

Curriculum Vitae

June 20, 2015

Thomas Ernst

Född i Uppsala 60-08-17

1 Tidiga studier

Gymnasieexamen naturvetenskaplig linje 79-06-08 i Malmö. Studerande på teknisk fysik-linjen i Lund 1979-1985. Civilingenjör 85-10-21.

2 Studieresultat

Matematikkurser: Ordinära differentialekvationer 5p, Gbg, 1989.

Algebraiska strukturer 5p, Gbg, 1991.

Talteori 5p, Uppsala, 1996

Allmän relativitetsteori 4p, Uppsala maj 2003.

Forskarutbildningskurser: Galoisteori 5p, Stockholms Universitet 1991 (examinator Jan-Erik Roos)

Topologi 4p, KTH, 1992 (examinator Lars Andersson)

Reell analys 5p, KTH 1994 (examinator Lars Andersson)

Elementär differentialgeometri 5p, KTH 1995 (examinator Lars Andersson)

Matrisgrupper 4p, KTH 1996 (examinator Dan Laksov)

Differentialgeometri 5B5210 5p, KTH 970815, (examinator Lars Andersson) (innehåll: bl.a. Principal- och vektorbuntar, karakteristiska klasser, analys på mångfalder, Hodge-teori, spinorer, indexsatsen)

Symmetriska funktioner och grupprepresentationer 4p, KTH 980615, (examinator Sergei Silvestrov)

Forskarutbildningskurser vid Uppsala universitet:

Reell och komplex analys 6p, juni 1995. (examinator: Sten Kaijser)

Komplex analys C+D 5p, juni 1996.(examinator: Dennis Hejhal)

Harmonisk analys på symmetriska rum 1, 4p, oktober 1996. (examinator: Sten Kaijser)

Analytisk talteori, 5p, 15 maj 1997 (examinator: Sten Kaijser)

Distributionsteori, 6p, april 1997 (examinator: Christer Kiselman)

Liealgebra, Liegrupper och Representationsteori, 5p, 6 juni 1997, (examinator: Sergei Silvestrov)

Meromorfa funktioner och Riemannytor, 6p, 22 september 1997 (examinator: Sten Kaijser)

Radontransformen, 4p, 11 december 1997, (examinator: Christer Kiselman)

Operatoralgebra, 6 p, 1 september 1999, (examinator: Sergei Silvestrov)

3 Doktorsavhandling:

Avhandlingen behandlar q-analys, q-hypergeometriska serier och symmetriska polynom. Den presenterades 14:e november 2002.

4 Professionella uppdrag

1. Referee för the Bulletin of the Belgian Mathematical Society - Simon Stevin.
2. Referee för Journal of nonlinear mathematical physics.
3. Referee för Indian Journal of mathematics.
4. Referee för Advan. Stud. Contemp. Math. (ASCM).
5. Referee för Advances in Difference Equations.
6. Referee för Elemente der Mathematik.
7. Referee för Czechoslovak Mathematical Journal.
8. Referee för Electronic Journal of Linear Algebra.
9. Referee för Revista Matematica Complutense
10. Referee för Linear algebra and its applications
11. Referee för Discrete mathematics
12. Referee för Proceedings of Estonian Academy of Sciences

13. Referee för Analele Stiintifice ale Univ. Ovidius Constanta, Ser. Matematica
14. Referee för The Ramanujan Journal
15. Referee för Electronic Journal of combinatorics
16. Referee för Axioms
17. Referee för Linear and Multilinear Algebra
18. Referee för Journal of number theory
19. Referee för The American Mathematical Monthly.
20. Referee för Journal of Applied Mathematics, Statistics and Informatics (JAMSI)
21. Referee för Le Matematiche
22. Referee för Journal of Mathematical Inequalities
23. Referee för Publicationes Mathematicae Debrecen.
24. Reviewer för mathematical reviews.
25. Reviewer för Annales Mathematiques du Quebec

5 Reviewade artiklar för Zentralblatt MATH

Kowalenko, Victor Exactification of the asymptotics for Bessel and Hankel functions. (English) [J] Appl. Math. Comput. 133, No.2-3, 487-518 (2002). 33C10

Perla Menzala, G.; Vasconcellos, C.F.; Zuazua, E. Stabilization of the Korteweg-de Vries equation with localized damping. (English) [J] Q. Appl. Math. 60, No.1, 111-129 (2002). 35Q53 93D21 35B40

Van, Peter Weakly nonlocal irreversible thermodynamics. (English) Ann. Phys. (8) 12, No.3, 146-173 (2003). MSC2000: 80A10 53B50 82B35 Zbl 1039.35106

Koch, H.; Tzvetkov, N. On the local well-posedness of the Benjamin-Ono equation in $H^S()$. (English) [J] Int. Math. Res. Not. 2003, No.26, 1449-1464 (2003). 35Q53 76B03 42B25

Binz, Ernst; Schempp, Walter Entanglement, parataxy, and cosmology. (English) [CA] de Gosson, Maurice (ed.), Jean Leray '99 conference proceedings. The Karlskrona conference, Sweden, August 1999 in honor of Jean Leray. Dordrecht: Kluwer Academic Publishers. Math. Phys. Stud. 24, 483-542 (2003).35Q75

Belgiorno, F. Notes on the third law of thermodynamics. I. (English) [J] J. Phys. A, Math. Gen. 36, No.30, 8165-8193 (2003)80A05 53C80 Zbl 1041.80002

Belgiorno, F. Notes on the third law of thermodynamics. II. (English) [J] J. Phys. A, Math. Gen. 36, No.30, 8195-8221 (2003).

Sastre, J.; Jdar, L. Asymptotics of the modified Bessel and the incomplete gamma matrix functions. (English) [J] Appl. Math. Lett. 16, No.6, 815-820 (2003). 33B20 33C10

Predel, Matthias Expansion of Bessel functions of the first kind $J_n(ax)$ resp. modified Bessel functions of the first kind $I_n(ax)$ in terms of $J_k(x) \cdot J_{n-k}((a-1)x)$ resp. $I_k(x) \cdot I_{n-k}((a-1)x)$, where $n, k \in \mathbb{N}$. (English) [J] Integral Transforms Spec. Funct. 14, No.6, 529-530 (2003). 33C10

Brown, B.M.; Eastham, M.S.P. The Hurwitz theorem for Bessel functions and antibound states in spectral theory. (English) [J] Proc. R. Soc. Lond., Ser. A, Math. Phys. Eng. Sci. 459, No.2038, 2431-2448 (2003) 33C10 34B24

Area, Iván; Dimitrov, Dimitar K.; Godoy, Eduardo; Ronveaux, André Zeros of Gegenbauer and Hermite polynomials and connection coefficients. (English) [J] Math. Comput. 73, No.248, 1937-1951 (2004). *33C45 26C10

Malits, P. Dual and triple Fourier-Bessel series equations. (English) Comput. Math. Appl. 48, No. 5-6, 823-831 (2004). MSC2000: 33C10 41A58,

Chen, Kwang-Wu Congruences for Euler numbers. (English) [J] Fibonacci Q. 42, No.2, 128-140 (2004). 11B68 11A07

Garg, Mridula; Mittal, Shweta Study of a generalization of multivariable Bessel polynomials. (English) Agarwal, A. K. (ed.) et al., Proceedings of the 5th annual conference of the Society for Special Functions and their Applications (SSFA), Lucknow, India, February 8-10, 2004. Chennai: Society for Special Functions and their Applications (SSFA). 31-41 (2004). MSC2000: 33C50 33C70,

Luciatti, James A class of identities relating Whittaker and Bessel functions. (English) J. Math. Anal. Appl. 296, No. 1, 1-7 (2004). MSC2000: 33C10

Zhang, Jing; Zhou, Zhewei Chebyshev approximation of the second kind of modified Bessel function of order zero. (English) Appl. Math. Mech., Engl. Ed. 25, No.5, 483-487 (2004). 33C10

Vallée, Olivier; Soares, Manuel Airy functions and applications to physics. (English) [B] London: Imperial College Press. x, (2004). 33C10 33-02 33C90

Boersma, J.; Glasser, M. L. A differentiation formula for spherical Bessel functions. J. Phys. A 38 (2005), no. 8, 1687-1690. 33C10

Allegretto, Walter; Lin, Yanping; Ma, Shuqing On the time periodic thermostat problem. (English) Eur. J. Appl. Math. 15, No. 1, 55-77 (2004). MSC2000: 35Q60 35R10 35B41

Jochmann, F. Nonlinear Maxwell-equations in the thin-film limit. Asymptot. Anal. 40 (2004), no. 3-4, 189-210. 35Q60

Zhang, Linghai Dissipation and decay estimates. (English) Acta Math. Appl. Sin., Engl. Ser. 20, No. 1, 59-76 (2004). MSC2000: 35Q53 35B40,

Yin, Hong-Ming On a nonlinear Maxwell's system in quasi-stationary electromagnetic fields. Math. Models Methods Appl. Sci. 14 (2004), no. 10, 1521-1539. 35Q60 (78A45)

Nicaise, Serge; Pignotti, Cristina Internal stabilization of Maxwell's equations in heterogeneous media. (English) Abstr. Appl. Anal. 2005, No. 7, 791-811 (2005). MSC2000: 34 35Q60

- Komech, A.I.; Mauser, N.J.; Merzon, A.E. On Sommerfeld representation and uniqueness in scattering by wedges. *Math. Methods Appl. Sci.* 28, No.2, 147-183 (2005). 35Q60, 78A45
- Qiu, S.-L.; Vuorinen, M. Special functions in geometric function theory. Kuhnau, R. (ed.), *Handbook of complex analysis: geometric function theory. Volume 2.* Amsterdam: Elsevier/North Holland. 621-659 (2005). 33C 30C
- Reula, Oscar; Sarbach, Olivier A model problem for the initial-boundary value formulation of Einstein's field equations. (English) [J] *J. Hyperbolic Differ. Equ.* 2, No.2, 397-435 (2005). 35Q75 83C05
- Biswas, Anjan Adiabatic dynamics of non-Kerr law vector solitons. *Dyn. Contin. Discrete Impuls. Syst. Ser. A Math. Anal.* 12 (2005), no. 3-4, 363-373. 35Q55 35Q51
- Bona, Jerry L.; Varlamov, Vladimir V. Wave generation by a moving boundary. *Nonlinear partial differential equations and related analysis*, 41-71, *Contemp. Math.*, 371, Amer. Math. Soc., Providence, RI, 2005. 35Q53
- Guo, Yan; Shu, Chi-Wang; Zhou, Tie: The dynamics of a plane diode. *SIAM J. Math. Anal.* 35 (2004), no. 6, 1617-1635 35Q72
- Guo, Victor J.W. Elementary proofs of some q -identities of Jackson and Andrews-Jain. (English) [J] *Discrete Math.* 295, No.1-3, 63-74 (2005). 33D15
- Kim, Yong Sup; Rathie, Arjun K.; Lee, Chang Hyun On q -Gauss's second summation theorem. *Far East J. Math. Sci. (FJMS)* 17, No.3, 299-303 (2005) 33C20 33D05 33D15.
- Kim, Taekyun; Adiga, C. On the q -analogue of gamma functions and related inequalities. (English) *JIPAM, J. Inequal. Pure Appl. Math.* 6, No.4, Paper No.118, 4 p., (2005). MSC 2000: 33D05 33B15 26D20
- Kozakevicius, Alice; Vera, Octavio On the unique continuation property for a nonlinear dispersive system. (English) *Electron. J. Qual. Theory Differ. Equ.* 2005, Paper No. 14, 23 p., electronic only (2005). MSC2000: 35Q53 37K05 35B60,
- Fitouhi, Ahmed; Brahim, Kamel; Bettaibi, Neji Asymptotic approximations in quantum calculus. (English) *J. Nonlinear Math. Phys.* 12, No.4, 586-606 (2005). 33D05 44A10
- Zhang, Yusen; Chen, Wei q -Triplicate inverse series relations with applications to q -series. (English) [J] *Rocky Mt. J. Math.* 35, No.4, 1407-1427 (2005) *Rocky Mt. J. Math.* 35, No.4, 1407-1427 (2005). 33D15 15A09
- D'Aprile, Teresa Solitary charged waves interacting with the electrostatic field. *J. Math. Anal. Appl.* 317, No.2, 526-549 (2006).
- Gravejat, Philippe Asymptotics for the travelling waves in the Gross-Pitaevskii equation. (English) *Asymptotic Anal.* 45, No. 3-4, 227-299 (2005). MSC2000: 35Q55 76G25 35C20
- Slepcev, D.; Pugh, M.C. Selfsimilar blowup of unstable thin-film equations. *Indiana Univ. Math. J.* 54, No.6, 1697-1738 (2005). 35Q35 35B40 76B15
- Arens, Tilo; Hohage, Thorsten On radiation conditions for rough surface scattering problems. (English) *IMA J. Appl. Math.* 70, No. 6, 839-847 (2005). MSC2000: 35P25 35J25

Lorch, Lee The first positive zeros of cylinder functions and of their derivatives. (English) Begehr, H. G. W. (ed.) et al., Advances in analysis. Proceedings of the 4th international ISAAC congress, Toronto, Canada, August 11–16, 2003. Hackensack, NJ: World Scientific. 423-428 (2005). MSC2000: 33C10

van Deun, Joris; Cools, Ronald Integrating products of Bessel functions using the incomplete gamma function. (English) Simos, Theodore S. (ed.) et al., ICNAAM 2005. International conference on numerical analysis and applied mathematics 2005. Official conference of the European Society of Computational Methods in Sciences and Engineering (ESCMSE), Rhodes, Greek, September 16–20, 2005. Weinheim: Wiley-VCH. 668-671 (2005). MSC2000: 33C10 65D20,

Bernstein, Dan A combinatorial proof of a bibasic trigonometric identity. Eur. J. Comb. 27, No.4, 518-525 (2006). 33B10 20B30

Brown, B.M.; Eastham, M.S.P. A note on the Dixon formula for a finite hypergeometric series. (English) J. Comput. Appl. Math. 194, No. 1, 173-175 (2006) 33C10 34B24

Zhislin, Grigorii On the essential spectrum of many-particle pseudorelativistic Hamiltonians with permutational symmetry account. (English) SIGMA, Symmetry Integrability Geom. Methods Appl. 2, Paper 024, 9 pages, electronic only (2006). 35Q75 35P05 35P15

Chen, Chao-Ping; Qi, Feng Logarithmically completely monotonic functions relating to the gamma function. (English) J. Math. Anal. Appl. 321, No. 1, 405-411 (2006). *33B15

Lewandowski, Jerome L.V. Solution of Burgers' equation using the marker method. (English) Int. J. Numer. Anal. Model. 3, No. 1, 80-93 (2006). *35Q53 60H35

Arbieto, A.; Corcho, A.J.; Matheus, C. Rough solutions for the periodic Schrödinger–Korteweg–de Vries system. (English) J. Differ. Equations 230, No. 1, 295-336 (2006). *35Q35 76B15

Rudnev, M.; Yurov, A.V.; Yurov, V.A. Lax pairs for higher-dimensional evolution PDEs and a 3+1 dimensional integrable generalization of the Burgers equation. (English) Proc. Am. Math. Soc. 135, No. 3, 731-741 (2007). MSC2000: *35Q53 35Q58

Li, Yuxiang; Wang, Youde Bubbling location for f -harmonic maps and inhomogeneous Landau-Lifshitz equations. (English) Comment. Math. Helv. 81, No. 2, 433-448 (2006). MSC2000: *35Q60 58E20 82D40

Athanasiadis, Christodoulos; Kardasi, Eleni On the far-field operator for electromagnetic scattering in chiral media. (English) Appl. Anal. 85, No. 6-7, 623-639 (2006). MSC2000: *35Q60 78A45,

Komech, A.I.; Merzon, A.E. Limiting amplitude principle in the scattering by wedges. (English) Math. Methods Appl. Sci. 29, No. 10, 1147-1185 (2006). MSC2000: *35Q60 78A45 35C20

Rubinstein, Jacob; Sternberg, Peter; Wolansky, Gershon Elliptic problems on networks with constrictions. (English) Calc. Var. Partial Differ. Equ. 26, No. 4, 459-487 (2006). MSC2000: *35Q60 78M30 78M35

- Demagnet, Laurent; Schlag, Wilhelm Numerical verification of a gap condition for a linearized nonlinear Schrödinger equation. (English) *Nonlinearity* 19, No. 4, 829-852 (2006). MSC2000: *35P30 35Q55 65N25,
- Scheel, Arnd Coarsening fronts. (English) *Arch. Ration. Mech. Anal.* 181, No. 3, 505-534 (2006). MSC2000: *35Q80 37K20 37K50
- Fouassier, Elise High frequency limit of Helmholtz equations: refraction by sharp interfaces. (English) *J. Math. Pures Appl.* (9) 87, No. 2, 144-192 (2007). MSC2000: *35Q60 35J05 78A45, Monk, Peter; Sun, Jiguang Analysis of an eddy current and micromagnetic model. (English) *Appl. Anal.* 85, No. 12, 1509-1525 (2006). MSC2000: *35Q60 78A55
- Pauly, Dirk Low frequency asymptotics for time-harmonic generalized Maxwell's equations in nonsmooth exterior domains. (English) *Adv. Math. Sci. Appl.* 16, No. 2, 591-622 (2006). MSC2000: *35Q60 78A25 78A30,
- Colliander, James; Keel, Markus; Staffilani, Gigliola; Takaoka, Hideo Symplectic nonsqueezing of the Korteweg-de Vries flow. (English) *Acta Math.* 195, No. 2, 197-252 (2005). MSC2000: *35Q53 37K25 47H20 Hmidi, Taoufik; Ker-aani, Sahbi Blowup theory for the critical nonlinear Schrödinger equations revisited. (English) *Int. Math. Res. Not.* 2005, No. 46, 2815-2828 (2005). MSC2000: *35Q55 35B40
- Muzaffar, Habib; Williams, Kenneth S. Evaluation of complete elliptic integrals of the first kind at singular moduli. (English) *Taiwanese J. Math.* 10, No. 6, 1633-1660 (2006). MSC2000: *11F20 11E16 11E25
- Braianov, I.; Marias, F.; Reneaume, J.M. Dynamic simulation of a fluidized bed incineration process. Influence of the interpolation scheme. (English) *JNAIAM, J. Numer. Anal. Ind. Appl. Math.* 1, No. 2, 175-200 (2006). MSC2000: *35Q80 80A25,
- Ackermann, Nils A nonlinear superposition principle and multibump solutions of periodic Schrödinger equations. (English) *J. Funct. Anal.* 234, No. 2, 277-320 (2006). MSC2000: *35Q55 35B10 Conway, J.T. Fourier and other series containing associated Legendre functions for incomplete Epstein-Hubbell integrals and functions related to elliptic integrals. (English) *Integral Transforms Spec. Funct.* 18, No. 3, 179-191 (2007). MSC2000: *42A16 33E05 33C05,
- El-Wakil, S.A.; Abulwafa, E.M.; Elhanbaly, A.; Abdou, M.A. The extended homogeneous balance method and its applications for a class of nonlinear evolution equations. (English) *Chaos Solitons Fractals* 33, No. 5, 1512-1522 (2007). MSC2000: *35Q53 35Q55 35-04,
- Fouassier, Elise High frequency limit of Helmholtz equations: refraction by sharp interfaces. (English) *J. Math. Pures Appl.* (9) 87, No. 2, 144-192 (2007). MSC2000: *35Q60 35J05 78A45,
- Zenchuk, A.I.; Santini, P.M. Dressing method based on the homogeneous Fredholm equation: quasilinear PDEs in multidimensions. (English) *J. Phys. A, Math. Theor.* 40, No. 23, 6147-6174 (2007). MSC2000: *35Q58 35Q35 65M25,
- Eller, Matthias M. Continuous observability for the anisotropic Maxwell system. (English) *Appl. Math. Optimization* 55, No. 2, 185-201 (2007). MSC2000: *35Q60 93B07, Rudnev, M.; Yurov, A.V.; Yurov, V.A. Lax pairs for higher-

dimensional evolution PDEs and a $3 + 1$ dimensional integrable generalization of the Burgers equation. (English) Proc. Am. Math. Soc. 135, No. 3, 731-741 (2007). MSC2000: *35Q53 35Q58 37K10,

Giniatouline, Andrei; Zapata, Oswaldo On some qualitative properties of stratified flows. (English) Paycha, S. (ed.) et al., Geometric and topological methods for quantum field theory. Proceedings of the summer school, Villa de Leyva, Colombia, July 11–29, 2005. Providence, RI: American Mathematical Society (AMS). Contemporary Mathematics 434, 193-204 (2007). MSC2000: *35Q35 35B40 35B65

Zbl pre05305553 Hall, Richard R. Some trigonometric and elliptic integrals. (English) Comput. Methods Funct. Theory 8, No. 2, 531-544 (2008). MSC2000: *33E05 33B10

Guo, Cuihua; Cui, Shangbin Solvability of the Cauchy problem of non-isotropic Schrödinger equations in Sobolev spaces. (English) Nonlinear Anal., Theory Methods Appl. 68, No. 4 (A), 768-780 (2008). MSC2000: *35Q55

Nobe, Atsushi Ultradiscrete QRT maps and tropical elliptic curves. (English) J. Phys. A, Math. Theor. 41, No. 12, Article ID 125205, 12 p. (2008). MSC2000: *35Q53 37K10 33E05,

El-Wakil, S.A.; Abulwafa, E.M.; Elhanbaly, A.; Abdou, M.A. The extended homogeneous balance method and its applications for a class of nonlinear evolution equations. (English) Chaos Solitons Fractals 33, No. 5, 1512-1522 (2007). MSC2000: *35Q53 35Q55 35-04,

Dai, Chaoqing; Zhang, Jiefang Variable separation solutions for the $(2 + 1)$ -dimensional generalized Nizhnik-Novikov-Veselov equation. (English) Chaos Solitons Fractals 33, No. 2, 564-571 (2007). MSC2000: *35Q53 35A20

Heikkala, V.; Lindn, H.; Vamanamurthy, M.K.; Vuorinen, M. Generalized elliptic integrals and the Legendre \mathcal{M} -function. (English) J. Math. Anal. Appl. 338, No. 1, 223-243 (2008).

6 Deltagande i

1. 7th international Colloquium Quantum groups and integrable systems, Prag 18-20 juni 1998 med föredrag
2. European school in group theory, Leiden 21 juni-4 juli 1998.
3. 4th international conference on lattice path combinatorics and applications, Wien 8-10 juli 1998.
4. Workshop on special functions and applications, Lund 7 maj 1999 med föredrag.
5. Conference on q -Series with Applications to Combinatorics, Number Theory, and Physics, University of Illinois, 26-28 oktober 2000 med föredrag.
6. 10th international Colloquium Quantum groups and integrable systems Prag, 21-23 juni 2001 med föredrag.

7. Conference on orthogonal functions and related topics, Røros, Norway, 12 - 16 augusti, 2003, med föredrag.
8. Seventh international symposium on orthogonal polynomials, special functions and applications, Köpenhamn 18-22 augusti 2003, med föredrag i parallell session.
9. International Conference on Difference Equations, Special Functions and Applications, München, 25-30 juli 2005, med föredrag.
10. Progress on Difference Equations, Homburg (Saar), 5-9 mars 2006.
11. Progress on Difference Equations, Salzburg, 31 mars -5 april 2007.
12. Orthogonal polynomials, Special Functions and Applications, Marseille, juli 2007
13. Peterson Conference Novacella Italy July 27 -August 4, 2007, med föredrag.
14. Progress on Difference Equations, Salzburg, 2008, med föredrag.
15. Noncommutative Structures in Mathematics and Physics Brussels, July 22-26, 2008, med föredrag i parallell session.
16. Föredrag, Winter conference on Difference Equations Homburg (Saar), January 2009.
17. Jahrestagung der DMV, Graz 20-25. september 2009, med föredrag i parallell session.
18. ICNAAM, Rhodos 19-25 september 2010 med 3 föredrag i parallell session.
19. Special functions and orthogonal polynomials of Lie groups and their applications, Decin, Czech Republic 14-20 augusti, 2011, med föredrag.
20. 17th ILAS Conference, Pure and Applied Linear Algebra: The new Generation Braunschweig, Germany, 22-26 augusti, 2011, med föredrag.
21. Orthogonal polynomials and special functions, Copenhagen June 11-15, 2012, med föredrag.
22. QQQ, Tallin, 9-14 July 2012 , med två föredrag i parallell session.
23. European Wolfram Technology Conference Frankfurt, 2013, 2014 och 2015
24. July 9-12, 2013, Kongsberg, Norway: conference on "Moduli Operads and Dynamics", at Buskerud University College, med föredrag.
25. Jahrestagung der DMV, Innsbruck, 23-27 September, 2013 med föredrag i parallell session.
26. Group 30, Gent 14-18 juli 2014, med föredrag i parallell session.

7 Vistelse på

1. Mittag-Leffler institutet maj 1999 med föredrag, och våren 2005 med föredrag 22 feb. och 3. mars.
2. Institutionen för teoretisk fysik i München, juli 1999 med föredrag.
3. Penn state university 23-24 oktober 2000 med föredrag.
4. Wolfram research (Mathematica), Champaign, Illinois, 29 oktober 2000.
5. Institutionen för matematik, Albert-Ludwigs-Universität Freiburg, 13 juni 2001, med föredrag.
6. Visual Analysis AG (Mathematica), München 17 juni 2001.
7. Institutionen för matematik i Wien, 19 juni 2001.
8. Institutionen för matematisk fysik i Ulm, 11-13 juli 2001.
9. Institutionen för teoretisk fysik i Uppsala med föredrag 26 april 2002.
10. Institutionen för matematik i Stuttgart, juli 2002.
11. Institutionen för matematik vid tekniska högskolan i Luleå med föredrag 29 januari 2003.
12. Institutionen för matematik, Technical University of Denmark, Lyngby vid minst 10 tillfällen.
13. l'Institut d'électronique et d'informatique Gaspard-Monge Université de Marne-la-Vallée , Paris, med föredrag, 17 januari 2003.
14. RISC combinatorics group (Mathematica), Linz, Österrike, 20-21 januari 2003 med föredrag, maj 2003.
15. Växjö university 4 Maj, 2004 med föredrag.

8 Publikationer:

1. A new method for q -calculus. Uppsala dissertations in mathematics 25, 2002.
2. A method for q -calculus. *J. nonlinear mathematical physics* **10** No.4 (2003) 487–525.
3. Some results for q -functions of many variables. *Rendiconti di Padova*, **112** (2004) 199–235.
4. Generalized Cauchy-Vandermonde determinants. *Advan. Stud. Contemp. Math.* **11**, no. 1 (2005) 1-10.

5. q -Generating functions for one and two variables. *Simon Stevin*, **12** no. 4, 2005, 589–605.
6. q -Bernoulli and q -Euler Polynomials, An Umbral Approach. *International journal of difference equations* **1** no. 1 2006, 31–80.
7. Les déterminants généralisés de Cauchy. *Advances in Dynamical Systems and Applications*. **1** no. 1 2006, 59–77.
8. q -analogues of some operational formulas. *Algebras Groups Geom.* **23** (2006), no. 4, 354–374.
9. A renaissance for a q -umbral calculus. Elaydi, S. (ed.) et al., Difference equations, special functions and orthogonal polynomials. Proceedings of the international conference, Munich, Germany, July 25–30, 2005. Hackensack, NJ: World Scientific. 178–188 (2007).
10. Some new formulas involving Γ_q functions. *Rendiconti di Padova*, **118** (2007), 159–188.
11. Examples of a q -umbral calculus. *Advan. Stud. Contemp. Math.* **16**, No. 1, 1–22 (2008)
12. Motivation for Introducing q -Complex Numbers. *ADSA Special Volume in Honor of Allan Peterson* 3(1) 107–129 2008.
13. The different tongues of q -calculus Proceedings of Estonian Academy of Sciences. **57** no. 2 81–99 2008
14. q -Stirling numbers, an umbral approach. *Advances in Dynamical Systems and Applications* 3 (2) (251–282) 2008
15. q -calculus as operational algebra. Communications of the Laufen colloquium on science, Laufen, Austria, April 1–5, 2007. Aachen: Shaker. Berichte aus der Mathematik, 7. 1–31 (2007).
16. q -calculus as operational algebra. Proceedings of Estonian Academy of Sciences. no 58, (2) (73–97) 2009.
17. q -deformed matrix pseudo-groups. *Royal Flemish Academy of Belgium* 2010.
18. Sur les polynômes q -Hermite de Cigler. *Algebras Groups Geom.* **27**, 121–142 2010
19. Die Jacobi–Gudermann–Glaisher elliptischen Funktionen nach Heine. *Hadronic J.* no 33, 273–302 2010.
20. Multiple q -hypergeometric transformations involving q -integrals, Proceedings of the 9th Annual Conference of the Society for Special Functions and their Applications (SSFA) 9 2010, 91–99.

21. Zur Theorie der Γ_q -Funktion. *Proceedings Jangjeon Math. Soc.* 14 2011, 91-113
22. q -analogues of general reduction formulas by Buschman and Srivastava and an important q -operator reminding of MacRobert. *Demonstratio Mathematica* No. 2 Vol.44 2011, 285-296
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24. Convergence aspects for q -Lauricella functions 1. *Adv. Studies Contemp. Math.* 22 (1), 2012, 35-50.
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Rapporterna 1,3,4,5 och en del av rapport 6 är inkluderade i avhandlingen. Mitt bidrag till rapport 2 är delvis inkluderad i avhandlingen eller i rapport 5.. Rapport 8 är helt inkluderad i publikation 3. Rapport 10 är en utökad variant av publikation 4.