.
- Diana Barseghyan, Pavel Exner, Spectral geometry in a rotating frame: Properties of the ground state, *Journal of Mathematical Analysis and Applications*. 2020, 489(1), 1-13. ISSN 0022-247X.
- Diana Barseghyan, Andrii Khrabustovskyi, Spectral estimates for Dirichlet Laplacian on tubes with exploding twisting velocity, *Operators and Matrices*. 2019, 13(2), 311-322. ISSN 1846-3886.
- D. Barseghyan, P. Exner, A magnetic version of the Smilansky model, *Journal of Physics A: Mathematical and Theoretical* 50, No. 48, 485203, 24 pp. (2017)
- D. Barseghyan, P. Exner, A regular analogue of the Smilansky model: spectral properties, *Reports on Mathematical Physics* 80, No. 2, 177-192 (2017)
- D. Barseghyan, O. Rossi, On a class of Schrödinger operators exhibiting spectral transition Functional analysis and operator theory for quantum physics. The P. Exner anniversary volume. Zürich: European Mathematical Society (EMS). EMS Series of Congress Reports, 55-70 (2017)
- D. Barseghyan, P. Exner, A. Khrabustovskyi, M. Tater, Spectral analysis of a class of Schrödinger operators exhibiting a parameter-dependent spectral transition, *Journal of Physics A: Mathematical and Theoretical* 49, No. 16, Article ID 165302, 19 pp. (2016)
- D. Barseghyan, P. Exner, H. Kovarik, T. Weidl, Semiclassical bounds in magnetic bottles, *Reviews in Mathematical Physics* 28, No. 1, Article ID 1650002, 29 pp. (2016)
- D. Barseghyan, A. Khrabustovskyi, Gaps in the spectrum of a periodic quantum graph with periodically distributed δ' -type interactions, *Journal of Physics A: Mathematical and Theoretical* 48, No. 25, Article ID 255201, 19 pp. (2015)
- D. Barseghyan, P. Exner, A regular version of Smilansky model, *Journal of Mathematical Physics* 55, No. 4, Article ID 042104, 13 pp. (2014)
- P. Exner, D. Barseghyan, Spectral estimates for Dirichlet Laplacians on perturbed twisted tubes, *Operators and Matrices* 8, No. 1, 167-183 (2014)
- D. Barseghyan, P. Exner, Spectral estimates for Dirichlet Laplacians and Schrödinger operators on geometrically nontrivial cusps, *Journal of Spectral Theory* 3, No. 4, 465-484 (2013)
- P. Exner, D. Barseghyan, Spectral estimates for a class of Schrödinger operators with infinite phase space and potential unbounded from below, *Journal of Physics A: Mathematical and Theoretical* 45, No. 7, Article ID 075204, 14 p. (2012)
- D. Barseghyan, Possibility to strengthen the Lieb-Thirring inequality for systems of functions of special type *Moscow University Mathematics Bulletin* 66, No. 3, 93-100 (2011)
- D. Barseghyan, Applications of inequalities of Lieb-Thirring type to spectral theory, *Mathematical Notes* 88, No. 2, 160-164 (2010)
- D. Barseghyan, On the possibility of strengthening the Lieb-Thirring inequality, *Mathematical Notes* 86, No. 6, 753-766 (2009)
- D. Barseghyan, On inequalities of Lieb-Thirring type, *Mathematical Notes* 82, No. 4, 451-460 (2007)

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Calculus of Variations

Spectral theory of Schrödinger operators

Functional analysis

Linear algebra

Matematicka analyza