Svajūnas SAJAVIČIUS

Institute of Applied Geometry
Faculty of Engineering and Natural Sciences (TNF)
Johannes Kepler University Linz
Science Park 2, 3rd floor, Room 3E/0361
Altenberger Str. 69, A-4040 Linz, Austria

Email: svajunas.sajavicius@jku.at
svajunas.sajavicius@gmail.com
Website: http://www.ag.jku.at/~svajunas
ResearcherID: C-7538-2011
LinkedIn: https://lt.linkedin.com/in/sajavicius

CURRENT POSITIONS

Postdoctoral Researcher
Institute of Applied Geometry, Faculty of Engineering and Natural Sciences (TNF),
Johannes Kepler University Linz, Austria

Associate Professor (on leave since December 2015)
Institute of Economics, Faculty of Economics and Business,
Mykolas Romeris University

EDUCATION

PhD Computer science 2009–2013
Faculty of Mathematics and Informatics, Vilnius University, Lithuania

MSc Mathematics 2007–2009
Faculty of Mathematics and Informatics, Vilnius University, Lithuania

BSc Mathematics 2003–2007
Faculty of Mathematics and Informatics, Vilnius University, Lithuania

PROFESSIONAL EXPERIENCE

Postdoctoral Researcher Since December 2015
Institute of Applied Geometry, Faculty of Engineering and Natural Sciences (TNF)
Johannes Kepler University Linz, Austria

Associate Professor Since January 2014
Institute of Economics (Department of Mathematical Modelling, till December 2016; Department of Finance and Taxes, till May 2016), Faculty of Economics and Business (Faculty of Economics and Finance Management, till December 2016)
Mykolas Romeris University, Lithuania

Lecturer 2010–2016
Department of Computer Science II, Faculty of Mathematics and Informatics
Vilnius University, Lithuania

Lecturer 2009–2013
Department of Mathematical Modelling, Faculty of Economics and Finance Management (Faculty of Social Informatics, till December 2012)
Mykolas Romeris University, Lithuania

Junior lecturer 2009–2010
Department of Computer Science II, Faculty of Mathematics and Informatics
Vilnius University, Lithuania

RESEARCH

Research interests

- Numerical methods for PDEs (finite difference method, finite element method, meshless methods, isogeometric analysis)
- Computer aided geometric design (applications in isogeometric analysis)

Publications

Summary of publications

	Number of papers
Journals and editions indexed in *Clarivate Analytics Web of Science*	8
Other indexed journals and editions	2
Other refereed editions	4

Journals indexed in Journal Citation Reports (JCR)	*Impact Factor (2016)*	*Journal rank (2016)*	*Number of papers*
Computers and Mathematics with Applications	1.531	Q1	2
Engineering Analysis with Boundary Elements	1.721	Q2	2
Nonlinear Analysis: Modelling and Control	0.952	Q2/Q3/Q4	2

Citation report (Clarivate Analytics Web of Science, July 2017)

Results found:	8
h-index:	4
Average Citations per Item:	4.88
Sum of the Times Cited:	39
Sum of Times Cited without self-citations:	24
Citing Articles:	27
Citing Articles without self-citations:	20

Citation distribution across journals

Advances in Applied Mathematics and Mechanics (1), Advances in Difference Equations (1), Applied Mathematical Modelling (3), Applied Mathematics and Computation (1), Boundary Value Problems (1), Computers & Mathematics with Applications (3), Electronic Journal of Differential Equations (1), Engineering Analysis with Boundary Elements (1), International Journal of Greenhouse Gas Control (1), International Journal of Numerical Modelling: Electronic Networks, Devices and Fields (1), Journal of Computational and Nonlinear Dynamics (1), Lithuanian Mathematical Journal (1), Mathematical Modelling and analysis (1), Mediterranean Journal of Mathematics (1), Nonlinear Analysis: Modelling and Control (5), Numerical Algorithms (1)

Publication distinctions

- #9 in *SciVerse ScienceDirect TOP25 – List of most downloaded articles* for Engineering Analysis with Boundary Elements – January to December 2013 (full year)
- #25 in *SciVerse ScienceDirect TOP25 – List of most downloaded articles* for Engineering Analysis with Boundary Elements – July to September 2013
- #2 in *SciVerse ScienceDirect TOP25 – List of most downloaded articles* for Engineering Analysis with Boundary Elements – April to June 2013
- #10 in *SciVerse ScienceDirect TOP25 – List of most downloaded articles* for Computers and Mathematics with Applications – October to November 2012

Refereed journal publications

1. S. Sajavičius. Radial basis function collocation method for an elliptic problem with nonlocal multipoint boundary condition. *Engineering Analysis with Boundary Elements*, **67**, pp. 164–172, 2016. ISSN 0955-7997, DOI: 10.1016/j.enganabound.2016.03.010 [Impact Factor: 1.392 (2014), 1.862 (2015), 1.721 (2016)]
   Times Cited (without self-citations): 1
2. S. Sajavičius. Radial basis function method for a multidimensional linear elliptic equation with nonlocal boundary conditions. *Computers and Mathematics with Applications*, **67**(7), pp. 1407–1420, 2014. ISSN 0898-1221, DOI: 10.1016/j.camwa.2014.01.014 [Impact Factor: 2.069 (2012), 1.996 (2013), 1.697 (2014), 1.398 (2015), 1.531 (2016)]
   Times Cited (without self-citations): 8
3. S. Sajavičius. Optimization, conditioning and accuracy of radial basis function method for partial differential equations with nonlocal boundary conditions—A case of two-dimensional Poisson

equation. *Engineering Analysis with Boundary Elements*, **37**(4), pp. 788–804, 2013. ISSN 0955-7997, DOI: 10.1016/j.enganabound.2013.01.009 [Impact Factor: 1.451 (2011), 1.596 (2012), 1.437 (2013), 1.392 (2014), 1.862 (2015)]

Times Cited (without self-citations): 6

4. S. Sajavičius. Stability of the weighted splitting finite-difference scheme for a two-dimensional parabolic equation with two nonlocal integral conditions. *Computers and Mathematics with Applications*, **64**(11), pp. 3485–3499, 2012. ISSN 0898-1221, DOI: 10.1016/j.camwa.2012.08.009 [Impact Factor: 1.747 (2011), 2.069 (2012), 1.996 (2013), 1.697 (2014)]

   Times Cited (without self-citations): 6
5. S. Sajavičius. On the eigenvalue problems for differential operators with coupled boundary conditions. *Nonlinear Analysis: Modelling and Control*, **15**(4), pp. 493–500, 2010. ISSN 1392-5113 [Impact Factor: 0.400 (2010), 0.686 (2011), 0.861 (2012)]
6. S. Sajavičius. On the eigenvalue problems for finite-difference operators with coupled boundary conditions. *Šiauliai Mathematical Seminar*, **5(13)**, pp. 87–100, 2010. ISSN 1822-511X
7. S. Sajavičius, M. Sapagovas. Numerical analysis of the eigenvalue problem for one-dimensional differential operator with nonlocal integral conditions. *Nonlinear Analysis: Modelling and Control*, **14**(1), pp. 115–122, 2009. ISSN 1392-5113 [Impact Factor: 0.400 (2010), 0.686 (2011), 0.861 (2012)]

   Times Cited (without self-citations): 4

Publications in refereed conference proceedings

1. S. Sajavičius. The splitting finite-difference scheme for two-dimensional heat conduction equation with four nonlocal integral conditions. In: J. Eberhardsteiner, H. J. Böhm and F. G. Rammerstorfer (Eds.), *CD-ROM Proceedings of the 6th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2012)*, Vienna, Austria, September 10–14, 2012, CD-ROM, Paper ID 1081, 12 p., 2012. ISBN 978-3-9502481-9-7
2. S. Sajavičius. On the stability of fully-explicit finite-difference scheme for two-dimensional parabolic equation with nonlocal conditions. In: B. Murgante, O. Gervasi, A. Iglesias, D. Taniar and B. O. Apduhan (Eds.), *Computational Science and Its Applications – ICCSA 2011, International Conference, Santander, Spain, June 20–23, 2011, Proceedings, Part IV. Lecture Notes in Computer Science*, **6785**, pp. 1–10, Springer-Verlag Berlin Heidelberg, 2011. ISSN 0302-9743/e-ISSN 1611-3349, ISBN 978-3-642-21897-2/e-ISBN 978-3-642-21898-9, DOI: 10.1007/978-3-642-21898-9_1
3. S. Sajavičius. On the stability of locally one-dimensional method for two-dimensional parabolic equation with nonlocal integral conditions. In: J. C. F. Pereira, A. Sequeira and J. M. C. Pereira (Eds.), *Proceedings of the V European Conference on Computational Fluid Dynamics (ECCOMAS CFD 2010)*, 14–17 June 2010, Lisbon, Portugal, CD-ROM, 11 p., 2010. ISBN 978-989-96778-1-4
4. S. Sajavičius. On the stability of alternating direction method for two-dimensional parabolic equation with nonlocal integral conditions. In: V. Kleiza, S. Rutkauskas and A. Štikonas (Eds.), *Proceedings of International Conference Differential Equations and Their Applications (DETA'2009)*, Panevėžys, Lithuania, pp. 42–48, Technologija, Kaunas, Lithuania, 2009. ISBN 978-9955-25-747-9

Extended abstracts

1. S. Sajavičius. The splitting finite-difference schemes for two-dimensional parabolic equation with nonlocal weighted integral conditions. In: S. Repin, T. Tiihonen and T. Tuovinen (Eds.), *Proceedings of ECCOMAS Thematic Conference on Computational Analysis and Optimization (ECCOMAS CAO 2011)*, 9–11 June 2011, Jyväskylä, Finland, pp. 81–84, 2011. ISSN 1456-4351 / ISBN 978-951-39-4331-8
2. S. Sajavičius. The splitting finite-difference schemes for two-dimensional parabolic equation with nonlocal conditions. In: A. Eriksson and G. Tibert (Eds.), *Proceedings of NSCM23: the 23rd Nordic Seminar on Computational Mechanics / Technical report 2010:07*, Stockholm, Sweden, pp. 345–348, 2010. ISSN 0348-467X
3. S. Sajavičius. The stability of finite-difference scheme for two-dimensional parabolic equation with nonlocal integral conditions. In: L. Damkilde, L. Andersen, A. S. Kristensen and E. Lund (Eds.), *DCE Technical Memorandum No. 11 / Proceedings of the Twenty Second Nordic Seminar on Computational Mechanics*, pp. 87–90, Aalborg, Denmark, 2009. ISSN 1901-7278

Participation in research projects

- MOTOR – Multi-ObjecTive design Optimization of fluid eneRgy machines (funded by European Commission through Horizon 2020 programme, project reference: 678727), 2015–2017
- BalticGrid-II project (funded by the EU within the framework of the 7th Framework Programme, Contract No. 223807), 2010
- Development of Bioelectrocatalysis for Synthesis and Analysis (BIOSA), #N–08007, Lithuanian State Science and Studies Foundation, 2008
- Computer Simulation of the Behavior of Heterogeneous Processes and Systems (MODELITA), #C–03048, Lithuanian State Science and Studies Foundation, 2005, 2006

Invited presentations/talks

- Seminar Geometrie: Recent Results in Computer Aided Geometric Design, Institute of Applied Geometry, Johannes Kepler University Linz, 24 September, 2015, Linz, Austria

Contributed presentations/talks in international conferences and congresses

- 9th International Conference on Mathematical Methods for Curves and Surfaces (MMCS9), 23–28 June, 2016, Tønsberg, Norway
- Equadiff'13 conference, 25–30 August, 2013, Prague, Czech Republic
- Congress on Numerical Methods in Engineering (CMN 2013), 25–28 June, 2013, Bilbao, Spain
- 6th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2012), 10–14 September, 2012, Vienna, Austria
- International Conference on Applied Mathematics and Approximation Theory (AMAT 2012), 17–20 May, 2012, Ankara, Turkey
- 7th International Congress on Industrial and Applied Mathematics (ICIAM 2011), 18–22 July, 2011, Vancouver, BC, Canada
- 16th International Conference Mathematical Modelling and Analysis, 25–28 May, 2011, Sigulda, Latvia
- 23rd Nordic Seminar on Computational Mechanics, 21–22 October, 2010, Stockholm, Sweden
- V European Conference on Computational Fluid Dynamics (ECCOMAS CFD 2010), 14–17 June, 2010, Lisbon, Portugal
- 15th International Conference Mathematical Modelling and Analysis, 26–29 May, 2010, Druskininkai, Lithuania
- 22nd Nordic Seminar on Computational Mechanics, 22–23 October, 2009, Aalborg, Denmark
- International Conference Differential Equations and Their Applications dedicated to Professor M. Sapagovas 70th anniversary, 10–12 September, 2009, Panevėžys, Lithuania
- 14th International Conference Mathematical Modelling and Analysis, 27–30 May, 2009, Daugavpils, Latvia

Participation in various international events

- G+Smo developer days 2017, 1–3 February, 2017, Delft, Netherlands
- Parameterisation roundtable meeting, 30–31 January, 2017, Delft, Netherlands
- Workshop on Function Approximation, 1–2 December, 2016, Linz, Austria
- International Symposium and Winter-School on Modeling, Adaptive Discretizations and Solvers for Fluid-Structure Interaction, 11–15 January, 2016, Linz, Austria
- G+Smo Workshop / G+Smo developer days 2015, 24–27 November, 2015, Linz, Austria
- 13th Workshop on Interactions Between Dynamical Systems and Partial Differential Equations / Jornades d'Interacció entre Sistemes Dinàmics i Equacions en Derivades Parcials (JISD2015), 1–5 June, 2015, Barcelona
- FORCE2015 Research Communication and e-Scholarship Conference, 12–13 January, 2015, Oxford, United Kingdom
- The 2014 International Summer School on HPC Challenges in Computational Sciences, 1–6 June, 2014, Budapest, Hungary
- Beyond the PDF2 Conference, 19–20 March, 2013, Amsterdam, Netherlands
- 6th European Congress of Mathematics (6ecm), July 2–7, 2012, Kraków, Poland

- Fifth RISC/SCIEnce Training School in Symbolic Computation, 28 June – 9 July, 2010, Hagenberg, Austria
- Summer School Modern Data Mining Technologies / Vasaros mokykla Modernios duomenų gavybos technologijos, 9–15 September, 2007, Druskininkai, Lithuania

Visits at renown universities or research centers

- MTU Aero Engines AG, 27–28 April, 2017, Munich, Germany
- Delft University of Technology, 30 January – 3 February, 2017, Delft, Netherlands
- Faculty of Applied Sciences, University of West Bohemia, 24–25 November, 2016, Plzen, Czech Republic
- The von Karman Institute for Fluid Dynamics (VKI), 13–14 April, 2016, Rhode-Saint-Genèse, Belgium
- Institute of Applied Geometry, Johannes Kepler University Linz, 24 September, 2015, Linz, Austria
- Budapest University of Technology and Economics (BME), 1–6 June, 2014, Budapest, Hugary
- Research Institute for Symbolic Computation (RISC), Johannes Kepler University Linz, 28 June – 9 July, 2010, Hagenberg im Mühlkreis, Austria

TEACHING

Vilnius University (since 2009)

- *Algorithms and data structures* – labs (Spring 2010)
- *Data analysis* – labs (Spring 2011, Spring 2012)
- *Data structures* – labs (Spring 2010, Spring 2011, Spring 2012, Spring 2013, Spring 2014)
- *Data structures and algorithms* – labs (Fall 2013, Fall 2014)
- *Human-computer interaction* – labs (Spring 2010)
- *Practical informatics* – lectures and labs (Fall 2010, Fall 2011, Fall 2012, Fall 2013, Fall 2014)

Mykolas Romeris University (since 2009)

- *Applied mathematics and quantitative methods in management* – practical sessions (Spring 2010)
- *Basics of finance mathematics* – lectures and practical sessions (Fall 2015)
- *Calculus and linear algebra* – lectures and practical sessions (Fall 2012)
- *Discrete structures*[*†] – lectures and practical sessions (Spring 2012, Spring 2013, Spring 2014 (in English and Lithuanian), Spring 2015 (in English))
- *Mathematical logic* – lectures and practical sessions (Spring 2010, Spring 2011)
- *Mathematical statistics*[*†] – lectures and practical sessions (Spring 2013, Spring 2014 (part-time studies), Spring 2015 (in English))
- *Matematical statistics and methods of statistical analysis I*[*] – lectures and practical sessions (Fall 2013 (in English))
- *Matematical statistics and methods of statistical analysis II*[*] – lectures and practical sessions (Spring 2014 (in English))
- *Numerical methods* – lectures and practical sessions (Fall 2010, Fall 2011)
- *Theory of probability and mathematical statistics*[*†] – lectures and practical sessions (Spring 2011, Spring 2014 (in English), Spring 2015 (in English))

ADMINISTRATIVE ACTIVITIES

- Member, Committee of Finance Economics bachelor studies programme (Mykolas Romeris University, Faculty of Economics and Finance Management), 2014–2015

PROFESSIONAL SERVICES

Conference committees

- Member of Technical Programme Committee, *International Conference on Service Science, Technology and Engineering (SSTE2017)*, Suzhou, China, June 23–25, 2017

[*] Courses taught in English

[†] Courses taught in dual diploma programmes validated by Middlesex University London, UK

Referee for international journals

- *Songklanakarin Journal of Science and Technology* (Prince of Songkla University, Thailand), since 2017
- *Iranian Journal of Science and Technology, Transactions A: Science* (Springer), since 2016
- *Inverse Problems in Science & Engineering* (Taylor & Francis), since 2016
- *Iranian Journal of Numerical Analysis and Optimization* (Ferdowsi University of Mashhad, Iran), since 2016
- *Mathematical Modelling and Analysis* (Taylor & Francis), since 2016
- *Journal of Applied Mathematics and Computing* (Springer), since 2015
- *Ain Shams Engineering Journal* (Elsevier), since 2015
- *International Journal of Computational Methods* (World Scientific Publishing), since 2015
- *Applied Mathematics – A Journal of Chinese Universities* (Springer), since 2014
- *Applied Mathematical Modelling* (Elsevier), since 2014
- *Expert Systems with Applications* (Elsevier), since 2014
- *Engineering Analysis with Boundary Elements* (Elsevier), since 2014
- *Nonlinear Analysis: Modelling and Control* (Vilnius University), since 2014
- *Journal of Computational and Applied Mathematics* (Elsevier), since 2013
- *Journal of Mathematics* (Hindawi Publishing Corporation), since 2012
- *Computers and Mathematics with Applications* (Elsevier), since 2012

Consulting

- Nature Research Centre, Lithuania, since 2015

Other

- Reviewer, *Zentralblatt MATH*, since 2012
- Reviewer, *Mathematical Reviews / MathSciNet*, since 2012

PROFESSIONAL MEMBERSHIPS

- *International Association of Engineers* (IAENG), since 2014
- *American Mathematical Society* (AMS), since 2013
- *Society for Industrial and Applied Mathematics* (SIAM), since 2011

GRANTS, AWARDS AND FELLOWSHIPS

- Travel grant from European Mathematical Society, Committee for European Solidarity (2015)
- Support for doctoral academic visit, Research Council of Lithuania (2013)
- Promotional doctoral scholarships for academic achievements, Lithuanian State Science and Studies Foundation (2010, 2011) and Research Council of Lithuania (2012, 2013)
- Support for short-term visits, allocated based on the project "The competitive funding of short-term researcher visits" under EU structural support, Research Council of Lithuania (2012, 2013)
- Support for research visit, Research Council of Lithuania (2011)
- Students' research practice fellowship, Research Council of Lithuania (2008)
- Financial support (travel grants) from organisers of various international conferences, congresses and other events:
  - 13th Workshop on Interactions Between Dynamical Systems and Partial Differential Equations (JISD2015), 1–5 June, 2015, Barcelona (registration fee and accommodation expenses)
  - FORCE2015 Research Communication and e-Scholarship Conference, 12–13 January, 2015, Oxford, United Kingdom (Travel fellowship supported by Elsevier/Mendeley, Moore, The National Science Foundation, PLoS and Sloan)
  - The 2014 International Summer School on HPC Challenges in Computational Sciences, 1–6 June, 2014, Budapest, Hungary
  - Beyond the PDF2 Conference, 19–20 March, 2013, Amsterdam, Netherlands (Travel award sponsored by Elsevier)
  - 6th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2012), 10–14 September, 2012, Vienna, Austria (registration fee and ECCOMAS scholarship to cover travel and accommodation expenses)

- 6th European Congress of Mathematics (6ecm), July 2–7, 2012, Kraków, Poland (waved registration fee, accommodation expanses and local costs)
- 7th International Congress on Industrial and Applied Mathematics (ICIAM 2011), 18–22 July, 2011, Vancouver, BC, Canada (registration fee and local expenses)
- Fifth RISC/SCIEnce Training School in Symbolic Computation, 28 June – 9 July, 2010, Hagenberg, Austria (Grant from project SCIEnce (Symbolic Computation Infrastructure in Europe) funded by the EU)
- Summer School Modern Data Mining Technologies / Vasaros mokykla Modernios duomenų gavybos technologijos (all expenses covered by the project "Informatics and Mathematics doctoral studies development (InMaDra)" (no. BPD2004-ESF-2.5.0-03-05/0027) supported by European structural funds)

SKILLS

Computer

Programming: C/C++, Python, Java, Visual Basic
Scientific computing and simulation: GNU Octave, Matlab, Mathematica, Maple, Maxima, R, COMSOL Multiphysics
Parallel computing: OpenMP, MPI
Post-processing (visualisation): ParaView, VisIt
Libraries and packages for isogeometric analysis: Geometry + Simulation Modules (G+Smo), GeoPDEs

Languages

Lithuanian (native)	Fluent
English	Good
German	Basics
Spanish	Basics

SUMMARY

Svajūnas Sajavičius graduated from Vilnius University (Lithuania) with BSc (2007) and MSc (2009) degrees in Mathematics, and a PhD degree (2013) in Computer Science. Currently he works at Institute of Applied Geometry of Johannes Kepler University Linz (Austria) as a postdoctoral researcher in the MOTOR project. His research interests include numerical methods for partial differential equations (PDEs) and computer aided geometric design (with special focus on applications in isogeometric analysis). Dr Sajavičius is an author of over 10 papers in refereed journals and conference proceedings, and a participant of various international conferences and congresses.

CAREER HIGHLIGHTS

- International research experience in EU-funded project with partners from academia and industry
- Strong focus on research output quality and publications in high impact journals
- University teaching experience in broad variety of math and computer science courses