

## CURRICULUM VITAE

Taras Goy

## PERSONAL INFORMATION

Date of birth	December 24, 1969
Address:	Faculty of Mathematics and Computer Sciences, Department of Differential Equations and Applied Mathematics, Vasyl Stefanyk Carpathian National University, 57 Shevchenko st., Ivano-Frankivsk, Ukraine, 76018; e-mails: <a href="mailto:taras.goy@pnu.edu.ua">taras.goy@pnu.edu.ua</a> <a href="mailto:tarasgoy@yahoo.com">tarasgoy@yahoo.com</a>

## EDUCATION

1986 – 1993	Vasyl Stefanyk Precarpathian National University, Faculty of Mathematics and Physics, <i>student</i>
1993 – 1996	Pidstryhach Institute for Applied Problems of Mechanics and Mathematics of the National Academy of Sciences of Ukraine, Department of Mathematical Physics, <i>post-graduate student</i>
1998	Yu. Fedkovych Chernivtsi State University, <i>PhD degree</i> Title of PhD thesis: Nonlocal value-boundary problems for partial differential equations. Thesis Advisor: Prof. Bohdan Ptashnyk
2018 – 2020	Vasyl Stefanyk Precarpathian National University, Faculty of Mathematics and Computer Sciences, <i>DrSci student</i>

## RESEARCH INTERESTS

2020 MS Classification:	11B37 Recurrences; 11B39 Fibonacci and Lucas numbers and polynomials and generalizations; 11B65 Binomial coefficients; factorials; $q$ -identities; 11B83 Special sequences and polynomials; 11C20 Matrices, determinants in number theory; 15A15 Determinants, permanents, traces, other special matrix functions; 15B05 Toeplitz, Cauchy, and related matrices; 15B36 Matrices of integers; 05A10 Factorials, binomial coefficients, combinatorial functions; 11B68 Bernoulli and Euler numbers and polynomials; 40A05 Convergence and divergence of series and sequences; 33Bxx Elementary classical functions
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## PROFESSIONAL EXPERIENCE

## Academic Positions:

1995 – 1996	Pidstryhach Institute for Applied Problems of Mechanics and Mathematics of the National Academy of Sciences of Ukraine, Department of Mathematical Physics (L'viv, Ukraine), mathematician
1996 – 2000	Vasyl Stefanyk Precarpathian National University, Faculty of Mathematics and Computer Sciences (Ivano-Frankivsk, Ukraine), assistant
2002 – till now	Vasyl Stefanyk Carpathian (Precarpathian) National University, Faculty of Mathematics and Computer Sciences (Ivano-Frankivsk, Ukraine), associate professor

## RESEARCHER IDENTIFIERS

Web of Science ResearcherID	<a href="https://orcid.org/0000-0002-6212-3095">A-9770-2016</a>
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ORCID	<a href="https://orcid.org/0000-0002-6212-3095">0000-0002-6212-3095</a>
zbMATH Open	<a href="https://zbmath.org/authors/?q=goy+taras">https://zbmath.org/authors/?q=goy+taras</a>
MathSciNet	<a href="https://mathscinet.ams.org/mathscinet/MRAuthorID/624925">https://mathscinet.ams.org/mathscinet/MRAuthorID/624925</a>
SciProfiles	<a href="https://mathscinet.ams.org/mathscinet/MRAuthorID/624925">1901738</a>
arXiv	<a href="https://arxiv.org/a/goy_t_1.html">https://arxiv.org/a/goy_t_1.html</a>
ResearchGate	<a href="https://www.researchgate.net/profile/Taras-Goy">https://www.researchgate.net/profile/Taras-Goy</a>

## MEMBERSHIP

Editorial Board Membership: *Carpathian Mathematical Publications*; *Notes on Number Theory and Discrete Mathematics*; *Far East Journal of Mathematical Sciences*; *JP Journal of Algebra, Number Theory and Applications*; *Advances and Applications in Discrete Mathematics*; *European Journal of Mathematics and Statistics*; *Precarpathian Bulletin of the Shevchenko Scientific Society. Series "Number"*.

Guest Editor: *Contemporary Mathematics (Singapore)*; Special Issue "Advanced Studies in Contemporary Mathematics" (*Axioms*, 2022).

Member of the Scientific Board: *International Symposium on Current Developments in Fundamental and Applied Mathematics Sciences* (Turkey, 2023, 2024); *II International Conference on Mathematics and Computers with Applications* (Turkey, 2026); *X International Conference on Mathematical Sciences* (Turkey, 2026).

Member of the Program Committee: *III International Conference on Mathematics, Computer Science & Engineering* (United Arab Emirates, 2025).

Reviewer for *Mathematical Reviews* (American Mathematical Society).

Reviewer for more than 85 journals, including: *AIMS Mathematics*; *Applicable Analysis and Discrete Mathematics*; *Applied Mathematics E-Notes*; *Applied Mathematics in Science and Engineering*; *Applied Sciences*; *Art of Discrete and Applied Mathematics*; *Electronic Research Archive*; *Fibonacci Quarterly*; *Filomat*; *Integers*; *Integral Transforms and Special Functions*; *International Journal of Mathematics and Mathematical Sciences*; *Journal of Applied Mathematics*; *Journal of Difference Equations and Applications*; *Journal of Mathematics*; *Malaysian Journal of Mathematical Sciences*; *Matematychni Studii*; *Mathematical Methods in the Applied Sciences*; *Mathematics*; *Mediterranean Journal of Mathematics*; *Quaestiones Mathematicae*; *Research in Mathematics*; *Symmetry*; *Transaction on Combinatorics*; *Turkish Journal of Mathematics*; *Ukrainian Mathematical Journal*.

## SELECTED INTERNATIONAL CONFERENCES AND WORKSHOPS (2018–2026)

- ✓ Int. Scientific Conf. "Modern Problems of Applied Mathematics and Information Technology – Al-Khorezmiy" (Uzbekistan, 2018)
- ✓ 6th Int. Conf. on Analytic Number Theory and Spatial Tessellations "Voronoi Impact on Modern Science" (Ukraine, 2018)
- ✓ XII Int. Algebraic Conf. in Ukraine (Ukraine, 2019)
- ✓ Int. Conf. "31th Journées Arithmétiques" (Turkey, 2019)
- ✓ 5th Conf. of the Mathematical Society of the Republic of Moldova (Moldova, 2019)
- ✓ Int. Conf. "Modern Problems of Mathematics and Mechanics" (Azerbaijan, 2019)
- ✓ XI Int. Skorobohatko Math. Conf. (Ukraine, 2020)
- ✓ Int. Workshop on Current Trends in Analysis and Approximation Theory (Italy, 2023)
- ✓ Int. Sci. Conf. "Current Problems of Mechanics and Mathematics" (Ukraine, 2023)
- ✓ XXIII Int. Pure Mathematics Conf. on Algebra, Analysis and Geometry (Pakistan, 2023)
- ✓ XIX Int. Sci. M. Kravchuk Conference (Ukraine, 2023)
- ✓ XI Int. Sci. Conf. "Modern Problems of Mathematics and Mechanics" (Azerbaijan, 2024)
- ✓ VIII Int. Conf. on Mathematics: An Istanbul Meeting for World Mathematicians (Turkey, 2024)
- ✓ III Int. Symposium on Current Developments in Fundamental and Applied Mathematics Sciences (Turkey, 2024)
- ✓ XIV Int. Conf. of the Georgian Mathematical Union (Georgia, 2024)
- ✓ IV Int. Conf. on Applied Algebra (Algeria, 2024)
- ✓ V Int. Conf. dedicated to the 145th anniversary of Hans Hahn (Ukraine, 2024)
- ✓ Int. Conf. on Number Theory and Applications "4èmes Journées Arithmétiques de Meknès" (Morocco, 2025)
- ✓ Int. Workshop on Modern Problems of Analysis, Optimization, Approximation and Their Applications (Italy, 2025)
- ✓ XV Int. Conf. of the Georgian Math. Union (Georgia, 2025)
- ✓ XII Int. Skorobohatko Math. Conf. (Ukraine, 2025)
- ✓ XX Int. Sci. M. Kravchuk Conference (Ukraine, 2025)
- ✓ Int. Sci. Online Conference "Algebraic and geometric methods of analysis" (Ukraine, 2026).

**LIST OF SELECTED PUBLICATIONS (2016–2026)**

1. Adegoke K., Frontczak R., Goy T. Evaluation of some alternating series involving the binomial coefficients  $\binom{4n}{2n}$ , *Carpathian Math. Publ.* (2026), 18(2), to be accepted.
2. Adegoke K., Frontczak R., Goy T. Series and sums involving the floor function, *Montes Taurus J. Pure Appl. Math.* (2026), 8(1), to be accepted.
3. Eser E., Goy T., Özkan E. On a sequence related to Mersenne numbers and its connection to the Horadam sequence, *AIMS Math.* (2026), 14(1), 11760–11775.
4. Kuloğlu B., Goy T., Özkan E. Symmetry and attention dynamics in Ducci-generated Jacobsthal circulant matrices, *Symmetry* (2026), 18(3), 520.
5. Goy T., Shattuck M. Determinants of Toeplitz–Hessenberg matrices with Fuss–Catalan entries, *J. Integer Seq.* (2026), 29, Art. 26.1.2.
6. Adegoke K., Frontczak R., Goy T. Harmonic number series associated with certain generating functions, *Bol. Soc. Mat. Mex.* (2026), 32(1), Art. 9.
7. Goy T., Shattuck M. Determinantal representations of some classical recurrent sequences, *Integers* (2025), 25, Art. #97.
8. Adegoke K., Frontczak R., Goy T. On some series involving the central binomial coefficients, *Proc. Jangjeon Math. Soc.* (2025), 28(3), 329–342.
9. Adegoke K., Frontczak R., Goy T. Combinatorial sums, series and integrals involving odd harmonic numbers, *Afr. Mat.* (2025), 36, Art. 124.
10. Adegoke K., Frontczak R., Goy T. On a problem of Mezđ and its generalizations to three classes of rational zeta series, *Appl. Anal. Discrete Math.* (2025), 19(1), 46–66.
11. Adegoke K., Frontczak R., Goy T. Fibonacci sums modulo 5, *Ann. Math. Sil.* (2025), 39(1), 1–22.
12. Goy T., Shattuck M. Toeplitz–Hessenberg determinant formulas for the sequence  $F_n - 1$ , *Online J. Anal. Comb.* (2024), 19, Art. #1.
13. Adegoke K., Frontczak R., Goy T. Some notes on a Fibonacci–Lucas identity, *Proc. Jangjeon Math. Soc.* (2024), 27(4), 859–869.
14. Adegoke K., Frontczak R., Goy T. On some series involving the binomial coefficients  $\binom{3n}{n}$ , *Notes Number Theory Discrete Math.* (2024), 30(2), 319–334.
15. Goy T., Shattuck M. Determinants of Toeplitz–Hessenberg matrices with generalized Leonardo numbers entries, *Ann. Math. Sil.* (2024), 38(2), 284–313.
16. Goy T., Shattuck M. Determinant identities for the Catalan, Motzkin and Schröder numbers, *Art Discrete Appl. Math.* (2024), 7(1), #P1.09.
17. Adegoke K., Frontczak R., Goy T. New binomial Fibonacci sums, *Palest. J. Math.* (2024), 13(1), 323–339.
18. Adegoke K., Frontczak R., Goy T. Binomial sum relations involving Fibonacci and Lucas numbers, *AppliedMath* (2023), 3(4), 851–881.
19. Adegoke K., Frontczak R., Goy T. Binomial Fibonacci sums from Chebyshev polynomials, *J. Integer Seq.* (2023), 26, Art. 23.9.6.
20. Goy T., Shattuck M. Hessenberg–Toeplitz matrix determinants with Schröder and Fine entries, *Carpathian Math. Publ.* (2023), 15(2), 420–436.
21. Goy T., Shattuck M. Determinants of Some Hessenberg–Toeplitz matrices with Motzkin number entries, *J. Integer Seq.* (2023), 26, Art. 23.3.4.
22. Adegoke K., Frontczak R., Goy T. Reciprocal series involving Horadam numbers, *Ukrainian Math. J.* (2023), 75(3), 335–346.
23. Adegoke K., Frontczak R., Goy T. Additional Fibonacci–Bernoulli relations, *Res. Math.* (2022), 30(2), 3–17.
24. Adegoke K., Frontczak R., Goy T. Fibonacci–Catalan series, *Integers* (2022), 22, #110.
25. Adegoke K., Frontczak R., Goy T. Recurrence relations for the squares of the Horadam numbers and some associated consequences, *Tatra Mt. Math. Publ.* (2022), 82 (2), 17–28.
26. Adegoke K., Frontczak R., Goy T. On a family of infinite series with reciprocal Catalan numbers, *Axioms* (2022), 11(4), 165.
27. Frontczak R., Goy T., Shattuck M. Fibonacci–Lucas–Pell–Jacobsthal relations, *Ann. Math. Inform.* (2022), 54, 28–48.

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28. Frontczak R., Goy T., Shattuck M. Identities relating six members of the Fibonacci family of sequences, *Carpathian Math. Publ.* (2022), 14(1), 6–19.
  29. Adegoke K., Frontczak R., Goy T. Some special sums with squared Horadam numbers and generalized tribonacci numbers, *Palest. J. Math.* (2022), 11(1), 66–73.
  30. Adegoke K., Frontczak R., Goy T. Binomial tribonacci sums, *Discrete Math. Lett.* (2022), 8(1), 30–37.
  31. Frontczak R., Goy T. Chebyshev–Fibonacci polynomial relations using generating functions, *Integers* (2021), 21, #A100.
  32. Frontczak R., Goy T. More Fibonacci–Bernoulli relations with and without balancing polynomials, *Math. Commun.* (2021), 26(2), 215–226.
  33. Adegoke K., Frontczak R., Goy T. Special formulas involving polygonal numbers and Horadam numbers, *Carpathian Math. Publ.* (2021), 27(1), 207–216.
  34. Frontczak R., Goy T. Lucas–Euler relations using balancing and Lucas-balancing polynomials, *Kyungpook Math. J.* (2021), 61(3), 473–486.
  35. Frontczak R., Goy T. General infinite series evaluations involving Fibonacci numbers and the Riemann zeta function. *Mat. Stud.* (2021), 55(2), 115–123.
  36. Goy T., Shattuck M. Determinant formulas of some Hessenberg matrices with Jacobsthal entries. *Appl. Appl. Math.* (2021), 16(1), 191–213.
  37. Frontczak R., Goy T. Combinatorial sums associated with balancing and Lucas-balancing polynomials, *Ann. Math. Inform.* (2020), 52, 97–105.
  38. Goy T., Shattuck M. Some Toeplitz–Hessenberg determinant identities for the tetranacci numbers, *J. Integer Seq.* (2020), 23(6), Art. 20.6.8.
  39. Goy T., Shattuck M. Determinant identities for Toeplitz–Hessenberg matrices with tribonacci number entries, *Trans. Comb.* (2020), 9(2), 89–109.
  40. Goy T., Shattuck M. Fibonacci–Lucas identities and the generalized Trudi formula, *Notes Number Theory Discrete Math.* (2020), 26(3), 203–217.
  41. Frontczak R., Goy T. Mersenne–Horadam identities using generating functions, *Carpathian Math. Publ.* (2020), 12(1), 34–45.
  42. Goy T., Sharyn S. On Pell–Padovan numbers and their connection on Fibonacci numbers, *Carpathian Math. Publ.* (2020), 12(2), 280–288.
  43. Goy T., Shattuck M. Determinant formulas of some Toeplitz–Hessenberg matrices with Catalan entries, *Proc. Indian Acad. Sci. Math. Sci.* (2019), 129, Art. 46.
  44. Goy T., Zatorsky R. On Oresme numbers and their connection with Fibonacci and Pell numbers, *Fibonacci Quart.* (2019), 57(3), 238–245.
  45. Goy T. Pell numbers identities from Toeplitz–Hessenberg determinants and permanents, *Novi Sad J. Math.* (2019), 49(2), 87–94.
  46. Goy T., Shattuck M. Determinants of Toeplitz–Hessenberg matrices with generalized Fibonacci entries, *Notes Number Theory Discrete Math.* (2019), 25(4), 83–95.
  47. Goy T., Shattuck M. Fibonacci and Lucas identities using Toeplitz–Hessenberg matrices, *Appl. Appl. Math.* (2019), 14(2), 699–715.
  48. Goy T. On identities with multinomial coefficients for Fibonacci–Narayana sequence, *Ann. Math. Inform.* (2018), 49, 75–84.
  49. Goy T. Horadam sequence through recurrent determinants of tridiagonal matrix, *Kragujevac J. Math.* (2018), 42(4), 527–532.
  50. Goy T. On new identities for Mersenne numbers, *Appl. Math. E-Notes* (2018), 18, 100–105.
  51. Goy T. Some families of identities for Padovan numbers, *Proc. Jangjeon Math. Soc.* (2018), 21(3), 413–419.
  52. Goy T. On determinants and permanents of some Toeplitz–Hessenberg matrices whose entries are Jacobsthal numbers, *Eurasian Math. J.* (2018), 9(4), 61–67.
  53. Goy T., Zatorsky R. Infinite linear recurrence relation and superposition of linear recurrence equations, *J. Integer Seq.* (2017), 20(5), Art. 17.5.3.
  54. Zatorsky R.A., Goy T.P. Parapermanents of triangular matrices and some general theorems on number sequences, *J. Integer Seq.* (2016), 19(2), Art. 16.2.20.
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