Ai fini della pubblicazione
Decreto Rettore Università di Roma "La Sapienza" n. 73/2019 dell'11.01.2019

SILVIA NOSCHESE

Curriculum Vitae

Rome, February 4, 2019

Personal Data

- Full Name: Silvia Noschese
- Citizenship: Italian
- Spoken Languages: Italian (mother tongue), English

Education

- 1993-94: *Specialisation degree* in "Teoria e Metodi Matematici per l'Analisi ed il Controllo dei Sistemi", Faculty of Engineering, University of Rome "La Sapienza", Rome, Italy.
  Thesis: *Un'estensione dei grafi perfetti: i grafi normali.* - Supervisor: Prof. C. De Simone.
- 1990-91: *Master's degree in Mathematics*, University of Rome "La Sapienza", Rome, Italy.
  Thesis: *Approssimazioni multirisoluzione e wavelets.* - Supervisor: Prof. P. E. Ricci.
- 1983-84: *High School Diploma in Scientific Studies*, Liceo Scientifico Statale "G. Peano", Rome, Italy.

Academic Appointments

- 01/11/1999–Today: Assistant Professor in Numerical Analysis at the Mathematics Department, University of Rome "La Sapienza", Italy.

Habilitations

- *Abilitazione Scientifica Nazionale*, national habilitation to the role of Associate Professor, Competitive Section 01/A5, Scientific-Disciplinary Sector MAT/08 (Numerical Analysis), obtained in the year 2017.

Teaching Activity

- *Bachelor and Master courses* at the Faculty of Science - University of Rome "La Sapienza":
  - *Istitituzioni di Analisi Numerica*, Master in Applied Mathematics, academic years 2010-11, 2011-12, 2014-15, 2015-16, 2018-19.
  - *Analisi Numerica*, Bachelor in Mathematics, academic years 2012-13, 2013-14.
  - *Laboratorio di Programmazione e Calcolo*, Bachelor in Mathematics, academic years 2008-09, 2009-10, 2016-17, 2017-18.
  - *Algebra Lineare Numerica 1*, Master in Applied Mathematics, academic years 2006-07, 2007-08, 2010-11.
  - *Calcolo Numerico 1*, Bachelor in Chemistry, academic years 2003-04, 2004-05, 2005-06, 2006-07, 2007-08.
  - *MATLAB*, Bachelor in Mathematics, academic years 2001-02, 2002-03, 2002-03, 2003-04, 2005-06, 2007-08.
  - *Calcolo Numerico*, Bachelor in Chemistry, academic year 2002-03.
- *Master courses* at the Faculty of Economics - University of Rome 3:
  - *Idoneità di Informatica II*, Master in Finance, academic year 2005-06.
- *Second Level Master courses*:
  - *Analisi Numerica* - with Roberto Ferretti, Second Level Master in Scientific Computing organized by the Department of Mathematics - University of Rome "La Sapienza", academic years 2002-03, 2003-04, 2004-05, 2005-06, 2006-07.
  - *MATLAB*, Second Level Master in Scientific Computing organized by the Department of Mathematics - University of Rome "La Sapienza", academic years 2002-03, 2003-04.
  - *MATLAB*, Second Level Master in Finance for Banking and Insurance organized by the Department of Statistics - University of Rome "La Sapienza", academic years 2003-04, 2004-05, 2005-06.
- Supervisor of *10 Master theses* and *24 Bachelor theses* (at the University of Rome "La Sapienza").

Funding Information

- *ANVUR 2017: Fondo di Finanziamento per le Attività Base di Ricerca (FFABR)*. Euro 3000,00.

Participation in Research Projects

- Participation in the following INdAM-GNCS Research Project:
  - 2018 Metodi di regolarizzazione non lineare: aspetti teorici, computazionali, applicativi - Principal investigator: Federico Benvenuto;
  - 2017 Metodi numerici non lineari per problemi inversi e applicazioni - Principal investigator: Claudio Estatico;
- Participation in the following italian Project of National Interest (Progetti di Ricerca di Interesse Nazionale - PRIN):
  - 1997 Numerical Analysis: Methods and Mathematical Software - Local principal investigator: Paolo Emilio Ricci;
- Participation in the following University Research Projects Sapienza:
  - 2017 Modelli evolutivi per sistemi a infiniti gradi di libertà - Principal investigator: Giada Basile;
  - 2016 Metodi fisico-matematici per problemi di evoluzione - Principal investigator: Dario Benedetto;

- 2014 Sistemi dinamici e problemi di evoluzione della fisica matematica - Principal investigator: Paolo Buttà;
- 2011 Sistemi dinamici classici e quantistici - Principal investigator: Carlo Marchioro;
- 2010 Evoluzione deterministica e stocastica di sistemi a molte componenti in fisica matematica ed applicazioni - Principal investigator: Carlo Boldrighini;
- 2009 Metodi della Fisica Matematica nelle scienze applicate - Principal investigator: Emanuele Caglioti;
- 2008 Effetti della struttura del problema in questioni di Algebra Lineare Numerica - Principal investigator: Lionello Pasquini;
- 2007 Perturbazioni di matrici non normali e precondizionamento di metodi iterativi - Principal investigator: Lionello Pasquini;
- 2006 Perturbazioni di matrici non normali e precondizionamento di metodi iterativi - Principal investigator: Lionello Pasquini;
- 2005 Perturbazioni di matrici non normali e precondizionamento di metodi iterativi - Principal investigator: Lionello Pasquini;
- 2004 Perturbazioni di matrici non normali e precondizionamento di metodi iterativi - Principal investigator: Lionello Pasquini;
- 2003 Perturbazioni di matrici non normali e precondizionamento di metodi iterativi - Principal investigator: Lionello Pasquini;
- 2002 Condizionamento Tradizionale e Strutturato e Precondizionamento di Problemi dell'Algebra Lineare Numerica - Principal investigator: Lionello Pasquini;
- 2001 Condizionamento e Precondizionamento di Problemi dell'Algebra Lineare Numerica - Principal investigator: Lionello Pasquini;
- 1999 Metodi e problemi analitici suggeriti dalla Fisica - Principal investigator: Paolo Emilio Ricci;
- 1998 Metodi numerici per problemi di Fisica Matematica classica - Principal investigator: Paolo Emilio Ricci.

Committes

- Managing Editor for *Electronic Transactions on Numerical Analysis*
- Referee for the following journals
  - Applied Mathematical Modelling;
  - Applied Mathematics and Computation;
  - Applied Numerical Mathematics;
  - BIT Numerical Mathematics;
  - Calcolo - A Quarterly on Numerical Analysis and Theory of Computation;
  - Electronic Journal of Linear Algebra - ELA
  - Electronic Transactions on Numerical Analysis;
  - Journal of Computational and Applied Mathematics;
  - Journal of Mathematical Analysis and Applications
  - Journal of Scientific Computing;
  - Linear Algebra and its Applications;
  - Numerical Algorithms;
  - Numerical Linear Algebra with Applications;

- Numerische Mathematik;
- SIAM Journal of Matrix Analysis and Applications.

- Member of the final committee of the PhD in Mathematics at the University of L'Aquila, 17 April 2018.
- Member of the final committee of the PhD in Mathematics at the University of Rome "Tor Vergata", 19 November 2012.
- Research Project Reviewer for the Research Council of Katholieke Universiteit Leuven.
- Member of the Scientific Committee for the Series "Studi Matematici" - Edizioni Nuova Cultura.
- Member of Selection Committees for Research Fellows in *Matematica e sue Applicazioni* at the Department of Mathematics, University of Rome "La Sapienza"- October 2008, July 2013, March 2014.

Organization of Workshops and Minisymposia

- Organizer (with Dario Bini) of the minisymposium *Matrix Equations: Analysis and Algorithms* at "ETNA25 Recent Advances in Scientific Computation", Santa Margherita di Pula, May 27 - 29, 2019.
- Organizer and Member of the Scientific Committee (with Dario Bini and Fabio Di Benedetto) of the Workshop *Due giorni di Algebra Lineare Numerica*, Rome, February 18-19, 2019.
  Conference Sponsorship:
  - *GNCS 2018: Contributo per Organizzazione Incontri Scientifici.* Euro 1000,00
  - *SAPIENZA 2018: Finanziamento di Ateneo per convegni, seminari, workshop.* Euro 1750,00
  - *Adalta Software: Conference Sponsorship.* Euro 250,00.
- Member of the Organizing Committee of the *Second Workshop on Advanced Special Functions and Integration Methods*, Melfi, June 18-23, 2000.

Main Research Activities

- *Structured problems in Numerical Linear Algebra*: i) Structured eigenvalue sensitivity [1, 2, 4, 10, 12, 17, 23, 24, 25, 43, 45]. ii) Structured matrix nearness problems [14, 16, 21, 22].
- *Linear discrete ill-posed problems*: Regularization methods [3, 5, 6, 7, 8, 9, 11, 13, 18].
- *Iterative methods for large linear systems*: Preconditioners for Toeplitz systems [3, 5, 15, 19, 20].
- *Approximation Theory*: i) Numerical approach to problems of Mathematical Physics [26, 28, 29, 30, 31, 32, 42, 44, 46]. ii) Special functions [27, 33, 34, 35, 36, 37, 38, 39, 40, 41].

International Workshops and Conferences (with invited scientific communication)

- "Structured Matrices in Numerical Linear Algebra: Analysis, Algorithms and Applications", Cortona, September 4-8, 2017, communication: *Computing Structured Pseudospectrum Approximations.*
- "Numerical Linear Algebra and Applications (NL2A)", CIRM, Luminy, Marseille, France, October 24-28, 2016, communication: *Approximated structured pseudospectra.*
- "Congress of the Italian Society of Industrial and Applied Mathematics (SIMAI 2016)", Milano, September 13-16, 2016, communication: *Regularization matrices via matrix nearness problems* in the minisymposium "Computational Methods for Inverse Problems and Applications" organized by Claudio Estatico e Giuseppe Rodriguez.

- "Two Days on Applied Mathematics in Cagliari", Cagliari, April 9-10, 2015, communication: *Rescaling the GSVD with application to ill-posed problems.*
- "Nonlinear Evolution Equations and Linear Algebra", Cagliari, September 2-5, 2013, communication: *A modified TSVD method for discrete ill-posed problems.*
- "New Frontiers in Numerical Analysis and Scientific Computing", Kent, OH, April 19-20, 2013, communication: *Some applications of inverse invariant subspace problems* in the session "Inverse problems" organized by Ronny Ramlau.
- "3rd Dolomites Workshop on Constructive Approximation and Applications (DWCAA12)", Alba di Canazei, September 9-14, 2012, communication: *Inverse subspace problems and applications* in the session "Approximation Methods in Numerical Linear Algebra" organized by Michela Redivo Zaglia e Lothar Reichel.
- "Structured Linear Algebra Problems: Analysis, Algorithms and Applications", Leuven, Belgium, September 10-14, 2012, communication: *Structured pseudospectral measures of a Toeplitz matrix.*
- "SIAM Conference on Applied Linear Algebra", Valencia, Spain, June 18-22, 2012, communication: *Inverse Problems for regularization matrices* in the minisymposium "Linear algebra for inverse problems" organized by Lothar Reichel e Hassane Sadok.
- "FoCM'11: Foundations of Computational Mathematics conference", Budapest, Hungary, July 8-10, 2011, communication: *Conditioning of the eigenvalues of tridiagonal Toeplitz matrices* in the workshop "Numerical Linear Algebra" organized by Olga Holtz e Lothar Reichel.
- "16th ILAS Conference", Pisa, June 21-25, 2010, communication: *Generalized circulant preconditioners for Toeplitz systems* in the minisymposium "Structured Matrices" organized by Yuli Eidelman, Lothar Reichel e Marc Van Barel.
- "SIAM Conference on Applied Linear Algebra", Monterey, CA, October 26-29, 2009, communication: *Structured distance to normality and eigenvalue sensitivity in the banded Toeplitz case* in the minisymposium "Structured Matrix Problems" organized by Lothar Reichel e Marc Van Barel.
- "FoCM'08: Foundations of Computational Mathematics conference", Hong Kong, June 20-22, 2008, communication: *Problems of numerical condition related to tridiagonal Toeplitz matrices* in the workshop "Numerical Linear Algebra" organized by Olga Holtz e Lothar Reichel.
- "FoCM'05: Foundations of Computational Mathematics conference", Santander, Spain, July 7-9, 2005, communication: *Eigenvalue patterned condition numbers: Toeplitz and Hankel cases* in the workshop "Numerical Linear Algebra" organized by Lothar Reichel e Steve Vavasis.
- "Second Workshop on Advanced Special Functions and Integration Methods", Melfi, June 18-23, 2000, communication: *Uniform polynomial approximation to solutions of ordinary differential equations. Two methods.*

International Workshops and Conferences (with scientific communication)

- "10th IMACS International Symposium on Iterative Methods in Scientific Computing", Marrakech, Morocco, May 18-21, 2011, communication: *Generalized Circulant Preconditioners for Toeplitz Systems.*
- "SIAM Conference on Applied Linear Algebra", Monterey, CA, October 26-29, 2009, communication: *Structured distance to normality in the Toeplitz case.*
- "Structured Numerical Linear Algebra Problems: Algorithms and Applications", Cortona, September 19-24, 2004, communication: *Eigenvalue Condition Numbers: Structured versus Traditional.*
- "SIAM Conference on Applied Linear Algebra", Williamsburg, VA, July 15-19, 2003, communication: *How to Find Matrix Modifications Keeping Essentially Unaltered a Selected Set of Eigenvalues.*

National Workshops and other scientific communications

- Seminario di Modellistica differenziale numerica, Department of Mathematics - University of Rome "La Sapienza", Rome, December 6, 2016, communication: *Approximated structured pseudospectra.*
- Workshop "Algebra Lineare Numerica e Applicazioni", Rome, January 29-31, 2013, communication: *Sottospazi invarianti: problemi inversi e applicazioni.*
- Workshop "Due Giorni di Algebra Lineare Numerica", Genoa, February 16-17, 2012, communication: *Analisi della perturbazione dello spettro di una matrice tridiagonale di Toeplitz e Applicazioni.*
- Seminario di Modellistica differenziale numerica, Department of Mathematics - University of Rome "La Sapienza", Rome, March 24, 2009, communication: *Distanza dalla normalità ed analisi della perturbazione dello spettro di una matrice di Toeplitz.*
- Workshop "GALN 09: Due Giorni di Algebra Lineare Numerica 2009", Perugia, February 16-17, 2009, communication: *Distanza strutturata dalla normalità delle matrici di Toeplitz a banda.*
- Workshop "GALN 2008: Due Giorni di Algebra Lineare Numerica 2008", Bologna, March 6-7, 2008, communication: *Strategie per l'analisi della sensibilità alle perturbazioni delle matrici tridiagonali di Toeplitz complesse.*
- Workshop "GALN 2007: Giornate di Algebra Lineare Numerica ed Applicazioni", Padua, February 26-27, 2007, communication: *Distanza strutturata dalla normalità di una matrice tridiagonale irriducibile.*
- Workshop "Analisi Numerica: metodi e software matematico", Ferrara, January 19-21, 2000, communication: *Condition and Stability Problems.*

Publications

Peer-reviewed journal articles

1. S. Noschese, L. Reichel - "Eigenvector sensitivity under general and structured perturbations of tridiagonal Toeplitz-type matrices". *Numerical Linear Algebra with Applications* (2019), e2232.
   ISSN: 1070-5325, (published online) doi: 10.1002/nla.2232
2. S. Noschese, L. Reichel - "Computing Unstructured and Structured Polynomial Pseudospectrum Approximations" *Journal of Computational and Applied Mathematics* **350** (2019), pp. 57–68.
   ISSN: 0377-0427, doi: 10.1016/j.cam.2018.09.033
3. L. Dykes, G. Huang, S. Noschese, L. Reichel - "Regularization matrices for discrete ill-posed problems in several space-dimensions". *Numerical Linear Algebra with Applications* **25** (2018) no. 4, e2163.
   ISSN: 1070-5325, doi: 10.1002/nla.2163
4. S. Noschese, L. Reichel - "Approximated structured pseudospectra". *Numerical Linear Algebra with Applications* **24** (2017) no. 2, e2082.
   ISSN: 1070-5325, doi: 10.1002/nla.2082
5. L. Dykes, S. Noschese, L. Reichel - "Circulant preconditioners for discrete ill-posed Toeplitz systems". *Numerical Algorithms* **75** (2017) no. 2, pp. 477–490.
   ISSN: 1017-1398, doi: 10.1007/s11075-016-0205-9
6. S. Noschese, L. Reichel - "Some matrix nearness problems suggested by Tikhonov regularization". *Linear Algebra and its Applications* **502** (2016), pp. 366–386.
   ISSN: 0024-3795, doi: 10.1016/j.laa.2015.04.008

7. G. Huang, S. Noschese, L. Reichel - "Regularization matrices determined by matrix nearness problems". *Linear Algebra and its Applications* **502** (2016), pp. 41–57.
ISSN: 0024-3795, doi: 10.1016/j.laa.2015.12.008

8. S. Noschese, L. Reichel - "Lavrentiev-type regularization methods for Hermitian problems". *Calcolo* **52** (2015) no. 2, pp. 187–205.
ISSN: 0008-0624, doi: 10.1007/s10092-014-0113-0

9. L. Dykes, S. Noschese, L. Reichel - "Rescaling the GSVD with application to ill-posed problems". *Numerical Algorithms* **68** (2015) no. 3, pp. 531–545.
ISSN: 1017-1398, doi: 10.1007/s11075-014-9859-3

10. P. Buttà, N. Guglielmi, M. Manetta, S. Noschese - "Differential equations for real-structured defectivity measures". *SIAM Journal on Matrix Analysis and Applications* **36** (2015) no. 2, pp. 523–548.
ISSN: 0895-4798, doi: 10.1137/140964631

11. M. E. Hochstenbach, S. Noschese, L. Reichel - "Fractional regularization matrices for linear discrete ill-posed problems". *Journal of Engineering Mathematics* **93** (2015) no. 1, pp. 113–129.
ISSN: 0022-0833, doi: 10.1007/s10665-013-9671-4

12. P. Buttà, S. Noschese - "Structured maximal perturbations of Hamiltonian eigenvalue problems". *Journal of Computational and Applied Mathematics* **272** (2014), pp. 304–312.
ISSN: 0377-0427, doi: 10.1016/j.cam.2013.04.031

13. S. Noschese, L. Reichel - "A modified truncated singular value decomposition method for discrete ill-posed problems". *Numerical Linear Algebra with Applications* **21** (2014) no. 6, pp. 813–822.
ISSN: 1070-5325, doi: 10.1002/nla.1938

14. S. Noschese, L. Reichel - "Inverse subspace problems with applications". *Numerical Linear Algebra with Applications* **21** (2014) no. 5, pp. 589–603.
ISSN: 1070-5325, doi: 10.1002/nla.1914

15. S. Noschese, L. Reichel - "A note on Superoptimal Generalized Circulant preconditioners". *Applied Numerical Mathematics* **75** (2014), pp. 188–195.
ISSN: 0168-9274, doi: 10.1016/j.apnum.2013.09.002

16. S. Noschese, L. Pasquini, L. Reichel - "Tridiagonal Toeplitz Matrices: Properties and Novel Applications". *Numerical Linear Algebra with Applications* **20** (2013), pp. 302–326.
ISSN: 1070-5325, doi: 10.1002/nla.1811

17. P. Buttà, N. Guglielmi, S. Noschese - "Computing the structured pseudospectrum of a Toeplitz matrix and its extremal points". *SIAM Journal on Matrix Analysis and Applications* **33** (2012) no. 4, pp. 1300–1319.
ISSN: 0895-4798, doi: 10.1137/120864349

18. S. Noschese, L. Reichel - "Inverse problems for regularization matrices". *Numerical Algorithms* **60** (2012) no. 4, pp. 531–544.
ISSN: 1017-1398, doi: 10.1007/s11075-012-9576-8

19. S. Noschese, L. Reichel - "Generalized circulant Strang-type preconditioners". *Numerical Linear Algebra with Applications* **19** (2012), pp. 3–17.
ISSN: 1070-5325, doi: 10.1002/nla.796

20. S. Noschese, L. Reichel - "The structured distance to normality of Toeplitz matrices with application to preconditioning". *Numerical Linear Algebra with Applications* **18** (2011), pp. 429–447.
ISSN: 1070-5325, doi: 10.1002/nla.735

21. S. Noschese, L. Reichel - "The structured distance to normality of banded Toeplitz matrices". *BIT Numerical Mathematics* **49** (2009), pp. 629–640.
ISSN: 0006-3835, doi: 10.1007/s10543-009-0231-2

22. S. Noschese, L. Pasquini, L. Reichel - "The structured distance to normality of an irreducible real tridiagonal matrix". *Electronic Transactions on Numerical Analysis* **28** (2007/2008), pp. 65–77.
ISSN: 1068-9613

23. S. Noschese, L. Pasquini - "Eigenvalue patterned condition numbers: Toeplitz and Hankel cases". *Journal of Computational and Applied Mathematics* **206** (2007) no. 2, pp. 615–624.
ISSN: 0377-0427, doi: 10.1016/j.cam.2006.08.031

24. S. Noschese, L. Pasquini - "Zero-Structured Matrix Modifications Keeping Essentially Unaltered Sets of Eigenvalues". *Rendiconti di Matematica e delle sue Applicazioni* **27** (2007) no. 2, pp. 155–182.
ISSN: 1120-7183

25. S. Noschese, L. Pasquini - "Eigenvalue Condition Numbers: Zero-Structured versus Traditional", *Journal of Computational and Applied Mathematics* **185** (2006), pp. 174–189.
ISSN: 0377-0427, doi: 10.1016/j.cam.2005.01.032

26. S. Noschese, P.E. Ricci - "Differentiation of multivariable composite functions and Bell Polynomials", *Journal of Computational Analysis and Applications* **5** (2003) no. 3, pp. 333–340.
ISSN: 1521-1398, doi: 10.1023/A:1023227705558

27. S. Noschese - "A monomiality principle approach to the Gould-Hopper Polynomials", *Rend. Ist. Mat. Univ. Trieste* **33** (2001), pp. 71–82.
ISSN: 0049-4704

28. S. Noschese, P.E. Ricci - "On Chaplygin's method for solving the Cauchy problem for O.D.E.", *Ricerche di Matematica* **L** (2001) Fasc. II, pp. 303–321.
ISSN: 0035-5038

29. A. Mongelli, S. Noschese - "Uniform Polynomial Approximation to solutions of the Cauchy problem for O.D.E.", *Riv. Mat. Univ. Parma* **6** (2000) no. 3, pp. 195–204.
ISSN: 0035-6298

30. S. Noschese, L. Pasquini - "On the Nonnegative Solution of a Freud Three-Term Recurrence", *Journal of Approximation Theory* **99** (1999), pp. 54–67.
ISSN: 0021-9045, doi: 10.1006/jath.1998.3313

31. S. Noschese, P.E. Ricci - "On the Eigenvalues of a Kernel Considered by A.M. Ostrowski", *Le Matematiche* **LIV** (1999) Fasc. II, pp. 309–317.
ISSN: 0373-3505

32. P. Natalini, S. Noschese, P.E. Ricci - "An iterative method for computing the eigenvalues of second kind Fredholm operators and applications", *Electronic Transactions on Numerical Analysis* **9** (1999), pp. 128–136.
ISSN: 1068-9613

33. P. Natalini, S. Noschese - "Asymptotics for the Relativistic Hermite Polynomials Zeros", *Integral Transforms and Special Functions* **7** (1998) no. 1-2, pp. 75–86.
ISSN: 1065-2469, doi: 10.1080/10652469808819187

34. P. Natalini, S. Noschese - "Some Properties of the Relativistic Laguerre Polynomials", *Atti del Seminario Mat. e Fis. Univ. Modena* **XLVI** (1998), pp. 303–314.
ISSN: 0041-8986

35. S. Noschese - "Asymptotics for the Greatest Zeros of Szegö Generalization of the Hermite Polynomials", *Acta Mathematica Hungarica* **75** (1997) no 1-2, pp. 31–42.
ISSN: 0236-5294, doi: 10.1023/A:1006526600355

36. B. Germano, S. Noschese, P.E. Ricci - "General Sets Of Relativistic Laguerre Polynomials", *Facta Universitatis, Ser. Math. Inform.* **12** (1997), pp. 109–116.
ISSN: 0352-9665

37. M.X. He, S. Noschese, P.E. Ricci - "The Relativistic Szegö Polynomials", *Integral Transforms and Special Functions* **5** (1997) no. 1-2, pp. 59–68.
ISSN: 1065-2469, doi: 10.1080/10652469708819126

38. P. Natalini, S. Noschese - "The Relativistic Bessel Polynomials", *Facta Universitatis, Ser. Math. Inform.* **12** (1997), pp. 117–126.
ISSN: 0352-9665

39. S. Noschese - "A Viskov-type Formula for the Relativistic Laguerre Polynomials", *Applied Mathematics and Informatics* **1** (1996) no. 1, pp. 136–139.
ISSN: 1512-0074

40. P. Natalini, S. Noschese, P.E. Ricci - "On the Moments of the Density of Zeros for the Relativistic Bessel Polynomials", *Applied Mathematics and Informatics* **1** (1996) no. 1, pp. 128–135.
ISSN: 1512-0074

41. P. Natalini, S. Noschese - "On the Moments of the Density of Zeros for the Relativistic Jacobi Polynomials", *Rend. Ist. Mat. Univ. Trieste* **27** (1995), pp. 223–239.
ISSN 0049-4704

42. S. Noschese, P.E. Ricci - "Asymptotics for the Greatest Zeros of Solutions of a Particular O.D.E.", *Le Matematiche* **XLIX** (1994) no. 1, pp. 107–121.
ISSN: 0373-3505

Peer-reviewed conference proceedings

43. S. Noschese, L. Pasquini - "How to Find Matrix Modifications Keeping Essentially Unaltered a Selected Set of Eigenvalues", SIAM Conference on Applied Linear Algebra, Williamsburg VA, July 15-19, 2003. *Linear Algebra Proceedings*, CP5 in `http://www.siam.org/meetings/la03/proceedings/`

44. S. Noschese, P.E. Ricci - "Uniform Polynomial Approximation to solutions of Ordinary Differential Equations. Two methods". Advanced Special Functions and Integration Methods, Melfi, Italy, June 18-23, 2000, *Proceedings of the Melfi School on Advanced Topics in Mathematics and Physics* Edited by G. Dattoli, H.M. Srivastava and C. Cesarano, Aracne Ed. (2001), pp. 259–269.

45. S. Noschese, L. Pasquini, - "Condition and Stability Problems". Workshop on Numerical Analysis - Methods and Mathematical Software, Ferrara, Italy, January 19-21, 2000. *Ann. Univ. Ferrara* Sez. VII Sc. Mat. Suppl. Vol. **46** (2000), pp. 553–568.
ISSN: 0430-3202

46. P. Natalini, S. Noschese, P.E. Ricci - "Numerical approach to some problems of Mathematical Physics". Workshop on Numerical Analysis - Methods and Mathematical Software, Ferrara, Italy, January 19-21, 2000. *Ann. Univ. Ferrara* Sez. VII Sc. Mat. Suppl. Vol. **46** (2000), pp. 569–587.
ISSN: 0430-3202

Other Publications

Manuscripts submitted for peer-reviewed journals

- S. Gazzola, S. Noschese, P. Novati, L. Reichel - "Arnoldi decomposition, GMRES, and preconditioning for linear discrete ill-posed problems". Avalaible at
  `http://arxiv.org/abs/1806.06599`
- A. Concas, S. Noschese, L. Reichel, G. Rodriguez - "On bipartization of networks". Avalaible at
  `http://arxiv.org/abs/1812.08408`

Unpublished teaching materials

- Silvia Noschese. Note del corso di Istituzioni di Analisi Numerica - 2018. (In Italian). Available at
  `https://elearning.uniroma1.it/course/view.php?id=6505`
- Silvia Noschese. Note del corso di Laboratorio di Programmazione e Calcolo - 2017. (In Italian). Available at
  `http://www.mat.uniroma1.it/persone/noschese`

Research Bibliometric Parameters

- Number of Products in Scopus: 31
- Total Citations in Scopus: 204
- Average Citations for Product [1]: 6.58
- Hirsh (H) index in Scopus: 8
- Normalized H-index [2]: 0.35
- Total Impact Factor[3]: 27.86
- Average Impact Factor [4]: 0.90

Selected Publications[5]

1. S. NOSCHESE, L. REICHEL. Computing Unstructured and Structured Polynomial Pseudospectrum Approximations.
   JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS. Vol. 350, pp. 57–68 (2019).
   ISSN: 0377-0427, doi: 10.1016/j.cam.2018.09.033
   IF: 1.632; Cit: 0 *(WoS)*
   IF: 0.938; Cit: 1 *(Scopus)*

2. L. DYKES, G. HUANG, S. NOSCHESE, L. REICHEL. Regularization matrices for discrete ill-posed problems in several space-dimensions.
   NUMERICAL LINEAR ALGEBRA WITH APPLICATIONS. Vol. 25, No. 4, e2163 (2018).
   ISSN: 1070-5325, doi: 10.1002/nla.2163
   IF: 1.281; Cit: 1 *(WoS)*
   IF: 1.104; Cit: 1 *(Scopus)*

[1] total citations divided by the number of products
[2] H-index divided by the academic seniority
[3] sum of the journal impact factors of each product in the publication year according to Scopus (SCImago Journal & Country Rank portal)
[4] total impact factor divided by the number of products
[5] with journal impact factor in the publication year (IF) and citations (Cit)

3. S. NOSCHESE, L. REICHEL. Approximated structured pseudospectra.
   NUMERICAL LINEAR ALGEBRA WITH APPLICATIONS. Vol. 24, No. 2 (2017), e2082.
   ISSN: 1070-5325, doi: 10.1002/nla.2082
   IF: 1.281; Cit: 1 *(WoS)*
   IF: 1.104; Cit: 2 *(Scopus)*

4. L. DYKES, S. NOSCHESE, L. REICHEL. Circulant preconditioners for discrete ill-posed Toeplitz systems.
   NUMERICAL ALGORITHMS. Vol. 75, No. 2, pp. 477–490 (2017).
   ISSN: 1017-1398, doi: 10.1007/s11075-016-0205-9
   IF: 1.536; Cit: 1 *(WoS)*
   IF: 0.981; Cit: 2 *(Scopus)*

5. S. NOSCHESE, L. REICHEL. Some matrix nearness problems suggested by Tikhonov regularization.
   LINEAR ALGEBRA AND ITS APPLICATIONS. Vol. 502, pp. 366–386 (2016).
   ISSN: 0024-3795, doi: 10.1016/j.laa.2015.04.008
   IF: 0.973; Cit: 4 *(WoS)*
   IF: 1.07; Cit: 5 *(Scopus)*

6. G. HUANG, S. NOSCHESE, L. REICHEL. Regularization matrices determined by matrix nearness problems
   LINEAR ALGEBRA AND ITS APPLICATIONS. Vol. 502, pp. 41–57 (2016).
   ISSN: 0024-3795, doi: 10.1016/j.laa.2015.12.008
   IF: 0.973; Cit: 2 *(WoS)*
   IF: 1.07; Cit: 5 *(Scopus)*

7. L. DYKES, S. NOSCHESE, L. REICHEL. Rescaling the GSVD with application to ill-posed problems.
   NUMERICAL ALGORITHMS, Vol. 68, pp. 531-545 (2015).
   ISSN: 1017-1398, doi: 10.1007/s11075-014-9859-3
   IF: 1.366; Cit: 6 *(WoS)*
   IF: 1.147; Cit: 7 *(Scopus)*

8. P. BUTTÀ, N. GUGLIELMI, M. MANETTA, S. NOSCHESE. Differential equations for real-structured defectivity measures.
   SIAM JOURNAL ON MATRIX ANALYSIS AND APPLICATIONS, Vol. 36, No. 2, pp. 523-548 (2015).
   ISSN: 0895-4798, doi: 10.1137/140964631
   IF: 1.883; Cit: 2 *(WoS)*
   IF: 1.853; Cit: 2 *(Scopus)*

9. P. BUTTÀ, S. NOSCHESE. Structured maximal perturbations for Hamiltonian eigenvalue problems.
   JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, Vol. 272, pp. 304-312 (2014).
   ISSN: 0377-0427, doi: 10.1016/j.cam.2013.04.031
   IF: 1.266; Cit: 3 *(WoS)*
   IF: 1.066; Cit: 3 *(Scopus)*

10. S. NOSCHESE, L. REICHEL. A modified truncated singular value decomposition method for discrete ill-posed problems.
    NUMERICAL LINEAR ALGEBRA WITH APPLICATIONS, Vol. 21, pp. 813-822 (2014).
    ISSN: 1070-5325, doi: 10.1002/nla.1938
    IF: 1.322; Cit: 3 *(WoS)*

IF: 1.186; Cit: 3 *(Scopus)*

11. S. NOSCHESE, L. REICHEL. Inverse subspace problems with applications.
NUMERICAL LINEAR ALGEBRA WITH APPLICATIONS, Vol. 21, pp. 589-603 (2014).
ISSN: : 1070-5325, doi: 10.1002/nla.1914
IF: 1.322; Cit: 1 *(WoS)*
IF: 1.186; Cit: 1 *(Scopus)*

12. S. NOSCHESE, L. REICHEL. A note on superoptimal generalized circulant preconditioners.
APPLIED NUMERICAL MATHEMATICS, Vol. 75, pp. 188-195 (2014).
ISSN: 0168-9274, doi: 10.1016/j.apnum.2013.09.002
IF: 1.221; Cit: 1 *(WoS)*
IF: 1.251; Cit: 2 *(Scopus)*