Warsaw, September 12, 2023

Dr hab. Sławomir Michalik
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CURRICULUM VITAE

Sławomir Michalik was born on July 20, 1972 in Warsaw, Poland. Since 2000 married and has 3 children.

EDUCATION — SCIENTIFIC DEGREES:

1991–1996, University of Warsaw, Faculty of Mathematics, Informatics and Mechanics (MIMUW)

1996, MSc in Mathematics, MIMUW, the thesis *A kernel theorem for some spaces of generalized functions* written under the supervision of dr Grzegorz Łysik

1997–2001, PhD Scholarship, Institute of Mathematics Polish Academy of Sciences (IMPAN)

2002, PhD in Mathematics, IMPAN, the thesis *Laplace distributions supported by a cone* written under supervision of dr hab. G. Łysik

2014, Habilitation in Mathematics, IMPAN, the thesis *Summability of formal solutions of linear partial differential equations with constant coefficients*

SCIENTIFIC POSITIONS:

2001–2002 Assistant and Assistant Professor, IMPAN in Warsaw

2003–2017 Assistant Professor, Cardinal Stefan Wyszyński University in Warsaw, Faculty of Mathematics and Natural Sciences, College of Sciences (UKSW)

2017–   Associate Professor, UKSW in Warsaw

SCIENTIFIC VISITS:

2002 Potsdam University (2 months)

2008–2009 IMPAN in Warsaw (12 months)

2011–2012 IMPAN in Warsaw (12 months)

ORGANIZATION OF THE CONFERENCES:

1. *Formal and Analytic Solutions of Differential Equations*, Banach Center (BC), Będlewo, 2008

2. *Formal and Analytic Solutions of Differential and Difference Equations*, BC, Będlewo, 2011

3. *Workshop on differential and difference equations in the complex domain*, BC, Warsaw, 2012

4. *Formal and Analytic Solutions of Differential, Difference and Discrete Equations*, BC, Będlewo, 2013

5. *Global Study of Differential Equations in the Complex Domain*, BC, Warsaw, 2013

6. *Analytic, Algebraic and Geometric Aspects of Differential Equations*, BC, Będlewo, 2015

7. *Asymptotic and computational aspects of complex differential equations*, Centro di Ricerca Matematica (CRM), Pisa, 2017

8. *Complex Differential and Difference Equations*, BC, Będlewo, 2018

9. *Complex Differential and Difference Equations II*, BC, Będlewo, 2023

10. *Polish-Japanese workshop on differential equations in the complex domain*, BC, Warsaw, 2023

EDITOR OF VOLUMES:

1. *Formal and Analytic Solutions of Differential and Difference Equations*, Banach Center Publ. 97 (2012), 190 pp; Werner Balser, Galina Filipuk, Grzegorz Łysik, Sławomir Michalik (eds.).

2. *Analytic, Algebraic and Geometric Aspects of Differential Equations*, Trends in Mathematics (2017), 471 pp; Galina Filipuk, Yoshishige Haraoka, Sławomir Michalik (eds.).

3. *Formal and Analytic Solutions of Diff. Equations*, Springer Proceedings in Mathematics & Statistics (2018), 274 pp; Galina Filipuk, Alberto Lastra, Sławomir Michalik (eds.).

4. *Complex Differential and Difference Equations*, De Gruyter Proceedings in Mathematics (2020), 463 pp; Galina Filipuk, Alberto Lastra, Sławomir Michalik, Yoshitsugu Takei, Henryk Żołądek (eds.).

5. *Formal and Analytic Solutions of Differential Equations*, World Scientific (2022), 400 pp; Galina Filipuk, Alberto Lastra, Sławomir Michalik (eds.).

6. *Recent Trends in Formal and Analytic Solutions of Diff. Equations*, Contemporary Mathematics 782 (2023), 228 pp; Galina Filipuk, Alberto Lastra, Sławomir Michalik (eds.).

PHD STUDENTS:

1. Hubert Grzebuła (UKSW, defended in 2021)

2. Maria Suwińska (UKSW, defended in 2022)

3. Bożena Tkacz (UKSW, defended in 2023)

SELECTED INTERNATIONAL CONFERENCES (WITH THE TITLE OF THE TALK):

1. Formale Lösungen von gewöhnlichen und partiellen Differentialgleichungen, March 27–30, 2007, Berlin, Germany; *Summability of formal solutions to the n-dimensional inhomogeneous heat equation.*

2. Formal and Analytic Solutions of Differential Equations, August 11–16, 2008, Będlewo, Poland; *Summability of formal solutions of partial differential equations with constants coefficients.*

3. The 2nd Nagoya Workshop on Differential Equations, March 15–17, 2010, Nagoya, Japan; *Multisummability of divergent solutions of linear partial differential equations with constant coefficients.*

4. Journées des équations différentielles et fonctionnelles, June 16–18, 2010, Lille, France; *Summability of formal solutions of inhomogeneous partial differential equations.*

5. Formal and Analytic Solutions of Differential and Difference Equations, August 8–13, 2011, Będlewo, Poland; *Analytic solutions of moment-PDEs.*

6. Formal and Analytic Solutions of Differential, Difference and Discrete Equations, August 25–31, 2013, Będlewo, Poland; *On formal power series solutions of inhomogeneous linear moment partial differential equations.*

7. Functional Equations in Limoges, March 31 – April 2, 2014, Limoges, France; *Spherical means and summable solutions of some multidimensional partial differential equations.*

8. Formal and Analytic Solutions of Functional Equations, September 2–5, 2014, Valladolid, Spain; *Summability of formal solutions of some multidimensional partial differential equations.*

9. Analytic, Algebraic and Geometric Aspects of Differential Equations, September 6–19, 2015, Będlewo, Poland; *Summability of divergent solutions of some linear partial differential equations with variable coefficients.*

10. Formal and Analytic Solutions of Partial Differential Equations, August 31 – September 2, 2016, Lisbon, Portugal; *The Stokes phenomenon for linear partial differential equations with constant coefficients.*

11. Formal and Analytic Solutions of Diff. Equations, September 4–8, 2017, Alcalá de Henares, Spain; *Maximal family of solutions and Stokes lines for some moment-PDEs.*

12. Analytic and Algebraic Methods in Differential Equations, October 31 – November 2, 2017, Moscow, Russia; *Hyperasymptotics and Stokes phenomenon for some partial differential equations.*

13. Formal and Analytic Solutions of Partial Differential Equations, June 26–29, 2018, Padova, Italy; *Newton polygons and Gevrey indices for moment partial differential operators.*

14. Complex Differential and Difference Equations, September 10–14, 2018, Będlewo, Poland; *Gevrey estimate and summability for some moment partial differential equations.*

15. Formal and analytic solutions of functional equations on the complex domain, December 17–20, 2018, Kyoto, Japan; *Formal and analytic solutions of some moment partial differential equations I, II.*

16. Formal and Analytic Solutions of Functional Equations 2019, September 9–12, 2019, Valladolid, Spain; *Summability of formal power series solutions of Goursat problem for linear partial differential equations with constant coefficients.*

17. Formal and Analytic Solutions of Diff. Equations (online), June 28–29, 2020, Alcalá de Henares, Spain; *Summable solutions of the Goursat problem for linear partial differential equations with constant coefficients.*

18. Contemporary Mathematics in Kielce 2020 (online), February 24–27, 2021, Kielce, Poland; *Summable solutions of the Goursat problem for some linear PDEs with constant coefficients.*

19. Formal and Analytic Solutions of Diff. Equations on the Internet, June 28 – July 2, 2021, Alcalá de Henares, Spain; *Summable solutions of the Goursat problem for some inhomogeneous PDEs.*

20. Complex Differential and Difference Equations II, August 28 – September 1, 2023, Będlewo, Poland; *On sequences preserving summability.*

21. Polish-Japanese workshop on differential equations in the complex domain, September 4–8, 2023, Warsaw, Poland; *On the characterization of formal automorphisms of integro-differential operators.*

LIST OF PUBLICATIONS:

1. *On the summability and convergence of formal solutions of linear q-difference-differential equations with constant coefficients*, Math. Ann. (2023), https://doi.org/10.1007/s00208-023-02672-0 (together with Kunio Ichinobe).

2. *On polyharmonic polynomials*, Acta Math. Hungar. 169, 325–348 (2023) (together with Hubert Grzebuła).

3. *Some notes on moment partial differential equations. Application to fractional functional equations*, in Recent Trends in Formal and Analytic Solutions of Diff. Equations, Contemporary Mathematics, vol. 782, Amer. Math. Soc., Providence, RI, 2023, 219–228 (together with Alberto Lastra and Maria Suwińska).

4. *Multisummability of formal solutions for a family of generalized singularly perturbed moment differential equations*, Results Math 78:49 (2023) (together with Alberto Lastra and Maria Suwińska).

5. *Summable solutions of the Goursat problem for some partial differential equations with constant coefficients*, J. Differential Equations 304 (2021), 435–466.

6. *Summability of formal solutions for a family of generalized moment integro-differential equations*, Fract. Calc. Appl. Anal. 24 (2021), 1445–1476 (together with Alberto Lastra and Maria Suwińska).

7. *Estimates of formal solutions for some generalized moment partial differential equations*, J. Math. Anal. Appl. 500:125094 (2021) (together with Alberto Lastra and Maria Suwińska).

8. *Summability of formal solutions for some generalized moment partial differential equations*, Results Math. 76:22 (2021) (together with Alberto Lastra and Maria Suwińska).

9. *Gevrey estimates for certain moment partial differential equations*, Complex Differential and Difference Equations, De Gruyter Proceedings in Mathematics (2020), 391–408 (together with Maria Suwińska).

10. *The Stokes phenomenon for some moment partial differential equations*, J. Dyn. Control Syst. 25 (2019), 573–598 (together with Bożena Tkacz).

11. *Spherical polyharmonics and Poisson kernels for polyharmonic functions*, Complex Var. Elliptic Equ. 64 (2019), 420–442 (together with Hubert Grzebuła).

12. *Hyperasymptotic solutions for certain partial differential equations*, Formal and Analytic Solutions of Diff. Equations, Springer Proceedings in Mathematics & Statistics 256 (2018), 61–78 (together with Maria Suwińska).

13. *Analytic and summable solutions of inhomogeneous moment partial differential equations*, Funkcial. Ekvac. 60 (2017), 325–351.

14. *A Dirichlet type problem for complex polyharmonic functions*, Acta Math. Hungar. 153 (2017), 216–229 (together with Hubert Grzebuła).

15. *The Stokes phenomenon for certain partial differential equations with meromorphic initial data*, Asymptot. Anal. 99 (2016), 163–182 (together with Bożena Podhajecka).

16. *Summable solutions of some partial differential equations and generalised integral means*, J. Math. Anal. Appl. 444 (2016), 1242–1259.

17. *Summability of formal solutions of linear partial differential equations with divergent initial data*, J. Math. Anal. Appl. 406 (2013), 243–260.

18. *Analytic solutions of moment partial differential equations with constant coefficients*, Funkcial. Ekvac. 56 (2013), 19–50.

19. *On Borel summable solutions of the multidimensional heat equation*, Ann. Polon. Math. 105 (2012), 167–177.

20. *Multisummability of formal solutions of inhomogeneous linear partial differential equations with constant coefficients*, J. Dyn. Control Syst. 18 (2012), 103–133.

21. *On the multisummability of divergent solutions of linear partial differential equations with constant coefficients*, J. Differential Equations 249 (2010), 551–570 (with: *Corrigendum to "On the multisummability of divergent solutions of linear partial differential equations with constant coefficients" [J. Differential Equations 249 (2010), 551–570]*, J. Differential Equations 255 (2013), 2400–2401).

22. *Summability and fractional linear partial differential equations*, J. Dyn. Control Syst. 16 (2010), 557–584.

23. *Laplace ultradistributions supported by a cone*, Banach Center Publ. 88 (2010), 229–241.

24. *Summability of formal solutions to the n-dimensional inhomogeneous heat equation*, J. Math. Anal. Appl. 347 (2008), 323–332.

25. *Formal solutions of semilinear heat equations*, J. Math. Anal. Appl. 341 (2008), 372–385 (together with Grzegorz Łysik).

26. *Summability of divergent solutions of the n-dimensional heat equation*, J. Differential Equations 229 (2006), 353–366.

27. *The Cauchy kernel for cones*, Studia Math. 163 (2004), 21–39.

28. *Laplace distributions and hyperfunctions on simplicial cones*, Integral Transforms Spec. Funct. 14 (2003), 307–320.

29. *The kernel theorem for Laplace ultradistributions*, Ann. Polon. Math. 77 (2001), 209–217.