

CURRICULUM VITAE AND LIST OF PUBLICATIONS

• **Personal Details**

Name: Alexander Rasin

Date and place of birth: 28.04.1983, Dnepropetrovsk, Ukraine

Date of immigration: 07.2007

Regular military service (dates): 11.2009-05.2010

Tel: +972-504196719

Address and telephone number at home: 7/11 Zirlson, Bney Brak

• **Education**

BSc in Mathematics 06.2003

Dnepropetrovsk National University,
Ukraine, Department of Mathematics
and Mechanics.

MSc in Mathematics 06.2004

Dnepropetrovsk National University,
Ukraine, Department of Mathematics
and Mechanics,
advisor: Prof. V.A. Tychnin
Title of thesis: Symmetries and
integration of second order nonlinear
evolution equations.

PhD in Mathematics 10.2007

University of Surrey, UK, Department
of Mathematics,
adviser: Prof. P. Hydon.
Title of thesis: Conservation laws and
symmetries of difference equations.

• Employment History

10.2024-now	Senior Lecturer in College of Management.
11.2022- 9.2024	Senior Lecturer in Ariel University.
11.2012-11.2022	Lecturer in Ariel University.
1.2011-11.2012	Post-doc in Weizmann Institute of Science, Israel
10.2007-1.2011	Post-doc in Bar-Ilan University, Israel

• Professional Activitiesd) Editor or member of editorial board of scientific or professional journal

01.2018 – 9.2024	Associated editor and manager
Name of journal:	Functional differential equations.

• Educational activities(a) Courses taught

Real analysis, Ordinary/Partial differential equation, Multi/Single variable calculus, Complex analysis, Fourier and Laplace transforms, Numerical methods – first degree – Ariel University. Advanced Mathematics. Mathematical programming, Numerical methods – second degree – Ariel University.

(b) Research students

2024 – Ishai Frisch - first degree, Ariel University
2024 – Tina Koripadze - first degree, Ariel University
2024 – Eden Gilad - first degree, Ariel University
2024 – Meital Paritzky - first degree, Ariel University
2019 – Ilana Sinke - first degree, Ariel University
2019 – Noa Efrati - first degree, Ariel University
2018 – Shir David - first degree, Ariel University
2018 – Laura Dahan - first degree, Ariel University

• Awards, Citations, Honors, Fellowships(a) Honors, Citation Awards (including during studies)

2005-2007 Distinguished Student Award, Overseas Research Students Awards Scheme, UK – 20000\$.

• **Scientific Publications**

h-index = 10

total citations = 350

Authored books

c) Editorship of collective volumes

Domoshnitsky A., Rasin A, Padhi S. 2020, “Functional Differential Equations and Applications: FDEA-2019”, Ariel, Israel, Springer Proceedings in Mathematics and Statistics, 2021, 379, pp. v–vi <https://link.springer.com/book/9789811662966>

Articles

(a) Refereed articles and refereed letters in scientific journals - running numbers

1. Rasin, A.G. (corresponding author) & Schiff, J. Symmetry structure of integrable hyperbolic third order equations. J. Phys. A: Math. Theor., 56, 48 (2023), 485204. IF 2.132.
2. Rasin, A. G. (corresponding author) Computation of generating symmetries. Communications in Nonlinear Science and Numerical Simulation, 118, (2023), 107003. IF 4.186
3. Rasin, A.G. & Schiff, J (corresponding author). Four Symmetries of the KdV equation. J Nonlinear Sci. 32 (5), (2022), 68. IF 3.443.
4. Rasin, A.G. (corresponding author) & Schiff. J A simple-looking relative of the Novikov, Hirota-Satsuma and Sawada-Kotera equations, Journal of Nonlinear Mathematical Physics 26, 4, (2019), 555-568. IF 0.986.
5. Расин А, (corresponding author) Шифф Д, Неизвестные аспекты преобразований Беклунда и ассоциированное уравнение Дегаспериса–Прочези. Теоретическая и математическая физика 196 (3), (2018), 449-464.
6. Rasin, A.G. (corresponding author) & Schiff, J. Unfamiliar Aspects of Bäcklund Transformations and an Associated Degasperis-Procesi Equation, Theoretical and Mathematical Physics 196 (3), (2018), 1333-1346. IF 0.984.

7. Rasin, A.G. (corresponding author) & Schiff, J. Bäcklund Transformations for the Boussinesq Equation. *J. Phys. A: Math. Theor.*, 50, 32 (2017), 325202. IF 2.132.
8. Rasin, A.G. (corresponding author) & Schiff, J. Bäcklund Transformations for the Camassa–Holm Equation. *J Nonlinear Sci* 27 (1), (2017), 45-69. IF 3.621.
9. Rasin, A. G. (corresponding author), & Schiff, J. The gardner method for symmetries. *J. Phys. A: Math. Theor.*, 46, 15 (2013), 155202. IF 2.132.
10. Rasin, A. G. (corresponding author) Conservation laws and symmetries of asymmetric equations on the quad-graph. *Functional differential equations* 19 (3-4), (2012) p. 341-349
11. Rasin, A. G. (corresponding author) Infinitely many symmetries and conservation laws for quad-graph equations via the Gardner method. *J. Phys. A: Math. Theor.*, 43, (2010), 277-281. IF 2.132.
12. Rasin, A. G., (corresponding author) & Schiff, J. Infinitely many conservation laws for the discrete KdV equation. *J. Phys. A: Math. Theor.*, 42, (2009), 175205. IF 2.132 .
13. Rasin, O. G., (corresponding author) & Hydon, P. E. Conservation laws for integrable difference equations. *J. Phys. A: Math. Theor.*, 40, (2007), 12763-12773. IF 2.132.
14. Rasin, O. G., (corresponding author) and Hydon, P. E. Symmetries of integrable difference equations on the quad-graph. *Stud. Appl. Math.*, 119, (2007), 253-269. IF 3.
15. Sahadevan, R. (corresponding author), Rasin, O. G., and Hydon, P. E. Integrability conditions for nonautonomous quad- graph equations. *J. Math. Anal. Appl.*, 331, (2006), 712-726. IF 1.014 .
16. Rasin, O. G. (corresponding author), and Hydon, P. E. Conservation laws for NQC-type difference equations. *J. Phys. A: Math. Gen*, 39, (2006), 14055-14066. IF 1.933 .
17. Rasin, O. G. (corresponding author), and Hydon, P. E. Conservation laws of discrete Korteweg-de Vries equation. *SIGMA Symmetry Integrability Geom. Methods Appl.* 1 (2005), Paper 026, 6 pp. (electronic). IF 1.040.

18. Tychynin, V. A. (corresponding author), and Rasin, O. G. Nonlocal symmetry and generation of solutions for reaction-diffusion equations. Rep. Math. Phys. 55, 2 (2005), 297-302. IF 0.870
19. Tychynin, V. (corresponding author), and Rasin, O. Nonlocal symmetry and generating solutions for the inhomogeneous Burgers equation. Pr.Inst.Mat.Nats.Akad.Nauk Ukr.Mat.Zastos., 50, Part 1. 2004, pp. 277-281.

• **Lectures and Presentations at Meetings and Invited Seminars not Followed by Published Proceedings**

(a) Invited plenary lectures at conferences/meetings

2016

Traveling wave solutions for the Camassa-Holm and the Degasperis-Procesi equations, Natural Science Symposium, Ariel University Israel.

http://www.ariel.ac.il/images/stories/site/departments/sciences/pdfs/Conference_Abstract_2016.pdf

2009

Symmetries of integrable difference equations, Discrete Integrable Systems, Isaac Newton Institute, Cambridge, UK.

<http://www.newton.ac.uk/seminar/20090318140014501>

(b) Presentation of papers at conferences/meetings

2022

Four Symmetries of the KdV equation.

Functional Differential Equations and Applications FDEA 2022, Ariel University, Israel.

<https://www.ariel.ac.il/wp/alexander-domoshnitsky/festival-of-mathematics-2022/>

2021,

The Gardner Method for Additional Symmetries

Symmetry 2021 - The 3rd International Conference on Symmetry, Online, Israel

<https://symmetry2021.sciforum.net/event/Symmetry2021>

2019,

Bäcklund Transformations Novikov and Associated Novikov Equations
Functional Differential Equations and Applications FDEA 2019, Ariel
University, Israel.

https://www.ariel.ac.il/wp/math/en/fdea2019/?lang=en&preview_nonce=8cfb402b85

Bäcklund Transformations Novikov and Associated Novikov Equations
The 16th Conference “Mathematics in Technical and Natural Sciences”,
Zakopane, Poland.

http://www.wms.agh.edu.pl/konferencje/mntp/Agenda_16thMTNS.pdf

2018,

Bäcklund Transformations and Infinitesimal Symmetries
The 32nd International Colloquium on Group Theoretical Methods in
Physics, Prague, Czech Republic.

<http://kmlinux.fjfi.cvut.cz/~burdices/Group32/new-booklet.pdf>

2017

Bäcklund Transformations for the Boussinesq Equation and Merging
Solitons 8th Israeli-Czech Workshop, Ariel University, Israel.

<https://drive.google.com/file/d/0B87lCDUIEP6LZF9McGQyT3BJLWsxQT B1M0ZncXVOc3ZMQndJ/view?usp=sharing>

2014

The Bäcklund transformations for the Camassa-Holm equation., 5th Israeli-
Czech Workshop, Ariel University, Israel.

<http://www.ariel.ac.il/projects/math/fdea2014/con2014.pdf>

2005

Method for finding conservation laws for partial difference equations,
Symmetry in Nonlinear Mathematical Physics, Kiev, Ukraine.

<https://www.imath.kiev.ua/~appmath/Abstracts2005/Rasin.html>

2003

Nonlocal symmetry and generation of solutions for inhomogeneous Burgers
equation, Symmetry in Nonlinear Mathematical Physics, Kiev, Ukraine.

<https://www.imath.kiev.ua/~snmp2003/abstract2003/Tychynin.html>

(c) Presentations at informal international seminars and workshops

2018

Israeli-Bulgarian Workshop on Applied Mathematics, Ariel, Israel.

2016

Geometric and Algebraic Aspects of Integrability, Durham Symposium,
Durham, UK.

2008

Geometric Numerical, Oberwolfach Seminar, Integration, Oberwolfach-
Walke, Germany.

2007

Workshop, Manifolds and Geometric Integration Colloquia (MaGIC),
AtnaSjoen, Norway.

(d) Seminar presentations at universities and institutions

2024

Shamoon College of Engineering

2021

Ariel University, Israel.

2016

University of Kent, Canterbury, UK.

2016

Ariel University, Israel.

2014

Ariel University, Israel.

2012,

Machon Lev, Israel.

2012

Bar-Ilan University, Israel.

2012

Ariel University, Israel.

2011

Weizmann Institute, Israel.

2011

University of Surrey, Guildford, UK.

2010

University of Surrey, Guildford, UK.

2007

University of Bergen, Bergen, Norway.

2006

University of Durham, Durham, UK.

Additional Information

- I've applied for ISF grant in 2018 and 2021.
- Member of Editorial Board and Manager of the journal Functional Differential Equations published at Ariel University
- I regularly referee articles for the following mathematical journals:
 - Journal of Nonlinear Science
 - SIGMA,
 - Results in Physics,
 - J. Phys. A: Math. Theor,
 - Proceedings Royal Society A.
 - Journal of Nonlinear Mathematical Physics
 - Functional Differential Equations
- I regularly referee the thesis of post-graduate students.
- I have significant experience in working with computer algebras: Maple, Matlab, Mathematics.
- I've almost finished preparing lecture notes for the course "Mathematical analysis for computer science".
- I have experience in understanding and researching Jewish religious texts: Torah, Talmud, Rishonim, Acharonim.
- Language skills: Hebrew, Russian, English.
- Family status: married with 7 children.