Curriculum Vitae

Miroslav Rozložník

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Born: August 4, 1969, Roznava, Czechoslovakia
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Education:

- DSc. (Doctor Scientiarum), Czech Aacdemy of Sciences, Prague, December 2020. Doctoral Thesis: Gram-Schmidt orthogonalization in presence of rounding errors.
- Habilitation (Docent degree) at the Technical University of Liberec, Department of Modelling of Processes, Faculty of Mechatronics and Interdisciplinary Studies, Liberec, April 2004. Habilitation Thesis: Iterative solution of saddle point problems in mathematical modelling.
- Ph.D. in Applied Mathematics, Faculty of Nuclear Science and Physical Engineering, Czech Technical University and Institute of Computer Science, Academy of Sciences of the Czech Republic, Prague, March 1997. Ph.D. Thesis: Numerical Stability of GMRES, Thesis Advisor: Zdenek Strakos.
- M.Sc. (Ing. Degree) in Applied Mathematics (Mathematical Engineering), Czech Technical University, Faculty of Nuclear Science and Engineering, Prague, June 1992, Supervisor: Zdenek Strakos, title of the diploma work: Biconjugate gradient-type methods for the solution of large nonsymetric systems of linear equations (awarded by Red diploma).

Employment:

- January 2017 – now: Research Fellow, Institute of Mathematics, Czech Academy of Sciences, Prague, May 2019 – Deputy Director.

- July 2000 – December 2016: Research Fellow, Institute of Computer Science, Academy of Sciences of the Czech Republic, Prague, 2005-2013 Head of the Department of Computational Methods.
- January 2000 – 2009: Technical University of Liberec, Department of Modelling of Processes, Faculty of Mechatronics and Interdisciplinary Studies, Liberec, Associate Professor (Doc.) since Spring 2004.
- January 1999 – July 2000: Postdoctoral research fellow, Seminar for Applied Mathematics, Swiss Federal Institute of Technology (SAM ETH), Zurich.
- April 1998 – December 1998: Postdoctoral research fellow, Swiss Center for Scientific Computing (CSCS/SCSC), Swiss Federal Institute of Technology ETH, Zurich.
- September 1994 – October 1996: Ph.D. student, Czech Technical University, Faculty of Nuclear Sciences and Physical Engineering, Prague (external doctoral study staying at the Institute of Computer Science, Academy of Sciences).
- October 1996 – February 1998: Civil military service, Department of Computer Communications
- August 1992 – August 1994: Research assistant, Institute of Computer Science, Academy of Sciences of the Czech Republic (before 1993 Institute of Information and Computing Sciences, Czechoslovak Academy of Sciences).

Teaching Experience:

- Summer 2014, Summer 2016, Summer 2018, Summer 2019, Summer 2020: Saddle point problems and their solution, Charles University in Prague, Faculty of Mathematics and Physics, Prague.
- November 2016: Numerical Mathematics, Zhejiang Gongshang University, Hanzhou, China.
- Fall 2013, Fall 2012, Fall 2011, Summer 2011, Fall 2010, Business Mathematics I/1, Anglo-American University, Prague.
- M. Rozloznik: Uvod do linearni algebry a geometrie (Introduction to linear algebra and geometry), Lecture notes, Technical University of Liberec, Faculty of Mechatronics and Interdisciplinary Studies, Liberec, 2005, pp. 88.
- Winter 2004,2005,2006,2007,2008,2009: Introduction to linear algebra, Technical University of Liberec, Faculty of Mechatronics and Interdisciplinary Studies, Liberec.
- Winter 2002,2003,2005,2006,2007,2008,2009: Implementation of numerical methods, Technical University of Liberec, Faculty of Mechatronics and Interdisciplinary Studies, Liberec.
- Summer 2003,2004: Advanced numerical linear algebra (with Z. Strakos), Technical University of Liberec, Faculty of Mechatronics and Interdisciplinary Studies, Liberec.
- Summer 2002: Mathematics II, Technical University of Liberec, Faculty of Mechatronics and Interdisciplinary Studies, Liberec, 2003.
- Winter 1999: Lineare Algebra (Prof. U. Lang) - Uebungen, Swiss Federal Institute of Technology, (ETH), Department of Mathematics, Abt. IIIA/D, Zurich.
- Winter 1995-Summer 1996: Linear algebra and geometry (Prof.J. Pytlicek)- Exercises, Czech Technical University, Faculty of Nuclear Sciences and Physical Engineering, Prague.

Awards:

- Annual award of the Academy of Sciences for outstanding result of a great scientific importance, 2006, as a member of the research team headed by Zdenek Strakos, May 2006.
- Otto Wichterle Prize for young scientists, 2002, awarded by the Academy of Sciences of the Czech Republic, Prague, May 2002.
- I. Babuska Prize (2nd place) for the best work in computer science submitted by students and young scientists, 1996 for the work Numerical Stability of GMRES, awarded by the Czech Association for Mechanics and the Union of Czech Mathematicians and Physicists, December 1996.

Other Activities and Grant Support:

- Member of the Editorial Board, Applications of Mathematics, 2012-
- Member of the Editorial Board, Numerical Linear Algebra with Applications, 2011-
- Member of the Evaluation Panel 201 (Mathematics), Grant Agency of the Czech Republic, 2011-2013, 2013-2015.
- Member of the Scientific Boards: Institute of Computer Science, Acad. of Sciences of the Czech Rep. (2003-2004, 2005-2006).
- Member of local organizing comittee of international conferences (MAT TRIAD 2019, International Conference on Matrix Analysis and its Applications, Liblice 2019, Conference Implicitly Constituted Materials, Roztoky 2017, Workshop of the ERC-CZ MORE Project, Pilsen 2015, Conference Modeling, analysis and computing in nonlinear PDEs, Liblice 2014, Workshop of the Project ERC-CZ MORE Implicitly Constituted Materials, Liblice 2013, XII GAMM Workshop on Applied and Numerical Linear Algebra**,** Liblice 2012 **,** Computational Methods with Appl. – Harrachov 2007, Computational Linear Algebra with Applications – Milovy 2002 and Iterative Methods and Parallel Computing, Milovy 1997).

- Coorganizer of the series of seminars and winter schools SNA (2005-2017) and ESSAM-MASC in Kacov (2016, 2018,2020).

- Grant CZ.02.2.69/0.0/0.0/18_054, Matematický ústav AV ČR usiluje o HR Award - zavedení profesionálního řízení lidských zdrojů, Ministerstvo školství, mládeže a tělovýchovy, 2020-2022.
- Grant GA17-17-12925S, Strength of materials and mechanical components based on iron: Multi-scale approach, co-investigator, Grant Agency of the Czech Republic, 2017-2019.
- Grant No. P108/11/0853, Nanostructures with trasition metals, co-investigator, Grant Agency of the Czech Republic, 2011-2015.
- Grant No. 101/00/1035, Production of nitrogen oxides in spark-ignition engine**,** principal investigator Grant Agency of the Czech Republic, 2000-2002.

- Postdoctoral Grant no. 201/98/P108, Analysis of the numerical stability of iterative methods for solution of large nonsymmetric linear systems, Grant Agency of the Czech Republic, January 1998.
- Grant No. E1030701 supporting the publication of the thesis Numerical Stability of

GMRES from the Grant Agency of the Academy of Sciences of the Czech Republic, April 1997.

Book:

M. Rozložník, Saddle-Point Problems and Their Iterative Solution , Birkhäuser, Cham, 2018. Print ISBN 978-3-030-01430-8, Online ISBN 978-3-030-01431-5, https://doi.org/10.1007/978-3-030-01431-5

Journal Publications:

- H. Fassbender, M. Rozložník, S. Singer Sanja, Nearly optimal scaling in the SR decomposition, Linear Algebra and its Applications (2021), Vol. 613, pp. 295-319.
- L. Rebollo-Neira, M. Rozloznik, S. Pradip, Analysis of the self projected matching pursuit algorithm, Journal of the Franklin Institute 357 (13), 2020, 8980-8994.
- E. Carson, M. Rozložník, Z. Strakoš, P. Tichý, M. Tůma: The numerical stability analysis of pipelined conjugate gradient methods: historical context and methodology, SIAM Journal on Scientific Computing 40 (5), 2018, A3549-A3580.
- K. Morikuni, M. Rozloznik, On GMRES for singular EP and GP systems, SIAM Journal on Matrix Analysis and Applications 39 (2), 2018, 1033-1048.
- F.J. Hall, Z. Li, C. Parnass, M. Rozloznik: Sign patterns of J-orthogonal matrices, Special Matrices 5 (1), 2017, 225-241.
- J. Kopal, M. Rozloznik and M. Tuma. An adaptive multilevel factorized sparse approximate preconditioning, Advances in Engineering Software 113 (2017) 19-24.
- H. Fassbender, M. Rozloznik: On the conditioning of factors in the SR decomposition, Linear Algebra and its Applications (2016), Vol. 505, pp. 224-244.
- J. Kopal, M. Rozloznik and M. Tuma. Factorized approximate inverses with adaptive dropping, SIAM J. Scientific Computing (2016), Vol. 38, pp. 1807-1820.
- F.J. Hall. M. Rozloznik: G-matrices, J-orthogonal matrices and their sign patterns, Czechoslovak Mathematical Journal 66 (141), (2016), 653-670.
- Z.Z. Bai, M. Rozloznik: On numerical behavior of Matrix Splitting Iteration Methods, 2014, SIAM J. Num. Anal. (2015), Vol. 53, No. 4, pp. 1116—1137.
- M. Rozloznik, F. Okulicka-Dluzewska, A. Smoktunowicz: Cholesky-like factorization of symmetric indefinite matrices and orthogonalization with respect to bilinear forms, SIAM J. Matrix Anal. and Appl. (2015), Vol. 36, No. 2, pp. 727—751.
- J. Kopal, M. Rozloznik and M. Tuma. Approximate inverse preconditioners with adaptive dropping, Advances in Engineering Software 84 (2015), 13—20.
- M. Rozloznik, A. Smoktunowicz, J. Kopal: A note on iterative refinement for seminormal equations, Applied Numerical Mathematics 75 (2014), 167—174.
- J. Kopal, M. Rozloznik, M. Tuma, A. Smoktunowicz: Rounding error analysis of orthogonalization with a non-standard inner product, BIT Numer Math (2012) 52:1035–1058.
- M. Rozloznik, G. Shklarski and S. Toledo: Partitioned triangular tridiagonalization, ACM Trans. Math. Softw. (TOMS) 37(4):38 (2011).
- P. Jiranek, M. Rozloznik: Adaptive version of Simpler GMRES. Num. Algorithms Volume 53, Issue 1 (2010), Page 93-112.

- P. Jiranek, M. Rozloznik, M.H. Gutknecht: How to make simpler GMRES and GCR more stable, SIAM Journal of Matrix Analysis and Applications (2008), Vol. 30, No. 4, pp. 1483—1499.
- P. Jiranek, M. Rozloznik: Maximum attainable accuracy of inexact saddle point solvers, SIAM Journal of Matrix Analysis and Applications (2008), Vol. 29, No. 4, pp. 1297—1321.
- P. Jiranek, M. Rozloznik: Limiting accuracy of segregated solution methods for nonsymmetric saddle point problems, Journal of Computational and Applied Mathematics 215 (2008), pp. 28-37.
- C.C. Paige, M. Rozloznik, Z. Strakos: Modified Gram-Schmidt (MGS), least squares and backward stability of MGS-GMRES, SIAM J. Matrix Anal. and Appl. (2006), Vol. 28, No. 1, pp. 264--284.
- M. Arioli, J. Maryska, M. Rozloznik,M. Tuma: Dual variable methodsfor mixed-hybrid finite element approximation of the potential fluid flow problem in porous media, ETNA (2006), Vol. 22, pp. 17-40.
- L. Giraud, J. Langou, M. Rozlozník, and J. van den Eshof **:** Rounding error analysis of the classical Gram-Schmidt orthogonalization process , Numerische Mathematik (2005) 101: 87-100 (previous version without the result on CGS: L. Giraud, J. Langou M. Rozloznik: On the round-off error analysis of the Gram-Schmidt algorithm with reorthogonalization, Research Report TR/PA/02/33, CERFACS, Toulouse, France, April, 2002).
- L. Giraud, J. Langou , M. Rozloznik: On the loss of orthogonality in the Gram-Schmidt orthogonalization process , Computers & Mathematics with Applications 50 (2005), pp. 1069--1075.
- M. Rozloznik, V. Simoncini : Krylov subspace methods for saddle point problems with indefinite preconditioning , SIAM J. Matrix Anal. and Appl. (2002), Vol. 24, No. 2, pp. 368--391.
- J. Liesen, M. Rozloznik, Z. Strakos : Least squares residuals and minimal residual methods , SIAM J. Sci. Comput. (2002), Vol. 23, No. 5, pp. 1064-8275 .
- M. H. Gutknecht , M. Rozloznik: A framework for generalized conjugate gradient methods - with special emphasis on contributions by Ruediger Weiss, Applied Numerical Mathematics (APNUM) 41 (2002), 7-22.
- M.H. Gutknecht, M. Rozloznik, Residual smoothing techniques: Do they improve the limiting accuracy of iterative solvers? , BIT 41, No. 1 (2001), 86-114.
- M.H. Gutknecht, M. Rozloznik, By how much can residual minimization accelerate the convergence of orthogonal residual methods? Numerical algorithms. 27 (2001), 189-213.
- J. Maryska, M. Rozloznik, M. Tuma : Schur complement systems in the mixed-hybrid finite element approximation of the potential fluid flow problem , Siam J. Sci. Comput (SISC), Vol. 22, No. 2 (2000), 704-723.
- J. Maryska , M. Rozloznik, M. Tuma : Schur complement systems in the mixed-hybrid finite element approximation of Darcy's law: Rounding error analysis , J. Comp. Appl. Math. 117 (2000), 159-173.
- A. Greenbaum , M. Rozloznik, Z. Strakos: Numerical behaviour of the modified Gram-Schmidt GMRES implementation , BIT 37:3 (1997), pp. 706-719.
- M. Rozloznik, R. Weiss: On the stable implementation of the Generalized minimal error method , J. Comp. Appl. Math. 98 (1998), pp. 49-62.
- J. Maryska, M. Rozloznik, M. Tuma: The potential fluid flow problem and the convergence rate of the minimal residual method , Numerical Linear Algebra with Applications, Vol. 3 (6) (1996), pp. 525-542.

- J. Drkosova, A. Greenbaum , M. Rozloznik, Z. Strakos : Numerical stability of GMRES, BIT 35:3 (1995), pp. 309-330.
- J. Maryska , M. Rozloznik, M. Tuma : Mixed-hybrid finite element approximation of the potential fluid flow problem , J. Comp. Appl. Math. 63 (1995), pp. 383-392.

Proceedings Publications:

- M. Rozloznik: Classical Gram-Schmidt orthogonalization in the presence of rounding errors, Book of extended abstracts of NAS2015 (Numerical Analysis Symposium), Katsunuma, Japan, pp. 49-52 (2015).
- M. Rozloznik: Saddle point problems, iterative solution and preconditioning: a short overview, Proceedings of the XV-th Summer School Software and Algorithms of Numerical Mathematics, I. Marek ed., University of West Bohemia, Pilsen, (2003), 97-108.
- J. Maryska, M. Rozloznik, M.Tuma: Primal vs. dual variable approach for mixed-hybrid finite element approximation of the potential fluid flow problem in porous media, Proceedings of the 3rd International Conference on "Large-Scale Scientific Computations", Lecture Notes in Computer Science 2179, Sv. Margenov, J. Wasniewski, P. Yalamov (eds.), June 6-10, 2001, pp.417-424.
- J. Maryska , M. Rozloznik, M. Tuma : Solution of augmented systems from a mixed-hybrid finite element of the potential fluid flow problem: asymptotic rates of convergence , Proceedings of Algoritmy 2000, 15th Conference on Scientific Computing, Vysoke Tatry, Slovakia, September 10-15 2000, Editors K. Mikula et al, pp. 100-109.
- M. Rozloznik, Z. Strakos , M. Tuma : On the Role of Orthogonality in the GMRES Method , in SOFSEM'96: Theory and Practice of Informatics, K. Jeffery, J. Kral, M. Bartosek (Eds), Lecture Notes in Computer Science, Vol. 1175, Springer Verlag, Berlin, Heidelberg, (1996), pp. 409-416.
- M. Rozloznik, Z. Strakos : Variants of the residual minimizing Krylov space methods, in Proceedings of the XI-th Summer School Software and Algorithms of Numerical Mathematics, I. Marek ed., University of West Bohemia, Pilsen, (1995), pp. 208-225.
- M. Rozloznik, Z. Strakos : On the implementation of some residual minimizing Krylov space methods , in SOFSEM'95: Theory and Practice of Informatics, M. Bartosek , J. Staudek, J. Wiedermann (Eds), Lecture Notes in Computer Science, Vol. 1012, Springer Verlag, Berlin, Heidelberg, (1995), pp. 449-454.
- M. Tuma, M. Rozloznik: On the efficiency of superscalar and vector computers for some problems in scientific computing , in SOFSEM'95: Theory and Practice of Informatics, M. Bartosek , J. Staudek, J. Wiedermann (Eds), Lecture Notes in Computer Science, Vol. 1012, Springer Verlag, Berlin, Heidelberg, (1995), pp. 481-486.
- M. Kocvara , M. Rozloznik, S.L.Xanthis: On iterative solvers for the method of arbitrary lines, in E.A. Lipitakis, Proceedings of the Second Hellenic European Conference on Mathematics and Informatics - HERMIS'94, Hellenic Mathematical Society, Athens, Greece, (1995), pp. 261-272.

PhD-Thesis: M. Rozloznik: Numerical Stability of the GMRES Method, PhD Thesis, Institute of Computer Science, Academy of Sciences of the Czech Republic and Faculty of

Nuclear Science and Physical Engineering, Czech Technical University, Prague (1997), p.80 (available upon the request also in the printed form from the author)

Habilitation Thesis: M. Rozloznik: Iterative solution of saddle point problems in mathematical modelling (in Slovak), Technical University of Liberec, Department of Modelling of Processes, Faculty of Mechatronics and Interdisciplinary Studies, Liberec, April 2004. Shorter version but in English available as: Saddle point problems, iterative solution and preconditioning: a short overview, submitted to Proceedings of the XV-th Summer School Software and Algorithms of Numerical Mathematics, I. Marek ed., University of West Bohemia, Pilsen, (2003).

Doctoral Thesis: M. Rozloznik: Gram-Schmidt orthogonalization in presence of rounding errors, Institute of Mathematics, Czech Academy of Sciences, Prague, October (2019).

Plenary Talks and Invited Participations:

- M. Rozložník: Numerical behavior of saddle-point solvers, Advances in Linear Algebra and Huge-Scale Optimization, ICMS, The Bayes Centre, Edinburgh, UK (July 1-2, 2019).

- M. Rozloznik: Numerics of the Gram-Schmidt process: from the stadard inner product to the SR decomposition, MAT TRIAD 2017 - International Conference on MATRIX Analysis and its Applications, Będlewo, Poland, (September 25-29, 2017).

- M. Rozloznik: On the conditioning of factors in the SR decomposition, contributed talk at the Householder symposium XX, Inn at Virginia Tech in Blacksburg, Virginia (June 19-23, 2017).

- M. Rozloznik: Orthogonalization with respect to inner products and beyond, The Twelfth International Conference on Matrix Theory and Applications, Lanzhou University, Lanzhou, Gansu Province, P.R. China, July 22-26, 2016

- M. Rozloznik: Gram-Schmidt process with respect to inner products and bilinear forms: rounding error analysis, Tenth Workshop on Mathematical Modelling of Environmental and Life Sciences Problems, October 16-19, 2014, Constantza, Romania.

- M. Rozloznik: Orthogonalization with respect to inner products and bilinear forms in relation to Cholesky-like factorizations, Snapshots of Numerical Analysis, A Conference Celebrating Martin Gutknecht's 70th Birthday, Lausanne, Switzerland, 3.10. 2014.

- M. Rozloznik: Numerical Behavior of Indefinite Orthogonalization, contributed talk at the Householder symposium XIX on Numerical Linear Algebra, Domain Sol Cress, Spa, Belgium, June 8-13, 2014.

- Workshop on Structured Preconditioning and Iterative Methods with Applications at Tsinghua Sanya International Mathematics Forum (TSIMF), Sanya, China, March 24-28, 2014, invited speaker.

- The Fourth International Conference on Numerical Algebra and Scientific Computing NASCOM 2012, Dalian University of Technology, Dalian, China, October 20-24, 2012, invited keynote talk

- International Conference "Structured Matrix Computations in Non-Euclidean Geometries: Algorithms and Applications" (SMC-NEGAA) held at CIRM October 8-12, 2012, Luminy, France.
- M. Rozloznik: Implementation and numerical stability of saddle point solvers, Workshop Recent Developments in the Solution of Indefinite Systems, TU Eindhoven, The Netherlands, April 17, 2012.
- M. Rozloznik: Orthogonalization with a non-standard inner product and approximate inverse preconditioning, contributed talk at the Householder Symposium XVIII, Lake Tahoe, USA, June 12-17, 2011.
- M. Rozloznik: Numerical behavior of saddle point solvers, plenary talk at the 4-th IMACS conference on Mathematical modelling and computational methods in applied sciences and engineering - MODELLING 2009, Roznov pod Radhostem, Czech Republic, June 22-26, 2009.
- M. Rozloznik: Numerical behavior of saddle point solvers, Advances and perspectives on numerical methods for saddle point problems, Banff international research station, Banff, Canada, April 12-17, 2009.
- M. Rozloznik: Numerical behavior of saddle point solvers, plenary talk at the International Workshop Numerical Analysis and Scientific Computing (NASCom'08), Rostov-on-Don, Russian federation, October 13-17, 2008.
- M. Rozloznik: Numerical behavior of saddle point solvers. contributed talk at the Householder Symposium XVII, Zeuthen, Germany (June 1-6, 2008).
- M. Rozloznik Rounding Error Analysis of the Classical Gram-Schmidt Process , contributed talk at the Householder Symposium XVI, Seven Springs Mountain Resort (Pennsylvania), May 24, 2005.
- M. Rozloznik: Dagstuhl-Seminar :On the role of orthogonalization process in the GMRES method, plenary talk at the Theoretical and Computational Aspects of Matrix Algorithms, Schloss Dagstuhl, (October 12-17, 2003).
- M. Rozloznik: Conjugate gradient method with indefinite preconditioning for saddle-point problems, contributed talk Householder symposium XV, Peebles, UK, (June 17-21, 2002).
- M. Rozloznik: Mathematical models and algorithms in remediation of consequences of uranium mining in northern Bohemia, talk at the 3. Kolloquium Wissenschaftliches Rechnen in Sachsen, Faculty of Mathematics and Informatics, Technical University of Freiberg, Freiberg, Germany, (June 24, 2002).
- M. Rozloznik: Numerical behaviour of the modified Gram-Schmidt implementation, contributed talk at the XIII Householder Symposium on Numerical Algebra, Pontresina, Switzerland, (June 17.-21, 1996).

Short-term Academic Visits:

- Warsaw University of Technology, April 1-5, 2017, M. Rozloznik: Numerical behavior of iterative methods. Seminarium Pierscienie, macierze i algorytmy numeryczne, Politechnika Warszawska, Warszawa, April 3, 2017.
- Chinese Academy of Sciences, Academy of Mathematics and Systems Sciences, Institute of Comput. Math. and Sci./Engrg. Computing, Beijing, July 19-21, 2016, M. Rozloznik: Orthogonalization with respect to inner products and bilinear forms, talk at the seminar, July 20, 2016

- University of Colorado, Denver, November 1-5, 2015, M. Rozloznik: Orthogonalization with respect to inner products and bilinear forms, talk at the Department of Mathematical and Statistical Sciences, November 2, 2015.
- Georgia State University, Atlanta, M. Rozloznik: Orthogonalization with respect to inner products and bilinear forms, talk at the seminar of the Department of Mathematics and Statistics, October 30, 2015.
- National Institute of Informatics, Tokyo, Japan, June 1-11, 2015, Lectures on Numerical Linear Algebra: M. Rozloznik: Numerical stability of GMRES, June 2, 2015, M. Rozloznik: Numerical behavior of saddle point solvers, June 3, 2015.
- Technical University Hamburg-Harburg, Institut für Mathematik, Kolloquium für Angewandte Mathematik, March 17-20, 2015, M. Rozložník: Orthogonalization with a non-standard inner product and approximate inverse preconditioning, 19 March 2015
- Operator Theory Seminar at the Institute of Mathematics of the Polish Academy of Sciences, Warszawa, November 8-12, 2013. M. Rozloznik: Numerical behavior of iterative methods and iterative refinement, November 9, 2013.
- Temple University, Department of Mathematics, February 19-23, 2013, M. Rozloznik: Numerical behavior of saddle point problems, Applied Mathematics and Scientific Computing Seminar, February 20, 2013.
- Warsaw University of Technology, November 22-27, 2012, M. Rozloznik: Numerical stability of GMRES. Seminarium Pierscienie, macierze i algorytmy numeryczne, Politechnika Warszawska, Warszawa, November 22, 2012.
- Université du Littoral Cote d'Opale, Laboratoire de Mathématiques Pures et Appliquées, Calais, France, May 9-21, 2012, M. Rozloznik: Numerics of the Gram-Schmidt orthogonalization, talk at the seminar.
- Department of Mathematical and Statistical Sciences, University of Colorado Denver, June 18-22, 2011, M. Rozloznik: Orthogonalization with a non-standard inner product and approximate inverse preconditioning, talk at the seminar.
- Warsaw University of Technology, October 22-27, 2010, M. Rozloznik: Numerical behavior of GMRES. Seminarium Pierscienie, macierze i algorytmy numeryczne, Politechnika Warszawska, Warszawa, October 26, 2010.
- Institute of Computational Mathematics and Scientific/Engineering Computing of the Chinese Academy of Sciences, Beijing, China, July 11-15, 2010. M. Rozloznik: On the accuracy of saddle point solvers, Talk at the State Key Laboratory of Scientific and Engineering Computing (LSEC)
- Tongji University, Shanghai, China, July 9-10, 2010. M. Rozloznik: Numerical behavior of GMRES. Talk at the seminar of Department of Mathematics.
- Warsaw University of Technology, November 10-15, 2009, M. Rozloznik: Numerics of the Gram-Schmidt orthgonalization process, Seminarium Pierscienie, macierze i algorytmy numeryczne, Politechnika Warszawska, Warszawa, November 13, 2009. M. Rozloznik: Numerical behavior of saddle point solvers, Seminar at the Widzial Matematyki, Informatyki i Mechaniki Uniwersytetu Warszawskiego, Warszawa, November 12, 2009.
- Oxford University Computing Laboratory, Oxford, January 10-15, 2010.
- McGill University, Montreal, Canada, April 18-22, 2009, M. Rozloznik: Numerical behavior of saddle point solvers, seminar of the School of Computer Science,.
- Oxford University Computing Laboratory, Oxford, January 14-16, 2009, M. Rozloznik: On the accuracy of inexact saddle point solvers, Computational Mathematics and Applications Seminar, Oxford, January 15, 2009.

- Department of Mathematics at the Hong Kong Baptist University, Centre for Mathematical Imaging and Vision (CMIV), October 19-November 2, 2007. M. Rozloznik: Numerical stability of GMRES, seminar of CMIV, October 23, 2007, M. Rozloznik: Numerics of Gram-Schmidt Orthogonalization, seminar of CMIV, October 26, 2007.
- Aston University, Birmingham, UK, (January 10-15, 2006). M. Rozloznik: Numerical stability of Gram-Schmidt process, Seminar of Neural Computing Research Group.
- Wroclaw University of Technology, Institute of Mathematics and Computer Science, Wroclaw, Poland (June 29-July 1, 2005).
- The University of Tennessee, Department of Computer Science, Knoxville, Tennessee (May 28-June 2, 2005).
- Technical University of Kosice, Faculty of Civil Engineering, Department of Mathematics, (March 1-5, 2004), M. Rozloznik: Numerical stability of iterative methods, talk at the seminar, Kosice, Slovakia, March 1, 2004.
- Mathematical Sciences Institute, Australian National University, Canberra, Australia, (July 12-17, 2003). M Rozloznik: Can we trust the classical Gram-Schmidt process, talk at the Workshop on Contemporary Computational Mathematics (July 16-17, 2003).
- Universita di Bologna and Istituto di Analisi Numerica, C.N.R. Pavia, Italy (Sep 17-Oct 11,2001)
- CERFACS, Toulouse, France (Sep.8-14 2001), M. Rozloznik: Residual smoothing techniques: Do they improve the limiting accuracy of ietrative solvers?, talk at the Parallel Algorithms Group seminar.
- Universite de Paris-Sud, Orsay, France, (October 22-29, 2000), Iterative solution of augmented systems from the potential fluid flow problem, seminar Groupe de Travail Equations Elliptiques et Paraboliques non Lineaires, organise par D. Hilhorst, F. Issard-Roch et C. Picard, October 24, 2000.
- Istituto di Analisi Numerica, C.N.R. Pavia, Italy (Mar 31-Apr 8,1999), Conjugate gradient method with indefinite preconditioning of saddlepoint problems, April 6, 2000.
- Emory University, Department of Mathematics and Computer Science, Atlanta (May 1999), Iterative solution of augmented systems from the potential fluid flow problem, talk at the Computational Mathematics Seminar, May 25, 1999.
- Istituto di Analisi Numerica, C.N.R. Pavia, Italy (Jan 26-Feb 7 1999), Solution of Augmented Systems from a Mixed-hybrid Finite Element Discretization of the Potential Fluid Flow Problem. Part II: Schur Complement Approach. Rounding Error Analysis (with M. Tuma).
- CERFACS, Toulouse, France (Nov 23-30 1998), M. Rozloznik: Numerical Stability of GMRES: Recent Results and Open Questions, talk at the Parallel Algorithms Group seminar.
- Rechenzentrum, Universitaet Karlsruhe, Germany, Nov. 15 1998, M. Rozloznik: Numerical Stability of Residual Smoothing Techniques, talk at the seminar organized by W. Schoenauer and R. Weiss.
- Department of Mathematics and Comp. Science, Emory University, Atlanta (Oct 21-23 1998).
- Institute of Mathematics, University of Tuebingen, Germany (May 27-29 1998)
- Istituto di Analisi Numerica, C.N.R. Pavia, Italy (May 1997, August-September 1996)
- University of Linkoping, Department of Mathematics, Sweden (September 1996)
- Rechenzentrum, Universitat Karlsruhe, Germany (August 1995, October 1994)

Contributed Talks and Presentations:

- M. Rozloznik: Nearly optimal scaling in the SR decomposition, ALGORITMY 2020, Conference on Scientific Computing , Vysoke Tatry, Podbanske, Slovakia, September 10-15, 2020
- M. Rozložník: Parallel Conjugate Gradient Methods: Numerical Stability Analysis, Historical Context and Methodology, 2020 SIAM Conference on Parallel Processing for Scientific Computing, Hyatt Regency Seatlle, Seattle, Washington (February 12-15, 2020)
- M. Rozložník: On GMRES for linear EP and GP systems, ICIAM 2019, minisymposium Recent Advances in Least Squares Problems, Universitad de Valencia, Valencia, Spain (July 15-19, 2019)
- M. Rozložník: Numerical behavior of GMRES for singular systems, 90th GAMM Annual Meeting ,Vienna, Austria (February 18-22, 2019).
- M. Rozložník:Numerics of the Gram-Schmidt process and its relation to the SR decomposition, The Thirteenth International Conference on Matrix Theory and Applications, Harbin Engineering University, Harbin, China (August 2018)
- M. Rozloznik: Condition number and equilibration of factors in the SR decomposition SIAM Conference oin Applied Linear Algebra (SIAM-ALA18), Hong Kong Baptist University, Hong Kong, May 4-8, 2018.
- M. Rozloznik: On GMRES for singular EP and GP systems, The GAMM Annual Meeting 2018, Technische Universitaet Muenchen, Germany, March 19-23, 2018.
- M. Rozloznik: The factors in the SR decomposition and their conditioning, PARNUM 2017, International Workshop on Parallel Numerics, Waischenfeld, Germany, April 19-21, 2017.
- M. Rozloznik: J-Orthogonal Matrices and Their Sign Patterns, The Sixth International Conference on Numerical Algebra and Scientific Computing" (NASC 2016), Zhejiang University, Hangzhou, P.R. China, October 22-26, 2016.
- M. Rozloznik: On the conditioning of factors in the SR decomposition, CMSE 2016, Computational Mathematics in Science and Engineering, Hotel RELAX, Rožnov pod Radhoštěm, Czech Republic, May 25-27, 2016.
- M. Rozloznik: Inexact saddle-point solvers and their numerical behavior, ALGORITMY 2016, Conference on Scientific Computing , Vysoke Tatry, Podbanske, Slovakia, March 13-18, 2016
- M. Rozloznik: Orthogonalization with respect to bilinear forms, contributed talk at the SIAM Conference on Applied Linear Algebra, Atlanta, October 26-30, 2015.
- M. Rozloznik: Classical Gram-Schmidt orthogonalization in the presence of rounding errors, plenary talk at NAS2015 (Numerical Analysis Symposium), Katsunuma, Japan, pp. 49-52 (2015).
- M. Rozloznik: Orthogonalization with respect to indefinite bilinear form. Seminar on Numerical Analysis, Modelling and Simulation of Challenging Engineering Problems SNA 2015, Technical University VSB-TUO, Ostrava, January 19-23, 2015.
- M. Rozloznik: Numerical behavior of orthogonalization schemes with respect to symmetric indefinite bilinear form, The fifth international conference on numerical algebra and scientific computing (NASC 2014), Tongji University, Shanghai, October 24-29, 2014
- M. Rozloznik: Numerical behavior of indefinite orthogonalization, talk at the contributed minisymposium CMS6. Linear Least Squares and Applications, The 19th

International Linear Algebra Society Conference ILAS2014, Seoul, South Korea, August 6-9, 2014.

- M. Rozloznik: Indefinite orthogonalization with rounding errors, GAMM-Matheon Workshop "Matrix Computations for Sparse Recovery", Berlin, April 9-11, 2014
- M. Rozloznik: Symmetric indefinite factorization and orthogonalization with respect to bilinear form, AIME@CZ - Czech workshop on applied mathematics in engineering, Institute of Computer Science, Academy of Sciences of the Czech Republic, Prague, 11-12 March 2014.
- M. Rozloznik: Numerical behavior of inexact iterative methods, Workshop of the Project ERC-CZ MORE Implicitly Constituted Materials: Modeling, Analysis, and Computing, Chateau Liblice, Czech Republic, November 24-27, 2013.
- M. Rozloznik: Numerical behavior of matrix splitting iteration methods, MatTriad'2013 - Conference on Matrix Analysis and its Applications, September 16-20, 2013, Herceg-Novi, Montenegro.
- M. Rozloznik: Numerical behavior of stationary and two-step splitting iteration methods, Numerical Analysis and Scientific Computation with Applications (NASCA13), June 24-26, 2013, Universite du Littoral Cote d'Opale (ULCO), Calais, France.
- M. Rozloznik: Numerical Behavior of Two-step Splitting Iteration Methods, 2013 SIAM Conference on Computational Science and Engineering (CSE13), February 25 - March 1, 2013, Boston, Massachusetts, USA .
- M. Rozloznik: Gram-Schmidt orthogonalization with standard and non-standard inner product: Rounding error analysis, SIAM Conference on Applied Linear Algebra, Valencia, Spain, June 18-22, 2012.
- M. Rozloznik: Orthogonalization with a non-standard inner product and approximate inverse preconditioning, SPOMECH Workshop 2011 on reliable solution of nonlinear problems in mechanics, Ostrava, November 22 - 24, 2011.
- M. Rozloznik: Splendor and misery of chasing the optimality, talk at the Scientific conference 2011, Dennis Gabor Applied University, Budapest, November 9, 2011.
- M. Rozloznik: Approximate inverse preconditioning and Gram-Schmidt orthogonalization, 17th ILAS Conference, Braunschweig, Germany, 22-26.8. 2011.
- M. Rozloznik: Orthogonalization with a non-standard inner product with the application to approximate inverse preconditioning, 10th IMACS International Symposium on Iterative Methods in Scientific Computing, Marrakech , Morocco, May 18-21, 2011.
- M. Rozloznik: Numerical behavior of saddle point solvers I and II, Seminar of the Department of Numerical Mathematics, Charles university, Prague, January 6, 2011 and November 25, 2010.
- M. Rozloznik : The accuracy of saddle point solvers, The 9th International Conference on Matrix Theory and Applications, Shanghai, China, July 18-22, 2010.
- M. Rozloznik: Partitioned triangular tridiagonalization: rounding error analysis. The 16th Conference of the International Linear Algebra Society (ILAS) has been held in Pisa, Italy, at Palazzo dei Congressi from June 21 to June 25, 2010.
- M. Rozloznik: A stable variant of Simpler GMRES and GCR, Applied Linear Algebra Conference ALA 2010 in honor of H. Schneider, University of Novi Sad, Serbia, May 24-28, 2010.
- M. Rozloznik: Rounding error analysis of triangular tridiagonalization, contributed talk at the GAMM Workshop on Applied and Numerical Linear Algebra, Zurich, September 10-11, 2009.

- M. Rozloznik: Numerical behavior of saddle point solvers, seminar at the Hong Kong City University (the group of Prof. W. Sun), August 27, 2009.
- M. Rozloznik: Preconditioned saddle point problems in finite precision arithmetic, contributed talk at the International conference on preconditioning techniques for scientific and industrial applications, Hong Kong, August 24-26, 2009.
- M. Rozloznik: Accuracy of inexact saddle point solvers, Algoritmy 2009, Conference on Scientific Computing, Vysoke Tatry, Podbanske, Slovakia, March 15-20, 2009.
- M. Rozloznik: Numerical stability of symmetric indefinite solvers: direct methods. Seminar on Numerical Analysis, Modelling and Simulation of Challenging Engineering Problems SNA 2009, Institute of Geonics, Ostrava, February 2-6, 2009
- M. Rozloznik: Saddle point problems, null-space projection method and conjugate gradient method with indefinite preconditioning, Necas seminar on continuum mechanics, Charles university, Prague, January 5, 2009.
- M. Rozloznik: How to stabilize Simplex GMRES and GCR? Talk at the Applied Linear Algebra Conference, In Honor of Ivo Marek, Novi Sad, Serbia (April 28-30, 2008).
- M. Rozloznik: Numerical behavior of saddle point solvers, Workshop on Linear algebra and applications in systems and control, Department of Control Engineering, Czech Technical University, Prague, March 28, 2008.
- M. Rozloznik: Simpler GMRES or GCR? Seminar Prague-Freiberg, Prague, March 25 2008.
- M. Rozloznik: Numerical behavior of inexact saddle point solvers, 9th IMACS International Symposium on Iteratice Methods in Scientific Computing, Lille, France, March 17-20, 2008.
- M. Rozloznik: Inexact saddle point solvers and their limiting accuracy, Gene Golub Day at TU Berlin, February 29, 2008.
- M. Rozloznik: Saddle point solvers and their numerical behavior, Workshop on Solution Methods for Saddle Point Systems , Hong Kong Baptist University, 31 October 2007.
- P. Jiranek, M. Rozloznik: Numerical stability of inexact saddle point solvers (poster), 6th International Congress on Industrial and Applied Mathematics, Zurich, Switzerland, 16-20 July, 2007.
- M. Rozloznik: Limiting Accuracy of Inexact Saddle Point Solvers. 22nd Biennial Conference on Numerical Analysis, University of Dundee, UK, June 26-29, 2007.
- M. Rozloznik: On the Limiting Accuracy of Segregated Saddle Point Solvers. VIII. Scientific Conference of the Faculty of Civil Engineering, Section V: „Applied Mathematics", Technical University of Kosice, Slovakia, May 28-30, 2007.
- M. Rozloznik: Iterative Solution of Saddle Point Problems. Seminar on Numerical Analysis, Modelling and Simulation of Challenging Engineering Problems SNA 2007, Institute of Geonics AS CR, Ostrava, January 22-27, 2007.
- M. Rozloznik: Maximum Attainable Accuracy of Some Krylov Subspace Methods for Saddle Point Problems, contributed talk at the GAMM Annual Meeting, Berlin, March 28, 2006.
- M. Rozloznik Rounding Error Analysis of the Classical Gram-Schmidt Process Used for Solving the Least Squares Problem, 16th Summer School Software and Algorithms of Numerical Mathematics (SANM'05), organized by I. Marek and University of West Bohemia, Srni, September 8-12, 2003.
- M. Rozloznik: Dual variable approach for the mixed-hybrid finite element approximation of the potential fluid flow problem. Contributed talk at the Session 22

Applied and numerical linear algebra, GAMM 2005 Annual Scientific Conference, Luxemburg (March 28 –April 1, 2005).

- M. Rozloznik: , Indefinite preconditioning of symetric indefinite systems, contributed talk at the ALGORITMY 2005, 17th Conference on Scientific Computing, Vysoke Tatry - Podbanske, Slovakia, (March 13-18, 2005).
- M. Rozloznik: The Conjugate Gradients Method with Indefinite Preconditioning, talk at the Mattriad 2005, Poznan - Bedlewo, Poland, March 5, 2005.
- M. Rozloznik, contributed talk at the, Seminar on Numerical Analysis, Modelling and Simulation of Challenging Engineering Problems SNA 2005, Institute of Geonics AS CR, Ostrava, February 7, 2005.
- M. Rozloznik: How (un-stable) is the Gram-Schmidt process? Contributed talk at the 5th Workshop of the ERCIM Working Group on Matrix Computations and Statistics „Numerical Methods for Statistics", Prague, (August 27-29, 2004).
- M. Rozloznik: Numerical stability of the Gram-Schmidt process, talk at the seminar Programs and Algorithms of Numerical Mathematics (PANM 12), organized by Institute of Mathematics of Czech Academy of Sciences, Dolni Maxov, Czech Republic, (June 6-11, 2004).
- M. Rozloznik: On the numerical stability of the Gram-Schmidt algorithm, contributed talk at IMET 2004 (Iterative Methods, Preconditioning and Numerical PDEs), Prague, (May 25 -28, 2004).
- M. Rozloznik: How important is the orthogonality in the Gram-Schmidt process for the GMRES method? talk at the Session 22 Applied and numerical linear algebra, GAMM 2003 Annual Scientific Conference, Dresden, Germany (March 21-27, 2004).
- M. Rozloznik: A preconditioner for saddle point problems, 15th Summer School Software and Algorithms of Numerical Mathematics (SANM'03), organized by I. Marek, Hejnice, September 8-12, 2003.
- M. Rozloznik: The loss of orthogonality in the Gram-Schmidt process and its role in the GMRES method, contribution at the Minisymposium „Accuracy and Effectiveness of Krylov Space Methods, organized by M.H. Gutknecht, 5th International Congress on Industrial and Applied Mathematics (ICIAM), Sydney, Australia, (July 7-11, 2003).
- M. Rozloznik: Can we give a bound for the loss of orthogonality in the classical Gram-Schmidt process? Contributed talk at the Session 22 Applied and numerical linear algebra, GAMM 2003 Annual Scientific Conference, Abano Terme – Padua, Italy (March 24-28, 2003).
- M. Rozloznik: Dual variable approach for mixed-hybrid finite element approximation of the potential fluid flow problem, Seminar on numerical analysis, dedicated to the 70th birthday of Ivo Marek, Ostrava, (February 17-18, 2003).
- M. Rozloznik: Are two steps enough for preserving the orthogonality in the Gram-Schmidt algorithm? contributed talk at the 2nd International workshop on Parallel Matrix Algorithms and Applications (PMAA'02), Neuchatel, Switzerland, (November 7-10, 2002).
- M. Rozloznik: Round-off error analysis of the Gram-Schmidt algorithm with reorthogonalization, contributed talk at the ALGORITMY 2002, 16th Conference on Scientific Computing, Vysoke Tatry - Podbanske, Slovakia, (September 8-13, 2002).
- M. Rozloznik: On the round-off error analysis of the Gram-Schmidt algorithm with reorthogonalization, contrinuted presentetation, Conference on Numerical Methods and Computational Mechanics, University of Miskolc, Hungary, (July 15-19, 2002).

- M. Rozloznik: Indefinite preconditioning and Conjugate Gradients, contributed talk at the LATSIS Symposium 2002, Iterative Solvers for Large Linear Systems, ETH Zurich, Switzerland, (Feb 18-21, 2002).
- M. Rozloznik: Indefinite preconditioning of saddle point problems, seminar Iterative methods, Institute of Geonics AS CR , Ostrava, Czech Republic, (Oct 30-31, 2001).
- M. Rozloznik: Primal vs. dual variable approach for mixed-hybrid finite element approximation of the fluid flow problem in porous media, contributed talk at the 3rd International Conference on Large Scale Scientific Computations, Sozopol, Bulgaria, June 6-10, 2001.
- M. Rozloznik: Conjugate gradients with indefinite constraint preconditioning, contributed talk at the 5th IMACS Conference on Iterative Methods in Scientific Computing, Heraklion, Crete, Greece, May 28-31, 2001.
- M. Rozloznik: Conjugate gradient method with indefinite preconditioning of saddle point problems, contributed talk at the GAMM Annual Meeting Zurich, Switzerland, February 12-15, 2001.
- M. Rozloznik: Iterative solution of augmented systems from the potential fluid flow problem, Seminar SemMechKont, Mathematical Institute of Charles University, Prague, organized by M. Feistauer, J. Necas and J. Malek, October 16, 2000.
- M. Rozloznik: Conjugate gradient method with indefinite preconditioning of saddle point problems, ALGORITMY 2000, 15th Conference on Scientific Computing, Vysoke Tatry, Slovakia, September 10-15, 2000.
- M. Rozloznik: Conjugate gradient method with indefinite preconditioning of saddle point problems, Workshop Simulation, modelling and numerical analysis SIMONA 2000, Liberec, Czech Republic, September 4-6, 2000.
- M.H. Gutknecht, M. Rozloznik: A short review of the work of Ruediger Weiss on generalized conjugate gradient methods, 16th IMACS World Congress 2000, Lausanne, Switzerland, 21-26 August 2000, session Development and Trends in Iterative Methods for Large Systems, in memoriam R. Weiss.
- M. Rozloznik: Schur complement approach and iterative solution of augmented systems in the potential fluid flow problem, Int. Workshop on Parallel Matrix Algorithms and Applications, 17-19 August 2000, Neuchatel, Switzerland.
- M. Rozloznik: Iterative methods in exact arithmetic and finite precision arithmetic, PANM 10 Workshop, Lazne Libverda, 12.-16.6. 2000.
- M. Rozloznik: Residual smoothing techniques: Do they improve the limiting accuracy of iterative solvers?, Schweizer Tagung ueber numerische Mathematik, Fribourg, October 12, 1999.
- M. Rozloznik: Residual smoothing techniques: Do they improve the limiting accuracy of ietrative solvers?, 13th Summer School Software and Algorithms of Numerical Mathematics (SANM'99), organized by I. Marek, Nectiny, September 6-10, 1999.
- M. Rozloznik: Numerical stability of residual smoothing techniques, 1999 SIAM Annual Meeting, CP 5: Numerical Linear Algebra and Applications, May 12-15, 1999, Atlanta (contributed presentation).
- M. Rozloznik: On the limiting accuracy of some residual smoothing techniques, Fourth IMACS International Symposium on Iterative Methods in Scientific Computation, University of Texas at Austin, October 18-20, 1998 (abstract)
- M. Rozloznik: Schur complement reduction in the mixed-hybrid approximation of Darcy's law: Rounding error analysis, summer seminar Programs and Algorithms of Numerical Mathematics, organized by Institute of Mathematics of Czech Academy of Sciences, Korenov, Czech Republic, 8.-12.6. 1998.

- J. Drkosova, M. Rozloznik, Z. Strakos: Is forward error analysis of GMRES possible? In: IMPC'97, Czech-U.S. Workshop on Iterative Methods and Parallel Computing, Milovy, Czech Republic, 16.-21.6. 1997 (abstract)
- M. Rozloznik: Finite precision analysis of Arnoldi algorithm and its application in GMRES, In: Prague Mathematical Conference, Prague 1996 (abstract)
- M. Rozloznik, Z. Strakos: Convergence, numerical stability and optimal implementation of the GMRES method, In: 4-th Conference of the International Linear Algebra Society, Erasmus University, Rotterdam, 1994, (abstract on p.125)
- M. Rozloznik,: Variants of the Generalized minimal error method,   In: Conference on mathematical modelling and computational methods Modelling-94,   Prague, 1994.

Other Relevant Publications:

- F.J. Hall, T.L. Markham, M. Rozloznik, J. Stuart: Miroslav Fiedler (7.4.01926-20.11.2015), Czechoslovak Mathematical Journal 66 (141), (2016), 585-590.
- J. Rakosnik, M. Rozloznik, Z. Strakos: Miroslav Fiedler, 1926-2015. Linear Algebra and its applications 497 (2016), 162—166.
- M.Rozloznik: Pábitel zo Žižkova oslavuje sedemdesiatku.
  Pokroky matematiky, fyziky & astronomie. Roč. 58, č. 2 (2013), s. 169-172
- M. Rozloznik: Do we always need to solve our problems exactly?, Informatika 40 (2012), 3-8. (Scientific Review of the Dennis Gabor College, Budapest, Hungary).
- M. Rozloznik: Profesor Miroslav Fiedler osemdesiatpätročný.
  Pokroky matematiky, fyziky & astronomie. Roč. 56, č. 2 (2011), s. 168-170. ISSN 0032-2423
- M. Rozloznik: Conjugate gradient-type iterative methods for the solution of nonsymmetric systems of linear equations, (in Slovak), In R. Blaheta et al. Modern Mathematical Methods in Engineering, Frydlant nad Ostravici, 1994, pp. 93-109.
- M. Tuma, M. Rozloznik: A comparison of the efficiency and accuracy of the solution of some linear algebra problems using the Silicon Graphics and Cray Y-MP EL computers, (in Czech), Czechoslovak Journal of Physics 6, Vol. 45, (1995), pp. 423-429.
- M. Rozloznik: A Comparison of the Biconjugate Gradient Method and Other Related Methods for Solving Nonsymmetric Systems of Linear Equations, Research report 548, ICS AS CR, Prague (1993), pp. 63.
- M. Rozloznik: Conjugate Gradients-Type Methods for Solving Nonsymmetric Systems of Linear Equations, (in Slovak), Research report 493, ICS AS CR, Prague 1991, revised 1992.

Recent Research Reports:

- E. Carson, K. Lund, M. Rozložník, S. Thomas, An overview of block Gram-Schmidt methods and their stability properties, Preprint IM-2020-50.
- E. Carson, K. Lund, M. Rozložník, Stability analysis for block classical Gram-Schmidt and its Pythagorean variants, in preparation.