CURRICULUM VITAE

Pavel Gumenyuk   January 30, 2018

Ph.D., Professor

Department of Mathematics and Natural Sciences,
University of Stavanger
4036 Stavanger, NORWAY

Tel.: +47 518 319 11

E-mail: pavel.gumenyuk@uis.no

Born: 1981, May 30

Nationality: Russian Federation

ORCID ID: 0000-0003-0724-641X

Memberships: GNSAGA – Istituto Nazionale di Alta Matematica "Francesco Severi" (INdAM) [*National Group in Algebraic and Geometric Structures and their Applications*, National Institute of Higher Mathematics, ITALY]

DEGREES:

(PhD=)   **Candidate of Science** (specialization – Mathematical Analysis),

Saratov, Russia, June 2005

(scientific adviser: *Professor Dmitri Prokhorov*, thesis title: "*Basins of fixed points and estimates in the class of univalent functions*")

(MSc=)   **Diploma with Honors** (specialty - Physics)**,**

Saratov State University, Russia, 2003

Habilitation: certified to work as an associated professor in Italy (*Abilitazione alla seconda fascia*, settore concorsuale 01/A2: Geometria e Algebra, bando D.D. 1532/2016, valido dal 28/03/2017 al 28/03/2023)

LANGUAGES:

ENGLISH	fluent language user
NORWEGIAN	good skills in reading and writing, ability of speech communication
ITALIAN	beginner; good ability of speech communication
RUSSIAN	mother tongue

CAREER DETAILS:

Professor

Department of Mathematics and Physics, **University of Stavanger, NORWAY**

August 2017 –

research work and teaching at the Faculty of Science and Technology

Associate professor

Department of Mathematics and Natural Sciences, **University of Stavanger, NORWAY**

November 2014 – July 2017

research work and teaching at the Faculty of Science and Technology

Senior postdoc / researcher (3 years contract)

Department of Mathematics, **University of Rome "Tor Vergata", ITALY**

December 2011 – October 2014

scientific work in the research group led by *Professor Filippo Bracci*, Progetto FIRB - Futuro in Ricerca 2008 n. RBFR08B2HY *"Geometria Differenziale Complessa e Dinamica Olomorfa"*

Associate professor (6 months temporary position)

Department of Mathematical Sciences, **Norwegian University of Science and Technology, Trondheim, NORWAY**

January 2011 – June 2011,

research work in collaboration with Prof. Santiago Díaz-Madrigal and Manuel D. Contreras, University of Seville, Spain; teaching a master course in Complex Analysis

Visiting researcher

Research Institute of Mathematics, **University of Seville, SPAIN**

February 2010 – December 2010,

scientific work within the research group led by *Professor Santiago Díaz-Madrigal*

Postdoctoral research fellow

Department of Mathematics, **University of Bergen, NORWAY**

August 2007 – January 2010,

scientific work within the Analysis Group (leader: *Professor Alexander Vasil'ev*)

Member of teaching staff

Chair of Mathematical Analysis, Department of Mechanics and Mathematics, **Saratov State University, RUSSIA**:

February 2007 – July 2007 — full-time employment as an *Associate professor*

September 2005 – January 2007 — full-time employment as a *Junior member of teaching staff*

September 2003 – August 2005 — part-time employment as a *Junior member of teaching staff*

conducting seminar classes and giving lectures in Analysis, Function Theory and special courses

Ph.D. - student

Department of Mechanics and Mathematics**, Saratov State University, RUSSIA**
June 2003 – June 2005

RESEARCH INTERESTS:

Complex Analysis, especially **Geometric Function Theory**. This includes:
- Loewner Theory in simply and multiply connected domains
- Theory of univalent functions and quasiconformal extensions
- Applications to Holomorphic Dynamics and Mathematical Physics
- Boundary behaviour of holomorphic dynamical systems

LIST OF PUBLICATIONS:

ORCID ID: 0000-0003-0724-641X

PREPRINTS / IN PREPARATION:

 (with M.D. Contreras and S.Díaz-Madrigal) *Sharp estimates for one-parameter semigroups and univalent self-maps with boundary fixed points* (preliminary title). **In preparation**.

(with I. Prause) *Quasiconformal extensions, Loewner chains and lambda-Lemma*, 14pp.
Preprint, 2017.
ArXiV: 1712.08632 [math.CV]
URL: https://arxiv.org/pdf/1712.08632v1

PUBLISHED AND ACCEPTED PAPERS:

2018: (with D. Prokhorov) *Value regions of univalent self-maps with two boundary fixed points*, 12 pp. Accepted for publication in **Ann. Acad. Sci. Fenn. Math.** 43 (2018).
DOI 10.5186/aasfm.2018.4321
ArXiv: 1703.05835 [math.CV]
URL: https://arxiv.org/pdf/1703.05835.pdf

2018: *Parametric representations and boundary fixed points of univalent self-maps of the unit disk*, 18 pp. Accepted for publication in Proceedings of the INdAM Conference "Geometric Function Theory in Higher Dimension", Cortona (AR), ITALY, September 5 - 9, 2016.
Springer INdAM Series. Vol. 26, 2018.
ArXiv: 1702.00344 [math.CV]
URL: http://arxiv.org/pdf/1702.00344.pdf

2017: *Parametric representation of univalent functions with boundary regular fixed points*, **Constr. Approx.** 46 (2017), 435–458.
Published online in April 2017 – DOI 10.1007/s00365-017-9376-4
URL: https://link.springer.com/article/10.1007/s00365-017-9376-4
OR: http://arxiv.org/pdf/1603.04043.pdf

2017: (with I. Hotta) *Chordal Loewner chains with quasiconformal extensions,* **Math. Z.** 285 (2017), No.3, 1063–1089.
Published online in September 2016 – DOI 10.1007/s00209-016-1738-2
URL: http://rdcu.be/kC69
OR: http://arxiv.org/pdf/1511.08077.pdf

2016: (with F. Bracci) *Contact points and fractional singularities for semigroups of holomorphic self-maps in the unit disc*, **J. Anal. Math.** 130 (2016), No.1, 185–217.
DOI 10.1007/s11854-016-0034-8
URL: http://link.springer.com/article/10.1007/s11854-016-0034-8
OR: https://arxiv.org/pdf/1309.2813v2.pdf

2016: (with L. Arosio) *Valiron and Abel equations for holomorphic self-maps of the polydisc,* **Internat. J. Math.** 27 (2016), No.4 1650034 (16 pages). Published online in April 2016 –
DOI 10.1142/S0129167X16500348
ArXiv: 1509.04169 [math.CV]
URL: http://dx.doi.org/10.1142/S0129167X16500348
OR: http://arxiv.org/pdf/1509.04169v2.pdf

2016: (with A. del Monaco) *Chordal Loewner Equation*, in Complex Analysis and Dynamical Systems VI. Part 2. **Contemp. Math. 667** (2016), 63–77. DOI 10.1090/conm/667/13531
ArXiv:1302.0898 [math.CV]
URL: http://dx.doi.org/10.1090/conm/667/13531
OR http://arxiv.org/pdf/1302.0898.pdf

2015: (with M.D.Contreras and S.Díaz-Madrigal) *Slope Problem for Trajectories of Holomorphic Semigroups in the Unit Disk*, **Comput. Methods Funct. Theory** 15 (2015), No.1, 117–124. Published online in September 2014 – DOI 10.1007/s40315-014-0092-9
URL: http://link.springer.com/article/10.1007/s40315-014-0092-9
OR: http://arxiv.org/pdf/1406.3614v1.pdf

2015: (with F. Bracci, M.D.Contreras and S.Díaz-Madrigal) *Boundary regular fixed points in Loewner Theory*, **Ann. Mat. Pura Appl.** 194 (2015), No.1, 221-245. Published online in August 2013 – DOI 10.1007/s10231-013-0372-4
URL: http://link.springer.com/article/10.1007/s10231-013-0372-4
OR: http://arxiv.org/pdf/1303.5216v1.pdf

2014: *Angular and unrestricted limits of one-parameter semigroups in the unit disk*, **J. Math. Anal. Appl.** 417 (2014), No.1, 200-224. Published online in March 2014 –
DOI 10.1016/j.jmaa.2014.02.057
URL: http://dx.doi.org/10.1016/j.jmaa.2014.02.057
OR: http://arxiv.org/pdf/1211.3965.pdf

2014: (with M.D.Contreras and S.Díaz-Madrigal) *Local duality in Loewner equations*, **J. Nonlinear Convex Anal.** 15 (2014), No.2, 269-297; available also as a preprint of *Institut Mittag-Leffler* ISRN IML-R- -16-11/12- -SE+fall and at ArXiv: 1202.2334 [math.CV]
URL: http://www.ybook.co.jp/online2/opjnca/vol15/p269.html
OR: http://www.mittag-leffler.se/research-programs/preprint-series?course_id=3901
OR: http://arxiv.org/pdf/1202.2334v2.pdf

2013: (with M.D.Contreras and S.Díaz-Madrigal) *Loewner Theory in annulus I: evolution families and differential equations*, **Trans. Amer. Math. Soc.** 365 (2013), 2505-2543. Published online in November 2012 – DOI 10.1090/S0002-9947-2012-05718-7
URL: http://dx.doi.org/10.1090/S0002-9947-2012-05718-7
OR: http://arxiv.org/pdf/1011.4253.pdf

2011: (with M.D.Contreras and S.Díaz-Madrigal) *Loewner Theory in annulus II: Loewner chains*. **Anal. Math. Phys.** 1 (2011), No.4, 351-385. DOI 10.1007/s13324-011-0016-z
URL: http://link.springer.com/article/10.1007/s13324-011-0016-z
OR: http://arxiv.org/pdf/1105.3187v1.pdf

2010: (with M.D.Contreras and S.Díaz-Madrigal) *Geometry behind chordal Loewner chains*. **Complex Anal. Oper. Theory** 4 (2010), 541-587. DOI 10.1007/s11785-010-0057-6
URL: http://link.springer.com/article/10.1007/s11785-010-0057-6
ERRATUM: http://www.ux.uis.no/~gumenyuk/erratumCAOT.pdf
OR: http://arxiv.org/pdf/1002.0826v1

2010: (with M.D.Contreras and S.Díaz-Madrigal) *Loewner chains in the unit disk*. **Rev. Mat. Iberoam.** 26 (2010), 975-1012.
URL: http://projecteuclid.org/DPubS?service=UI&version=1.0&verb=Display&handle=euclid.rmi/1282913829
OR: http://arxiv.org/pdf/0902.3116v1

2009: (with E. Grong and A. Vasil'ev) *Matching univalent functions and conformal welding*. **Ann. Acad. Sci. Fenn. Math.** 34 (2009), 303-314. MR2489029
URL: http://www.acadsci.fi/mathematica/Vol34/vol34pp303-314.pdf
OR: http://arxiv.org/pdf/0806.0930v1

2009: *Carathéodory Convergence of Immediate Basins of Attraction to a Siegel Disk.* **Analysis and Mathematical Physics. Trends in Mathematics**, 165-184, Birkhäuser Verlag Basel/Switzerland, 2009 DOI: 10.1007/978-3-7643-9906-1_9
URL: http://dx.doi.org/10.1007/978-3-7643-9906-1_9
OR: http://www.ux.uis.no/~gumenyuk/2009Trends.pdf

2005: *Siegel disks and basins of attraction for families of analytic functions*. **Izv. Saratov Univ. (N. S.), Ser. Math. Mech. Inform.** 5 (2005), No.1, 12-26 (in Russian) ISSN 1816-9791
URL: http://www.mathnet.ru/php/archive.phtml?wshow=paper&jrnid=isu&paperid=671&option_lang=eng

2004: *A lower estimate for the distance of an attracting fixed point to the boundary of its basin via univalence radius*. **Comput. Methods Funct. Theory** 3 (2004), no.2, 413-424. DOI 10.1007/BF03321046
URL: http://link.springer.com/article/10.1007/BF03321046

2002: *The Fatou and Julia sets of multivalued analytic functions*. **Sib. Mat. Zh.** 43 (2002), No.6, 1293-1303; transl. in **Sib. Math. J.** 43 (2002), No.6, 1047-1054.
DOI 10.1023/A:1021117301173
URL: http://link.springer.com/article/10.1023/A:1021117301173
OR: http://www.ux.uis.no/~gumenyuk/SibMatZh.pdf

1999: (with A. M. Zakharov and A. A. Kuznetsov) *Extremal problems for a family of functionals and the Roth conjectures*. **Izv., Ross. Akad. Estestv. Nauk, Mat. Mat. Model. Inform. Upr.** 3 (1999), No.2, 36-59 (in Russian) Zbl 0992.30011
URL: http://www.ux.uis.no/~gumenyuk/IzvRAEN.pdf

<u>REFERRING FOR SCIENTIFIC JOURNALS</u>:

- Arkiv för matematik (*Institut Mittag-Leffler, Springer*) – 2015

- Journal of Mathematical Analysis and Applications (*Elsevier*) – 2012, 2017

- Annali di Matematica Pura ed Applicata (*Springer*) – 2015

- Analysis and Mathematical Physics (*Birkhäuser*) – 2011 (2 papers)

- Computational Methods and Function Theory (*Springer*) – 2015

- Complex Variables and Elliptic Equations (*Taylor & Francis Group*) – 2011

- Journal of Geometric Analysis (*Springer*) – 2017

- Complex Analysis and Operator Theory (*Birkhäuser*) – 2016

- Mathematical Methods in the Applied Sciences (*John Wiley & Sons*) – 2017

- Revista Matemática Complutense (*Universidad Complutense de Madrid, Springer*) – 2016

- Contemporary Mathematics. Proceedings of the biennial conference on Complex Analysis and Dynamical Systems (*American Mathematical Society*) – 2016

- Trends in Mathematics. Analysis and Mathematical Physics. Proceedings the International Conference "*New Trends in Complex and Harmonic Analysis*", Voss, NORWAY, May 2007 (*Birkhäuser*) – 2008 (3 papers)

- Michigan Mathematical Journal (*University of Michigan*) – 2017

- Archiv der Mathematik (*Springer*) – 2014

- Rivista di Matematica della Università di Parma (*University of Parma*) – 2018

- Taiwanese Journal of Mathematics (*Mathematical Society of the Republic of China (Taiwan)*) – 2009, 2010, 2012

- Izvestiya Saratovskogo Universiteta [Proceedings of Saratov State University]. Novaya Seriya. Seriya Matematika. Mekhanika. Informatika (*Saratov State University*) – 2012

- Izvestiya Vysshikh Uchebnykh Zavedenij. Prikladnaya Nelinejnaya Dinamika (*Saratov State University*) – 2007, 2009

RESEARCH VISITS:

2017 October:	*University of Helsinki*, FINLAND
2017 September:	*University of Seville*, SPAIN
2017 January:	*Center of Advanced Studies (Norwegian Academy of Science and Letters)* Oslo, NORWAY
2016 February:	*University of Bergen*, NORWAY
2015 November:	*University of Bergen*, NORWAY
2015 July:	*University of Rome*, ITALY
2015 June:	*University of Seville*, SPAIN
2014 November-December:	*Tokyo Institute of Technology*, JAPAN
2014 April:	*University of Bergen*, NORWAY
2014 March:	*University of Seville*, SPAIN
2013 December:	*University of Würzburg*, GERMANY
2013 February - March:	*University of Seville*, SPAIN
2012 February:	*University of Seville*, SPAIN
2011 October - November:	*Institut Mittag-Leffler*, Djursholm (Stockholm), SWEDEN
2011 June:	*University of Seville*, SPAIN
2010 January:	*University of Rome "Tor Vergata"*, ITALY
2009 September:	*University of Seville*, SPAIN
2008 October:	*University of Seville*, SPAIN

RESEARCH GUESTS:

2016 November:	Dr. **István PRAUSE**; 27/11/2016 – 03/12/2016; Department of Mathematics and Statistics, *University of Helsinki*, FINNLAND
2016 March:	Dr. **Ikkei HOTTA**; 17/03/1026 – 22/03/2016; Department of Applied Sciences, *Yamaguchi University*, JAPAN

PARTICIPATION IN CONFERENCES AND SEMINARS:

<u>PARTICIPATION IN ORGANIZING COMMITTEES</u>:

Forthcoming events:

2018 May: **22nd NORDAN conference on Complex Analysis and related topics**, University of Stavanger, Stavanger, NORWAY, May 25 – 27, 2018. Participation in the organizing committee.

Past events:

2017 November: **International Conference on Applied Mathematics and Informatics (ICAMI2017)** San Andrés Island, COLOMBIA, November 26 – December 1, 2017. Participation in the organizing committee of the *Honorable Special Session dedicated to the memory of Professor Alexander Vasil'ev*.

2012 March: **International Conference on Analysis and Mathematical Physics "New Trends in Complex and Harmonic Analysis"**, Tenerife, SPAIN, March 5 - 9, 2012. Co-organizer the session on *Loewner Theory and Related Topics*.

2006 January: **13th International Conference "Modern Problems in Theory of Functions and Applications"**, Saratov, RUSSIA, January 27 – February 3, 2006. Participation in the local organizing committee.

<u>SEMINAR AND CONFERENCE TALKS</u>:

2017 November: **International Conference on Applied Mathematics and Informatics (ICAMI2017)** San Andrés Island, COLOMBIA, November 26 – December 1, 2017, with 20-minute talk *"Value regions of univalent self-maps with two boundary fixed points"*

2017 October: **Seminar in Functional Analysis**, University of Helsinki, FINLAND, October 12, 2017, with 2-hour seminar talk *"Loewner Theory: recent results and applications"*

2016 October: **International Conference "Spaces of Analytic Functions and Singular Integrals (SAFSI2016)"**, Chebyshev Laboratory of St. Petersburg State University and St. Petersburg Department of Steklov Mathematical Institute, St. Petersburg, RUSSIA, October 17 - 20, 2016, with 30-minute talk *"Parametric representations and quasiconformal extensions by means of modern Loewner Theory"*

2016 September: **INdAM meeting** (international workshop) **"Geometric Function Theory in higher dimensions"**, Cortona, ITALY, September 5 - 9, 2016, with 50-minute talk *"Parametric representation of univalent holomorphic self-maps of the unit disk"*

2016 May: **International Conference "Geometric Analysis in Control and Vision Theory"**, Voss, NORWAY, May 9 - 14, 2016, with 30-minute talk *"Quasiconformal extensions of holomorphic functions in the half-plane via chordal Loewner equation"* (in collaboration with I.Hotta)

2015 November: **Analysis Seminar**, University of Bergen, NORWAY, November 10, 2015, with 2-hour seminar talk *“Loewner-type representation for conformal self-maps of the disk with prescribed boundary fixed points”*

2015 May: **International Conference "Complex Analysis & Dynamical Systems, VII"**, Nahariya, ISRAEL, May 10-15, 2015, with 25-minute talk *“Quasiconformal extensions via the chordal Loewner equation”* (in collaboration with I.Hotta)

2014 December: **Oslo – Gothenburg Meeting in Complex Analysis and Geometry**, University of Oslo, NORWAY, December 11-12, 2014, with 45-minute talk *“Recent advances in Loewner Theory”*

2014 November**: International Workshop on Conformal Dynamics and Loewner Theory**, Tokyo Institute of Technology, JAPAN, November 22-24, 2014, with 50-minute talk *“Loewner-type Parametric Representation of univalent self-maps with given boundary regular fixed points”*

2014 October: Workshop **"Progressi Recenti in Geometria Reale e Complessa - IX"**, Centro Internazionale per la Ricerca Matematica, Levico Terme (Trento), ITALY, October 19-23, 2014, with 40-minute talk *“Quasiconformal extensions via the chordal Loewner equation”* (in collaboration with I.Hotta)

2014 July: **First Joint International Meeting RSME-SCM-SEMA-SIMAI-UMI**, Bilbao, SPAIN, June 30 – July 4, 2014, with 30-minute session talk *"Parametric representation of univalent self-maps with given boundary fixed point"*

2013 December: **Complex Analysis Seminar**, Saratov State University, Saratov, RUSSIA, December 27, 2013, with 1-hour talk *“Теория Лёвнера и однолистные эндоморфизмы круга с заданными граничными неподвижными точками”* [in Russian; “*Loewner Theory and univalent endomorphisms of the disk with prescribed boundary fixed points*”]

2013 December: **New Entries’ Day 2013**, Workshop at the Department of Mathematics, University of Rome “Tor Vergata”, Rome, ITALY, December 20, 2013, with 25-minute talk *“Loewner Theory: classical applications and new perspectives”*

2013 December: **Complex Analysis Seminar**, University of Würzburg, GERMANY, December 5, 2013, with 1-hour talk *“Parametric representation of univalent self-maps of the unit disk with given boundary fixed points”*

2013 May: **International Conference "Complex Analysis & Dynamical Systems, VI"**, Nahariya, ISRAEL, May 19-24, 2013, with 25-minute talk *"Boundary behaviour of one-parameter semigroups and evolution families"*

2013 March: Workshop **"Complex Analysis and Related Areas"** Institute of Mathematics of the **University of Sevilla** (IMUS) and the **University of Málaga**, SPAIN, March 11-15, 2013, with 40-minute talk *“Boundary behaviour of one-parameter semigroups and evolution families”*

2013 February: Colloquium at the Institute of Mathematics (IMUS), **Universidad de Sevilla**, SPAIN, February 13, 2013, with a 1-hour talk *"Loewner Theory in the unit disk"*

2012 October: Workshop **"Progressi Recenti in Geometria Reale e Complessa - XIII"**, Levico Terme (Trento), ITALY, October 14-19, 2012, with 40-minute talk *"Boundary behaviour of one-parameter semigroups and evolution families"*

2012 September: International Conference **"New Trends in Holomorphic Dynamics"** (*INdAM — Istituto Nazionale di Alta Matematica "Francesco Severi"*), Cortona, Tuscany, ITALY, September 2-7, 2012, with 50-minute talk *"Loewner equations, evolution families and their boundary fixed points"*

2012 April: **Geometry Seminar**, Politecnico di Milano, Milan, ITALY, April 13, 2012, with 50-minute talk "*Loewner Theory: recent developments in the classical topic*"

2011 September: **Workshop "Univalent functions and control"** dedicated to the 65th anniversary of Dmitri Prokhorov, Institut Mittag-Leffler, Djursholm, SWEDEN, September 12-13, 2011, with 45-minute talk "*Loewner theory in annulus: history and recent developments*" (in collaboration with M.D.Contreras and S.Díaz-Madrigal)

2011 May: **International Conference "Complex Analysis & Dynamical Systems, V"**, Akko (Acre), ISRAEL, May 22-27, 2011, with 25-minute talk "*Loewner Theory in Annulus*" (in collaboration with M.D.Contreras and S.Díaz-Madrigal)

2010 December: **Seminar of Complex Analysis, Universidad de Sevilla**, SPAIN, December 15, 2010, with 1-hour talk "*Classical and Modern Loewner Theory*"

2010 December: **Complex Analysis Seminar, Universidad Autonoma de Madrid**, SPAIN, December 20, 2010, with 1-hour talk "*Loewner Theory: new approach to a classical topic*"

2010 June: **International Conference on Analysis and Mathematical Physics "New Trends in Complex and Harmonic Analysis"**, Jacobs University, Bremen, GERMANY, June 28 - July 3, 2010, with 25-minute talk "*Loewner evolution in doubly connected domains*" (in collaboration with M.D.Contreras and S.Díaz-Madrigal)

2010 February: **15th International Conference "Modern Problems in Theory of Functions and Applications**", Saratov, RUSSIA, January 28 - February 3, 2010, with 15-minute talk "*Generalized Loewner chains*" [in Russian] (in collaboration with M.D.Contreras and S.Díaz-Madrigal)

2010 January**: Complex Analysis Seminar, University of Rome "Tor Vergata"**, ITALY, January 19, 2010, with 1-hour talk *"Geometric and analytic properties of generalized Loewner chains"*

2009 December: **National Center for Theoretical Sciences, Hsinchu, TAIWAN**, 30-minute seminar talk "*Geometric and analytic properties of generalized Loewner chains*" (in collaboration with M.D.Contreras and S.Díaz-Madrigal), December 14, 2009

2009 November: **International Workshop on Complex Analysis** dedicated to the 65th anniversary of Professor Arne Stray, November 30 - December 2, 2009, Bergen, NORWAY, with 45-minutes talk "*Geometric and analytic properties of generalized Loewner chains*"(in collaboration with M.D.Contreras and S.Díaz-Madrigal)

2009 September: **Norwegian Fall School on Analysis for Ph.D. students and young researchers**, Trondheim, NORWAY, September 10-13, 2009, with 20-minute talk "*Loewner chains: a new approach to the classical topic*" (in collaboration with M.D.Contreras and S.Díaz-Madrigal)

2009 June: **International Conference "Modern Complex Analysis and Operator Theory and Applications, IV"**, El Escorial (Madrid), SPAIN, June 17-21, 2009, with 25-minute talk "*Loewner chains: the case of boundary Denjoy - Wolff point*" (in collaboration with M.D.Contreras and S.Díaz-Madrigal)

2008 June: **Joint USA - Norway Workshop "Complex Analysis and Mathematical Physics"**, Sophus Lie Conference Center, Nordfjordeid, NORWAY, June 8-14, 2008, with 25-minute talk "*Matching univalent functions*" (in collaboration with E.Grong and A.Vasil'ev)

2007 October: **International mini-Workshop "Virasoro Algebra and Related Topics"**, Bergen, October 29-31, 2007, with 45-minute talk *"Exterior and interior univalent functions"* (in collaboration with E.Grong and A.Vasil'ev)

2007 May: **International Conference on Analysis and Mathematical Physics "New Trends in Complex and Harmonic Analysis"**, Voss, NORWAY, May 7 - 12, 2007, with 25-minute talk "*Convergence of Basins of Attraction to a Siegel Disk*"

2006 July: **3rd Petrozavodsk International Conference on Theory of Functions of a Complex Variable**, Petrozavodsk, RUSSIA, June 25 - July 1, 2006, with 20-minute talk "*Conditions for convergence of basins of attraction in a sequence of analytic functions*"

2006 February: **13th International Conference "Modern Problems in Theory of Functions and Applications"**, Saratov, RUSSIA, January 27 – February 3, 2006, with 15-minute talk "*Convergence of Basins of Attraction to a Siegel Disk*"[in Russian]

2005 September: **"Complex Analysis and its Applications" International conference dedicated to the memory of Prof. I.P.Mityuk**, Krasnodar, RUSSIA, September 11-17, 2005, with 20-minute talk "*Convergence of basins of fixed points in one-parametric families of analytic functions*" [in Russian]

2004 May: **International Conference "Geometrical Analysis and its Applications"**, Volgograd, RUSSIA, May 24-30, 2004, with 20-minute talk "*A lower estimate for the size of the basin of attraction via univalence radius*"[in Russian]

2004 February: **12th International Conference "Modern Problems in Theory of Functions and Applications"**, Saratov, RUSSIA, January 27 - February 3, 2004, with 15-minute talk "*A lower estimate for the size of the basin of attraction via univalence radius*"[in Russian]

2002 September: **ISAAC Conference on Complex Analysis, Differential Equations and Related topics and NATO advanced research workshop "Topics in Analysis and its Applications"**, Yerevan, ARMENIA, September 17-21, 2002, with 15-minute talk "*Extremal problems for a family of functionals and Roth conjectures*" (in collaboration with A.Kuznetsov)

2002 February: **11th International Conference "Modern Problems in Theory of Functions and Applications"**, Saratov, RUSSIA, January 28 - February 4, 2002, with 15-minute talk "*A generalization of some problems of Complex Dynamics*"[in Russian]

2001 August: **INTAS International Conference on Complex Analysis and Potential Theory**, Kiev, UKRAINE, August 7-12, 2001, with 15-minute talk "*On iterations of multivalued functions*"

VISITING SCIENTIFIC EVENTS (without giving a talk):

2017 June: **International Conference "Complex Dynamics: Iterations, Foliations and Evolutions"**, Center of Advanced Studies (Norwegian Academy of Science and Letters), Oslo, NORWAY, June 19 – 23, 2017

2017 September: **International Workshop on Quaternionic Analysis "Quaternioni sul Conero"**, Università Politecnica delle Marche, Ancona (AN), ITALY, September 7 – 8, 2017

2016 September: **International Workshop "Complex function theory, its generalizations and applications",** INdAM (National Institute of Higher Mathematics), Rome, ITALY, September 12 - 16, 2016

2016 August: **International Conference "Complex Geometry and the Cauchy-Riemann Equation",** Centre for Advanced Study, Norwegian Academy of Science and Letters, Oslo, NORWAY, August 22 - 26, 2016

2015 February: **Norwegian - Spanish Workshop in Complex Variables and Applications**, Universidad Complutense de Madrid, Madrid, SPAIN, February 19 - 20, 2015

2009 May: **International Conference "Complex Analysis & Dynamical Systems, IV"**, Nahariya, ISRAEL, May 18 - 22, 2009

2008 September: **International Workshop on Holomorphic Iteration, Semigroups, and Loewner Chains**, INdAM (National Institute of Higher Mathematics), Rome, ITALY, September 9 - 12, 2008

2008 July: **5th European Congress of Mathematics**, Amsterdam, NETHERLANDS, July 14 - 18, 2008

AWARDS AND GRANTS:

Member of a research group, working on the project "*Complex Analysis, Banach spaces, and operators*", supported by Ministerio de Economía y Competitividad (Spain), grant MTM2015-63699-P, 2016 – 2018.

"Små driftsmidler 2011" – travel grant of the Department of Mathematical Sciences (Norwegian University of Science and Technology, Trondheim, Norway) to visit the conference "Complex Analysis & Dynamical Systems V", Acre, Israel, May 2011 (project no. 70235600)

Abel Extraordinary Chair, NILS Mobility Project ("Geometric and analytic properties of generalized Loewner chains", Visiting Researcher at the University of Seville), February 2010 – June 2010, September 2010 – February 2011

ESF Short Visit Grant (within the Research Networking Programme "Harmonic and Complex Analysis and its Applications"), October 2008

Norwegian Government Scholarship, 2007/2008 academic year (postdoctoral research project "Dynamical systems and applications to Mathematical Physics")

Awarded the Medal of the Russian Academy of Sciences, 2002 (for a research study carried out in collaboration with Alexander Kuznetsov)

Awarded the Medal of Ministry of Education of the Russian Federation, 2000 (for a research study carried out in collaboration with Alexander Kuznetsov)

Member of a research group, working on projects supported by INTAS (#99-00089, 2002-2003) and RFBR (Russian Foundation for Basic Research) (#98-01-00842, #01-01-00123, #04-01-00083; #07-01-00120, 1999 – 2009)

Personal grant RFBR (Russian Foundation for Basic Research) #03-01-06010 (2003)

COURSES AND OTHER ACTIVITES:

Reviewing research papers for *Mathematical Reviews*, October 2006 – present

Attending and serving as a tutor of the participants' small research projects for the **Doc-Course *"Complex Analysis and Related Areas"***, Institute of Mathematics of the University of Sevilla (IMUS) and the University of Málaga, February 4th - March 15th, 2013

Participation in the ***Norwegian summer school on analysis and geometry for PhD students and young researchers***, Bergen, Norway, June 23 – 28, 2013

Participation in the Summer School of Mathematics (**Scuola Matematica Interuniversitaria**), course title: "***Loewner's theory from the deterministic and stochastic point of view***", Cortona, Italy, August 15 – 27, 2010

Participation in the course on Dynamical Systems "***III Escuela de Verano de Sistemas Dinámicos***", University of Huelba, Spain, June 17-18, 2011

PEDAGOGICAL EDUCATION:

University courses in pedagogics:
- Pedagogics and Psychology (54 hours, examination grade - *excellent*)
- New Information Technologies in Educational Process (150 hours, examination grade - *passed*)

PhD program course:
- Foundations of Psychology of Higher Education (25 hours, examination grade - *passed*)

TEACHING EXPERIENCE:

I. My teaching experience started in 2003 when I entered the PhD courses at Saratov State University, RUSSIA. During my affiliation with <u>Saratov State University</u> I taught at the *Department of Mechanics and Mathematics* and the *Department of Nonlinear Processes* the following courses:

- **Lecture course in Mathematical Analysis and problem solving classes in Calculus** (for 1st- and 2nd-year students at the part-time department, specialty "Applied Mathematics")   *September 2005 – May 2007*
- **Special lecture course "Iteration of rational functions"** (60 hours, for 4th year students at the Dept. Mech. and Math.)   *autumn semester 2006*
- **Problem solving classes in Calculus** (for 1st- and 2nd-year students at the Dept. Mech. and Math. and Dept. of Nonlinear Processes)   *September 2003 – May 2007*
- **Problem solving classes in Complex Analysis** (for 2nd-year students at the Dept. of Nonlinear Processes)   *spring semester 2007*
- **Students' self-study seminar "Complex Dynamics"** (34 hours, for 4th year students at the Dept. Mech. and Math.)   *spring and autumn semesters 2006*
- **Students' self-study seminar "Theory of Univalent Functions"** (34 hours, for 5th year students at the Dept. Mech. and Math.)   *spring semester 2007*

II. I also contributed in teaching work at <u>Saratov State University</u> as a supervisor of students' projects, including **a number of yearly projects (term papers)** and **two successfully defended diploma papers**.

III. My position at the <u>University of Bergen</u>, NORWAY, did not assume official teaching duties. However, I conducted **problem solving classes for master students** in the following subjects:

- **Integration and Measure Theory**   *Spring semester, 2009*
- **Functional Analysis**   *Autumn semester, 2009*

IV. At the <u>Norwegian University of Science and Technology</u> I gave **a lecture course and problem solving classes for master students in Complex Analysis** *(Spring semester, 2011)*, see web-page of the course at the Department's site http://wiki.math.ntnu.no/tma4175/2011v/start

V. At the <u>University of Rome "Tor Vergata"</u> I read the <u>PhD course</u> "**Univalent functions**", see the program at http://www.mat.uniroma2.it/~dott/Pavel.pdf

VI. During my work at the <u>University of Rome "Tor Vergata"</u> I also contributed as an **assistant supervisor** (Italian "correlatore") for a successfully defended **master thesis**: A. del Monaco, *Loewner's Equations.* Tesi di laurea magestrale. Università di Roma "Tor Vergata", 2012.

VII. At the <u>University of Stavanger</u>, I have taught two courses on the bachelor level:
- **"Mathematical Methods 2"** (90 hours)   *Spring semesters 2015 – 2018*
  http://www.uis.no/studies/study-courses/?code=MAT200_1
  an elementary course for more than 500 students following various engineering careers;

- **"Mathematical Analysis"** (60 hours)   *Autumn semesters 2015 – 2017*
  http://www.uis.no/studies/study-courses/?code=MAT310_1
  a bachelor course for students following careers in Mathematics and Physics

REFERENCES:

1. **Prof. Filippo Bracci**, `fbracci "at" mat.uniroma2.it`, University of Rome "Tor Vergata", Department of Mathematics, via della Ricerca Scientifica 1, 00133 Rome, ITALY, Tel.: (+39)06-72594643, Fax: (+39) 06-72594699

Relation: my collaborator and previous employer

2. **Prof. Santiago Díaz-Madrigal**, `madrigal "at" us.es`, University of Seville, Escuela Técnica Superior de Ingenería and IMUS, Camino de los Descubrimientos s/n, 41092 Seville, SPAIN, Tel.: (+34) 954-48-60-63, Fax: (+34) 954-48-61-65

Relation: my collaborator and the host professor during my research stay in Seville

3. **Prof. Kari Hag**, `kari "at" math.ntnu.no`, Norwegian University of Science and Technology, Department of Mathematical Sciences, N-7491 Trondheim, NORWAY, Tel.: (+47) 73 59 35 21, Fax: (+47) 73 59 35 24

Relation: Prof. Kari Hag supervised and advised me about teaching work during my fixed-term employment at the Norwegian University of Science and Technology

4. **Prof. Dmitri Prokhorov**, `ProkhorovDV "at" info.sgu.ru`, Saratov State University, Department of Mechanics and Mathematics, Astrakhanskaya 83, 410012 Saratov, RUSSIA, Tel.: (+7) 8452-51-55-37, Fax: (+7) 8452-26-15-54

Relation: my PhD supervisor and first employer – head of the Chair of Mathematical Analysis

5. **Prof. Alexander Rashkovskii**, `alexander.rashkovskii "at" uis.no`, University of Stavanger, Department of Mathematics and Natural Sciences, N-4036 Stavanger, NORWAY, Tel.: (+47) 5183 1833, Fax: (+47) 5183 1750

Relation: Mathematics Group Leader at the University of Stavanger (where I currently work)

6. **Prof. Oliver Roth**, `roth "at" mathematik.uni-wuerzburg.de`, University of Würzburg, Department of Mathematics, Lehrstuhl für Mathematik IV, Emil-Fischer-Straße 40, 97074 Würzburg, GERMANY,
Tel.: +49 (0) 931 31-84974,   Fax: +49 (0)931 31-85376

Relation: prospective research collaborator, head of the Chair of Complex Analysis at the University of Würzburg

7. **Prof. Alexander Solynin**, `alex.solynin "at" ttu.edu`, Texas Tech University, Department of Mathematics and Statistics, Box 41042, Lubbock, TX 79409-1042, USA, Tel.: (+1)806-834-7280, Fax: (+1)806-742-1112

Relation: prospective collaborator working in a closely related area

8. **Prof. Alexander Vasil'ev** University of Bergen, Department of Mathematics

Relation: the leader of the research group in which I worked during my postdoc in Bergen