

CURRICULUM VITAE

Tatiana Hessami Pilehrood

Date and place of birth	February 17, 1973; Mogilev, Belarus
Citizenship	Iran
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Research interests

Transcendental number theory, diophantine approximations, linear independence and irrationality of numbers, measures of irrationality and of transcendence, hypergeometric functions, polylogarithmic functions, Riemann zeta function, Padé approximations, number-theoretic remarkable constants.

Education and Research

- **Specialized Kolmogorov's school** in physics and mathematics for young talents, Lomonosov Moscow State University, Moscow, Russia (1989-1990)
- **Lomonosov Moscow State University**, Moscow, Russia (1990-1999)
 - Doctor of Philosophy in Mathematics (December, 1999)
Thesis titled "Arithmetical properties of values of hypergeometric functions" written under the supervision of Prof. Yu.V.Nesterenko
 - Master of Science in Pure and Applied Mathematics (June 25, 1995)
- **Institute for Studies in Theoretical Physics and Mathematics (IPM)**, Tehran, Iran
 - (2002-2003)
 - (2004-present)
 - Research position supported by IPM

- **Research Institute for Fundamental Sciences, Tabriz, Iran**
(2003-2004)
 - Research position

Employment

- **Moscow Institute of Electronics and Mathematics**, Assistant Professor (1995-1998)
- **Shahrekord University**, Shahrekord, Iran, Assistant Professor (2001-present)
 - Includes
 - teaching graduate and postgraduate mathematics courses
 - instructing postgraduate students
 - participation in the research activities of the department

Teaching Experience

- **Moscow Institute of Electronics and Mathematics**, Assistant Professor (1995-1998)
 - *Analytical Geometry and Linear Algebra*, Engineering Department
 - *Linear Algebra II*, Engineering Department
 - *Graph Theory*, Department of Applied Mathematics
- **Shahrekord University**, Assistant Professor (2001-present)
 - *Calculus I*, Mathematics Department, Engineering Department
 - *Calculus II*, Engineering Department
 - *Calculus III*, Engineering Department
 - *Mathematical Analysis II*, Mathematics Department
 - *Mathematical Analysis III*, Mathematics Department
 - *Complex Analysis*, Mathematics Department
 - *Topics in Number Theory*, Mathematics Department
 - *Number Theory*, Mathematics Department
 - *English Language for Mathematicians*, Mathematics Department

Membership

- **Iranian Mathematical Society** (since September 1999)
- **American Mathematical Society** (since January 2006)
- **Mathematical Association of America** (since 2006)

Editing Activity

- Reviewer for the Mathematical Review of the American Mathematical Society (since 2005)

Presentations

• Seminars and Conferences

- Number Theory Seminar, Lomonosov Moscow State University (Spring 1995-1999).
- Seminar on Diophantine Approximations and Transcendental Numbers, Lomonosov Moscow State University (Fall 1995-1999).
- *On linear independence of vectors with polylogarithmic coordinates*, The 30-th International Conference on Mathematics (Ardebil, Iran, September 1999).
- *Lower bounds for linear forms in values of polylogarithms*, The 33-th International Conference on Mathematics (Mashhad, Iran, September 2002).
- *On the positive integral solutions of the third degree Diophantine equation* (with Kh. Hessami Pilehrood) and *On some Diophantine inequalities involving the hypergeometric functions* (with Kh. Hessami Pilehrood). The 34-th Iranian Mathematics Conference (Shahrood, Iran, September 2003).
- *On Mordell diophantine equation* (with Kh. Hessami Pilehrood). Sixth International Conference “Algebra and Number Theory: Modern Problems and Applications” dedicated to 100-year anniversary of N. G. Chudakov (Saratov State University, Saratov, Russia, September 2004).
- *On irrationality of sums of zeta values* (with Kh. Hessami Pilehrood) and *Conditional irrationality measures for generalized Euler’s constant* (with Kh. Hessami Pilehrood) . XXIV Journees Arithmetiques. (Marseille, France, 4-8 July 2005).
- *On irrationality of certain numbers that contain values of the di- and trilogarithm* (with Kh. Hessami Pilehrood and W. Zudilin) and *Approximation formulas for logarithms of some infinite products* (with Kh. Hessami Pilehrood). International Congress of Mathematicians, ICM 2006. (Madrid, Spain, 22-30 August 2006).

Honors and Awards

- High Scholarship for excellent graduate studies, Lomonosov Moscow State University (1991-1995)
- Soros Student Grant, International Soros Science Education Program (ISSEP) (1994-1995)
- Diploma of Master of Science in Mathematics with Honors, Lomonosov Moscow State University (1995)
- Research Fellowship, Institute for Studies in Theoretical Physics and Mathematics (2002)
- Research Fellowship, Research Institute for Fundamental Science, Tabriz, Iran (2003)
- Research Fellowship, Institute for Studies in Theoretical Physics and Mathematics (2004-2005, 2005-2006, 2006-2007)

Publications

1. Kh. Hessami Pilehrood, T. Hessami Pilehrood. *Apéry-like recursion and continued fraction for $\pi \coth \pi$* , submitted for publication.
2. Kh. Hessami Pilehrood, T. Hessami Pilehrood. *Infinite sums as linear combinations of polygamma functions*, submitted for publication.
3. Kh. Hessami Pilehrood, T. Hessami Pilehrood. *On conditional irrationality measures for values of the digamma function*, J. Number Theory, **123**(2007), no.1, p.241-253.
4. Kh. Hessami Pilehrood, T. Hessami Pilehrood. *Arithmetical properties of some series with logarithmic coefficients*, Math. Zeitschrift, **255** (2007), no.1, p.117-131.
5. Kh. Hessami Pilehrood, T. Hessami Pilehrood, W. Zudilin. *Irrationality of certain numbers that contain values of the di- and trilogarithm*, Math. Zeitschrift, **254** (2006), no.2, p.299-313.
6. T. Hessami Pilehrood, Kh. Hessami Pilehrood. *On irrationality of the sums of zeta values*, Mat. Zametki, **79** (2006), no.4, p.607-618; English transl.: Math. Notes., **79** (2006), no.4, p.561-571.
7. Kh. Hessami Pilehrood, T. Hessami Pilehrood. *On sums of two rational cubes*, Indian J. Pure Appl. Math. **36** (2005), no.12, p.707-717.
8. Kh. Hessami Pilehrood, T. Hessami Pilehrood. *On the diophantine equation $x^2 + 3 = py^n$* , Indian J. Pure Appl. Math. **36** (2005), no.8, p.431-439.
9. T. Hessami Pilehrood, Kh. Hessami Pilehrood. *Lower bounds for linear forms in values of polylogarithms*, Mat. Zametki, **77** (2005), no. 4, p.623-629; English transl.: Math. Notes, **77** (2005), no. 4, p.573-579.
10. Kh. Hessami Pilehrood, T. Hessami Pilehrood. *On the diophantine equation $x^2 + 3 = py^{p-1}$* , (in Russian), Chebyshevskii Sbornik, **5** (2004), no. 4 (12), p.118-124.
11. Kh. Hessami Pilehrood, T. Hessami Pilehrood. *On Mordell diophantine equation* (in Russian), Chebyshevskii sbornik, **5** (2004), no. 2 (10), p.167-171.
12. T. Hessami Pilehrood, Kh. Hessami Pilehrood. *Criteria for irrationality of generalized Euler's constant*, J. Number Theory, **108** (2004), no. 1, p.169-185.
13. T. Hessami Pilehrood. *On arithmetical properties of the values of polylogarithmic functions*, Fundam. Prikl. Mat. **7** (2001), no 4, p.1237-1258;
<http://www.math.msu.su/~fpm/rus/k01/k014/k01416h.htm>

14. T. Hessami Pilehrood. *Lower bounds for linear forms in values of certain hypergeometric functions*, Mat.Zametki. **67** (2000), no 3, p.441-451; English transl.: Math. Notes. **67** (2000), no 3, p.372-381.
15. T. Hessami Pilehrood. *Linear independence of vectors with polylogarithmic coordinates*, Vestnik Moskov. Univ.Ser.I Mat. Mekh. No 6. 1999, p.54-56; English transl.: Moscow Univ. Math. Bull. **54** (1999), no. 6, p.40-42.
16. T. Hessami Pilehrood. *Lower bound for a linear form*, Mat.Zametki **66** (1999), no.4, p.617-623; English transl.: Math. Notes. **66** (1999), no. 4, p.507-512.
17. T. Hessami Pilehrood. *Linear independence of vectors with polylogarithmic coordinates*, All-Russian Institute for Scientific Information (VINITI). 1999. No. 1873-V.99, p.1-25.
18. T. Hessami Pilehrood. *On linear independence measure for values of hypergeometric functions*, All-Russian Institute for Scientific Information (VINITI). 1999. No. 1036-V.99, p.1-17.