Pavia, January 9, 2012

Curriculum Vitae
Ilaria Perugia

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Personal Information

Born in Milano, Italy, October 23, 1969
Italian Citizenship

Education

Ph.D in Computational Mathematics and Operations Research, Università di Milano, 1998
Adviser: F. Brezzi, Thesis: "Discretization of linearly constrained problems and applications in scientific computing"

Laurea in Matematica, Università di Pavia, 1993
Advisers: G.A. Pozzi and F. Brezzi, Thesis: "Finite element methods for the Stokes problem"

Current Position

Professor of Numerical Analysis
Facoltà di Scienze Matematiche, Fisiche e Naturali, Università di Pavia (since Dec. 29, 2012)

Associate Research Fellow at the IMATI-CNR, Pavia (since 2001)

Past Positions

2001-2011 Associate Professor of Numerical Analysis, Facoltà di Scienze, Università di Pavia

1995–2001 Researcher of Numerical Analysis, Facoltà di Scienze, Università di Pavia

1993–1995 Ph.D Student in Computational Mathematics and Operations Research, Università di Milano

Invited Visiting Positions

2006–2007 (Fall Semester) Visiting Professor, Seminar für Angewandte Mathematik, Department of Mathematics ETH Zürich, CH

1999–2001 Visiting Assistant Professor, School of Mathematics, University of Minnesota, USA

Honors

Supercomputing Institute for Digital Simulation and Advanced Computation Fellowship, University of Minnesota, Jul 2000–Jun 2001

CNR Postdoctoral Fellowship (spent at the University of Minnesota), Sep 1999–Aug 2000

Berzolari Prize (best Laurea thesis at the Università di Pavia; given every three years)

Conference Talks

1. I. Perugia *Trefftz-Discontinuous Galerkin Methods for the Time-Harmonic Maxwell Equations*, Workshop on Numerical Electromagnetics and Industrial Applications NELIA 2011, Santiago de Compostela, October 25–28, 2011 (invited lecture).

2. I. Perugia *Trefftz-Discontinuous Galerkin Methods for the Time-Harmonic Maxwell Equations*, Workshop on "Discontinuous Galerkin Methods for Partial Defferential Equations", Heraklion, Crete, September 26–28, 2011 (invited lecture).

3. I. Perugia *Trefftz-Discontinuous Galerkin Methods for the Time-Harmonic Maxwell Equations*, Workshop on "Partial Differential Equations in Mathematical Physics and their Numerical Approximation", Levico Terme (Trento), September 5–9, 2011 (invited lecture).

4. I. Perugia *Trefftz-Discontinuous Galerkin Methods for the Time-Harmonic Maxwell Equations*, Workshop on "Advances in Computational Wave Propagation 2011", University College London, September 2–3, 2011 (invited lecture).

5. I. Perugia, *Trefftz-discontinuous Galerkin methods for time-harmonic wave problems*, IMA Workshop "Numerical Solutions of Partial Differential Equations: Novel Discretization Techniques", IMA Minneapolis, USA, November 1-5, 2010 (invited plenary lecture).

6. I. Perugia, *Non polynomial approximations of wave problems*, European Science Foundation ESF Conference on Highly Oscillatory Problems: From Theory to Applications, The Isaac Newton Institute, Cambridge, UK, September 12–17, 2010 (invited plenary lecture).

7. I. Perugia, *Plane Wave Discontinuous Galerkin Methods for the Helmholtz Problem*, 81st Annual Meeting of the International Association of Applied Mathematics and Mechanics GAMM, Karlsruhe, Germany, March 22–26, 2010, (invited talk within the Minisymposium on Computational Wave Propagation, organized by R. Hiptmair).

8. I. Perugia, *Plane Wave Discontinuous Galerkin Methods* (survey talk), Oberwolfach Meeting on "Computational Electromagnetism and Acoustics", Oberwolfach, Germany, February 14–20, 2010.

9. I. Perugia, *Discontinuous Galerkin approximation of eigenvalue problems*, MAFELAP 2009 - The Mathematics of Finite Elements and Applications, Brunel University, West London, UK, June 9–12, 2009 (invited talk within the Minisymposium on Discontinuous Galerkin Methods organized by Y. Epshteyn, J. Guzman, B. Riviere nd S. Shaw).

10. R. Hiptmair, A. Moiola and I. Perugia, *Plane wave discontinuous Galerkin methods for the Helmholtz problem*, The 7th European Finite Elemen Fair, Helsinki, Finland, June 5–6, 2009.

11. R. Hiptmair, A. Moiola and I. Perugia, *Metodi plane wave discontinuous Galerkin per il problema di Helmholtz*, Convegno del Gruppo Nazionale di Calcolo Scientifico dell'INdAM, Montecatini Terme, Italy, February 3–5, 2009.

12. I. Perugia, *Linear algebra problems arising in discontinuous Galerkin finite element discretizations*, INdAM Workshop on Structured Linear Algebra Problems: Analysis, Algorithms, and Applications, Cortona, Italy, September 15–19, 2008, organized by D.A. Bini (invited lecture).

13. I. Perugia, *Plane wave discontinuous Galerkin methods*, Oberwolfach Meeting on Nonstandard Finite Element Methods, Oberwolfach, Germany, August 10–16, 2008.

14. I. Perugia, *Plane wave discontinuous Galerkin methods*, The 6th European Finite Element Fair, Göteborg, Sweden, May 30–31, 2008.

15. I. Perugia, *Plane wave discontinuous Galerkin methods*, 18th International Conference on Domain Decomposition Methods, Jerusalem, Israel, January 12–17, 2008 (invited plenary lecture).

16. R. Hiptmair and I. Perugia, *Plane wave discontinuous Galerkin methods for the Helmholtz equation*, 9th US National Congress on Computational Mechanics, San Francisco CA, USA, July 23–26, 2007 (invited talk within the Minisymposium on Discontinuous Galerkin methods for PDEs, organized by S. Adjerid, B. Cockburn, K. Garikipati, A. Lew and C.-W. Shu).

17. A. Buffa, P. Houston and I. Perugia, *Discontinuous Galerkin approximations of the Maxwell eigenproblem*, INdAM Workshop on Multiscale Problems: Modeling, Adaptive Discretization, Stabilization, Solvers Cortona, Italy, September 18–22, 2006, organized by D. Boffi, L.F. Pavarino, G. Russo, F. Saleri and A. Veeser (invited lecture).

18. I. Perugia, *Analysis of discontinuous Galerkin approximations of the Maxwell eigenproblem*, 7th International Conference on Mathematical and Numerical Aspects of Waves WAVES'05, Providence RI, USA, June 20–24, 2005 (invited plenary lecture).

19. A. Buffa and I. Perugia, *Discontinuos Galerkin approximation of eigenvalue problems*, Third MIT Conference on Computational Fluid and Solid Mechanics, Boston MA, USA, June 14–17, 2005 (invited talk within the Minisymposium on Discontinuous Galerkin Methods for PDE's, organized by S. Adjerid, B. Cockburn e C.-W. Shu).

20. I. Perugia, *Elementi finiti discontinui per equazioni di Maxwell*, Workshop del Progetto Integruppo INdAM 2004 "Metodi Numerici per lo studio di problemi evolutivi multiscala", Milano, Italy, February 21–22, 2005.

21. P. Hansbo, C. Lovadina I. Perugia e G. Sangalli, *A Lagrange multiplier method for finite elements on non-matching meshes*, VII Congresso Nazionale della SIMAI (Società Italiana di Matematica Applicata e Industriale), San Servolo, Venezia, Italy, September 20–24, 2004.

22. I. Perugia, *Discontinuous Galerkin methods for Maxwell's equations*, Advanced Computational Electromagnetism Seminar, Tampere, Finland, August 2–4, 2004, organized by L. Kettunen (invited talk).

23. P. Houston, I. Perugia, A. Schneebeli and D. Schötzau, *Discontinuous Galerkin method for the time-harmonic Maxwell equations: the indefinite case*, IV European Congress on Computational Methods in Applied Sciences and Engineering ECCOMAS, Jyväskylä, Finland, July 24–28, 2004 (invited talk within the Minisymposium on Nonconforming Methods: Classical, Mortar and Discontinuous Galerkin Methods, organized by S. Brenner).

24. P. Houston, I. Perugia and D. Schötzau, *Discontinuous Galerkin methods for the mixed Maxwell equations*, 6th International Conference On Spectral and High Order Methods ICOSAHOM, Brown University, Providence RI, USA, June 21–25, 2004 (invited talk within the Minisymposium on High Order Discontinuous Galerkin Methods, organized by B. Cockburn and C.-W. Shu).

25. I. Perugia, *Discontinuous Galerkin methods for the time-harmonic Maxwell equations*, The 2nd European Finite Element Fair, Berlin, Germany, June 4–5, 2004.

26. I. Perugia, *Discontinuous Galerkin methods for the time-harmonic Maxwell equations*, Seconda Giornata di Studio su "Il Metodo degli Elementi Finiti nelle Applicazioni dell'Ingegneria Elettrica e dell'Informazione", Genova, Italy, 3–4 Giugno 2004 (invited talk).

27. P. Houston, I. Perugia and D. Schötzau, *Discontinuous Galerkin methods for Maxwell's equations in frequency-domain* (poster), IMA "Hot Topics" Workshop on Compatible Spatial Discretizations for Partial Differential Equations Minneapolis MN, USA, May 11–15, 2004.

28. I. Perugia, *Discontinuous Galerkin methods for Maxwell's equations* (survey talk), Oberwolfach Meeting on "Computational Electromagnetism", Oberwolfach, Germany, February 22–28, 2004

29. I. Perugia, *Metodi discontinuous Galerkin per le equazioni di Maxwell time-harmonic*, Convegno del Gruppo Nazionale di Calcolo Scientifico dell'INdAM, Montecatini Terme, Italy, February 9–11, 2004.

30. I. Perugia, *Discontinuous Galerkin discretization of mixed problems*, AHPCRC Workshop on Recent Advances and State-of-the-Art in Discontinuous Galerkin Methods in Computational Structural Mechanics, Minneapolis MN, USA, October 28–29, 2003 (invited talk).

31. I. Perugia, *Elementi finiti non conformi per equazioni di Maxwell time-harmonic in regime di bassa frequenza*, XVII Congresso dell'UMI (Unione Matematica Italiana), Milano, Italy, September 8–13, 2003.

32. I. Perugia, *Nonconforming mixed finite element approximations to time-harmonic eddy current problems*, XIV COMPUMAG Conference on Computation of Electromagnetic Fields, Saratoga Springs NY, USA, July 13–17, 2003 (invited plenary talk).

33. P. Alotto and I. Perugia, *Matrix properties of a vector potential cell method for magnetostatics* (poster) XIV COMPUMAG Conference on Computation of Electromagnetic Fields, Saratoga Springs NY, USA, July 13–17, 2003.

34. I. Perugia, *Discontinuous Galerkin methods for the Maxwell operator*, Workshop on "Problems in Electromagnetism", Trento, Italy, November 29–30, 2002, organized by F. Bagagiolo, A. Valli and A. Visintin (invited talk).

35. P. Houston, I. Perugia and D. Schötzau, *Discontinuous Galerkin methods for Maxwell's equations*, 12th ECMI Conference - the European Consortium for Mathematics in Industry, Jurmala, Latvia, September 10–14, 2002 (invited talk within the Minisymposium on Topics in Electromagnetics, organized by W. Schilders).

36. I. Perugia and D. Schötzau, *Discontinuous Galerkin discretization of time-harmonic Maxwell's equations in low and high–frequency regimes*, WCCM V - Fifth World Congress on Computational Mechanics, Vienna, Austria, July 7–12, 2002 (invited talk within the Minisymposium on Discontinuous Galerkin Methods, organized by B. Cockburn, C. Dawson and B. Rivière).

37. I. Perugia, *Solution of Maxwell's equations with discontinuous Galerkin methods in the time-harmonic case*, VI Congresso Nazionale della SIMAI (Società Italiana di Matematica Applicata e Industriale), Chia Laguna, Italy, May 27–31, 2002.

38. I. Perugia, *Discontinuous Galerkin methods for time-harmonic Maxwell's equations*, Oberwolfach Meeting on "Discontinuous Galerkin Methods", Oberwolfach, Germany, April 22–26, 2002.

39. I. Perugia and D. Schötzau, *hp–local discontinuous Galerkin methods for low-frequency time-harmonic Maxwell's equations*, IV European Conference on Numerical Mathematics and Advanced Applications ENUMATH, Ischia Porto, Italy, July 23–28, 2001 invited talk within the Minisymposium on Discontinuous Galerkin Finite Element Methods, organized by G. Kanschat and E. Süli).

40. P. Alotto, I. Perugia and V. Simoncini, *An adaptive field-based method for magnetostatic problems*, IV International Congress on Industrial and Applied Mathematics ICIAM, Edinburgh, UK, July 5–9, 1999 (invited talk within the Minisymposium on Mathematical Modeling of Electromagnetics, organized by H. Hammari and G. Bao).

41. I. Perugia, *A mixed formulation for magnetostatics: theoretical and numerical aspects*, IV International Congress on Industrial and Applied Mathematics ICIAM, Edinburgh, UK, July 5–9, 1999 (invited talk within the Minisymposium on Finite Element Models in Low Frequency Electromagnetics, organized by P. Fernandes).

42. I. Perugia and V. Simoncini, *Preconditioners for a mixed finite element method in magnetostatics*, International Conference on Preconditioning Techniques for Large Sparse Matrix Problems in Industrial Applications, Minneapolis MN, USA, June 10–12, 1999.

43. P. Alotto and I. Perugia, *An adaptive mixed formulation and code for 3D magnetostatics*, VIII International IGTE Symposium on Numerical Field Calculation in Electrical Engineering, Graz, Austria, September, 21–24, 1998.

44. I. Perugia, *Un metodo agli elementi finiti di tipo misto per il problema magnetostatico*, Convegno Nazionale di Analisi Numerica, Montecatini Terme, Italy, April 15–17, 1998.

45. P. Alotto, F. Delfino, P. Molfino, M. Nervi and I. Perugia, *A mixed face-edge finite element formulation for 3D magnetostatic problems* (poster), XI COMPUMAG Conference on Computation of Electromagnetic Fields, Rio de Janeiro, Brazil, November, 2–6, 1997.

46. P. Di Barba, A. Savini and I. Perugia, *Mixed finite elements for the simulation of fields and forces in electromagnetic devices* (poster), XI COMPUMAG Conference on Computation of Electromagnetic Fields, Rio de Janeiro, Brazil, November, 2–6, 1997.

47. P. Di Barba, L. D. Marini, I. Perugia e A. Savini, *Applicazione di elementi finiti misti alla magnetostatica bidimensionale*, III Congresso Nazionale della SIMAI (Società Italiana di Matematica Applicata e Industriale), Salice Terme, Italy, May 27–31, 1996.

48. I. Perugia, *Formulazione mista del problema magnetostatico*, III Congresso Nazionale della SIMAI (Società Italiana di Matematica Applicata e Industriale), Salice Terme, Italy, May 27–31, 1996.

49. D. Boffi e I. Perugia, *Elementi finiti bi- e tridimensionali per il problema di Stokes*, Convegno Nazionale di Analisi Numerica, Montecatini Terme, Italy, April 27–29, 1994.

Lectures within International Schools

Zürich Summer School': "Eigenvalue Problems", Universität Zürich, August 25–29, 2008.

CEA-EDF-INRIA School "École des Ondes": Discontinuous Galerkin (DG) methods for the wave equations, INRIA Rocquencourt, November 27–December 1, 2006.

Other Talks

1. Institut für Mathematik, Humboldt-Universität, Berlin, July 27, 2011.
2. Dipartimento di Matematica, Politecnico di Torino, July 16, 2009.
3. Special day of the Seminario di Matematica Applicata on " Robustness of a posteriori error estimators", Università degli Studi di Milano, September 18, 2007.
4. EUCOR Seminar, Universität Basel, November 23, 2006,
5. Applied Mathematics Seminar, University of Leicester, May 29, 2003.
6. IRMAR, Université de Rennes, France, March 20, 2003.
7. Fachbereich Mathematik und Informatik, Universität Mainz, February 5, 2003.
8. Dipartimento di Ingegneria Strutturale, Politecnico di Milano, November 8, 2002.

9. Institut für Angewandte Mathematik, Universität Heidelberg, June 17, 2002.
10. Seminari di Matematica Applicata, Università di Pavia, October 3, 2001.
11. IMA Post-Doc Seminar, University of Minnesota, May 8, 2001.
12. Applied Math. and Numerical Analysis Seminar, University of Minnesota, November 9, 2000.
13. Department of Computer Science, Stanford University, July 13, 2000.
14. Applied Math. and Numerical Analysis Seminar, University of Minnesota, October 7, 1999.

Participation to Oberwolfach Meetings

1. "Computational Electromagnetism and Acoustics" organized by R. Hiptmair, W.R. Hoppe, P. Joly e U. Langer, February 14–20, 2010.
2. "Nonstandard Finite Element Methods", organized by S.C. Brenner, C. Carstensen e P. Monk, August 10–16, 2008.
3. "Computational Electromagnetism and Acoustics", organized by R. Hiptmair, W.R. Hoppe, P. Joly e U. Langer, February 4–10, 2007.
4. "Computational Electromagnetism", organized by R. Hiptmair, W.R. Hoppe e U. Langer, February 22–28, 2004.
5. "Discontinuous Galerkin Methods", organized by D. Kröner, C. Schwab e E. Süli, April 22–26, 2002.

Refereeing Activity

Math. Comp., SIAM J. Numer. Anal., SIAM J. Sci. Comp., Numer. Math., Math. Mod. Meth. Appl. Sci., IMA J. Numer. Anal., M2AN Math. Model. Numer. Anal., Numer. Methods Partial Differential Equations, J. Comp. Appl. Math., J. Sci. Comp., J. Appl. Math., Appl. Math. Letters, J. Comput. Phys., Comput. Methods Appl. Mech. Engrg., Comput. Struct., IEEE Trans. on Magnetics

Teaching Activity

PhD Level

2006–2007 Discontinuous Galerkin Methods (Graduate School in Mathematics, ETH Zürich)

2004–2005 Discontinuous Galerkin finite element methods (Ph.D in Mathematics and Statistics for Computational Sciences, University of Milano)

Master Level

2010–2011 Numerical methods - Finite Element Analysis (International Master Course in Civil Engineering, University of Bologna)

2007–2008 Classical Computational Methods (Master in Complexity and its Interdisciplinary Applications, University of Pavia)

2005–2006 Classical Computational Methods (Master in Complexity and its Interdisciplinary Applications, University of Pavia)

2004–2005 Classical Computational Methods (Master in Complexity and its Interdisciplinary Applications, University of Pavia)

2003–2004 Classical Computational Methods (Master in Complexity and its Interdisciplinary Applications, University of Pavia)

2002–2003 Finite Elements for Mechanics of Continuum and Structures (Master in Computer Aided Structural Design, University of Pavia)

Undergraduate Level

2011–2012 Mathematical Analysis and Computer Science (for students in Biotechnologies, University of Pavia)
Finite Elements (for students in Mathematics, University of Pavia)

2010–2011 Mathematical Analysis and Computer Science (for students in Biotechnologies, University of Pavia)
Finite Elements (for students in Mathematics, University of Pavia)

2009–2010 Mathematical Analysis and Computer Science (for students in Biotechnologies, University of Pavia)
Finite Elements (for students in Mathematics, University of Pavia)

2008–2009 Mathematical Analysis and Computer Science (for students in Biotechnologies, University of Pavia)
Finite Elements (for students in Mathematics, University of Pavia)

2007–2008 Mathematical Analysis and Computer Science (for students in Biotechnologies, University of Pavia)
Finite Elements (for students in Mathematics, University of Pavia)

2006–2007 Finite Elements (for students in Mathematics, University of Pavia)
Mathematics and Statistics applied to Natural Sciences (for students in Natural Sciences and Technologies, University of Pavia)

2005–2006 Finite Elements (for students in Mathematics, University of Pavia)

2004–2005 Mathematical Analysis and Computer Science (for students in Biotechnologies, University of Pavia)
Finite Elements (for students in Mathematics, University of Pavia)

2003–2004 Mathematical Analysis and Computer Science (for students in Biotechnologies, University of Pavia)
Numerical Approximation Methods (for students in Mathematics and students of the Ph.D. Program in Mathematics and Statistics, University of Pavia)

2002–2003 Mathematical Analysis and Computer Science (for students in Biotechnologies, University of Pavia) Numerical Modeling (for students in Mathematics, University of Pavia)

2001–2002 Mathematical Analysis and Computer Science (for students in Biotechnologies, University of Pavia)
Numerical Analysis, part II (for students in Mathematics, University of Pavia)

2000–2001 Short Calculus (Math 1142, University of Minnesota)

1999-2000 Precalculus II (Math 1151, University of Minnesota)

1995–1999 Assistant Professor of Numerical Analysis (for students in Mathematics, University of Pavia)

1993–1995 Teaching Assistant for courses of Mathematical Analysis (for students in Engineering and in Physics, University of Pavia)

Supervised PhD Theses

1. Paola F. Antonietti, "Domain decomposition, spectral correctness and numerical testing of discontinuous Galerkin methods" (co-adviser A. Buffa); current position of P. Antonietti: Researcher of Numerical Analysis at MOX - Politecnico di Milano

2. Daniele Marazzina, "Stability properties of discontinuous Galerkin methods"; current position of D. Marazzina: Researcher of Financial Mathematics at the Dipartimento di Matematica, Politecnico di Milano

Supervised Laurea Theses ("Master" Level)

1. Michele Ruggeri, "Generalized finite element methods and meshless methods", Pavia, 21.09. 2010

2. Nadia Bigoni, "Mimetic finite differences for elliptic problems", (co-adviser G. Manzini), Pavia, 13.07.2010

3. Elisa Varini, "Finite element methods for advection-diffusion problems", Pavia, 27.04.2010

4. Gabriella Pocalana, "Finite element approximation of eigenvalue problems in electromagnetics", Diploma IUSS - Istituto Universitario di Studi Superiori, Pavia, 19.05.2009.

5. Andrea Bressan, "Isogeometric finite elements for the Stokes problem" (co-adviser G. Sangalli), Pavia, 28.04.2009

6. Domenico Reggiori, "Discontinuous finite elements for the Maxwell eigenvalue problem", Pavia, 16.09.2008

7. Andrea Moiola, "Analysis of the plane wave discontinuous Galerkin method for the Helmholtz problem", Pavia, 15.07.2008

8. Maurizio Siletti, "Finite element approximation of a relaxation scheme for the heat equation", Pavia, 15.07.2008

9. Lucia Ferrari, “Analysis of the deformation of an incompressible elastic disk: numerical simulation and material parameters identification” Pavia, 19.12.2006 (co-advisers: C. Lovadina e P. Colli Franzone)

10. Paola F. Antonietti, “The interior penalty method for the Poisson problem”, Pavia, 19.9.2003

11. Daniele Marazzina, “The local discontinuous Galerkin method for elliptic problems”, Pavia, 19.9.2003

12. Nadia Abbà, “A teaching project using the software DERIVE for integral calculus”, Pavia, 27.3.2003

Publications

Journal Papers

1. F. Cavalli, G. Naldi and I. Perugia, *Discontinuous Galerkin approximation of relaxation models for linear and nonlinear diffusion equations*, accepted for publication in SIAM J. Sci. Comp.

2. R. Hiptmair, A. Moiola and I. Perugia, *Error analysis of Trefftz-discontinuous Galerkin methods for the time-harmonic Maxwell equations*, accepted for publication in Math. Comp.

3. R. Hiptmair, A. Moiola and I. Perugia, *Stability results for the time-harmonic Maxwell equations with impedance boundary conditions*, Math. Mod. Meth. Appl. Sci., 21 (2011), 2263-2287.

4. A. Moiola, R. Hiptmair and I. Perugia, *Plane wave approximation of homogeneous Helmholtz solutions*, Z. Angew. Math. Phys., 62 (2011), 809-837.

5. A. Moiola, R. Hiptmair and I. Perugia, *Vekua theory for the Helmholtz operator*, Z. Angew. Math. Phys., 62 (2011), 779-807.

6. R. Hiptmair, A. Moiola and I. Perugia, *Plane wave discontinuous Galerkin methods for the 2D Helmholtz equation: analysis of the p-version*, SIAM J. Numer. Anal., 49 (2011), 264-284.

7. A. Buffa, I. Perugia and T. Warburton, *The mortar-discontinuous Galerkin method for the 2D Maxwell eigenproblem*, J. Sci. Comp., 40 (2009), 86-114.

8. C. J. Gittelson, R. Hiptmair and I. Perugia, *Plane wave discontinuous Galerkin methods: Analysis of the h–version*, M2AN Math. Model. Numer. Anal., 43 (2009), 297-331.

9. A. Buffa, P. Houston and I. Perugia, *Discontinuous Galerkin Computation of the Maxwell Eigenvalues on Simplicial Meshes*, J. Comput. Appl. Math., 204 (2007), 317-333.

10. P. Houston, I. Perugia and D. Schötzau, *An a posteriori error indicator for discontinuous Galerkin discretizations of H(curl)-elliptic partial differential equations*, IMA J. Numer. Anal., 27 (2007), 122-150.

11. A. Buffa and I. Perugia, *Discontinuous Galerkin approximation of the Maxwell eigenproblem*, SIAM Numer. Anal., 44 (2006), 2198-2226.

12. P. F. Antonietti, A. Buffa and I. Perugia, *Discontinuous Galerkin approximation of the Laplace eigenproblem*, Comput. Methods Appl. Mech. Engrg., 195 (2006), 3483-3503.

13. P. Houston, I. Perugia, A. Schneebeli and D. Schötzau, *Mixed discontinuous Galerkin approximation of the Maxwell operator: the indefinite case*, M2AN Math. Model. Numer. Anal., 39 (2005), 727-753.

14. P. Houston, I. Perugia, A. Schneebeli and D. Schötzau, *Interior penalty method for the indefinite time-harmonic Maxwell equations*, Numer. Math., 100 (2005), 485–518.

15. P. Hansbo, C. Lovadina, I. Perugia and G. Sangalli, *A Lagrange multiplier method for the finite element solution of elliptic interface problems using non-matching meshes*, Numer. Math., 100 (2005), 91–115.

16. P. Houston, I. Perugia and D. Schötzau, *Energy norm a posteriori error estimation for mixed discontinuous Galerkin approximations of the Maxwell operator*, Comput. Methods Appl. Mech. Engrg., 194 (2005), 499–510.

17. P. Houston, I. Perugia and D. Schötzau, *Mixed discontinuous Galerkin approximation of the Maxwell operator: non-stabilized formulation*, J. Sci. Comp., 22 (2005), 325–356.

18. P. Houston, I. Perugia and D. Schötzau, *Recent developments in Discontinuous Galerkin methods for the time-harmonic Maxwell equations*, International Compumag Society Newsletter, 11 (2004), 11-17.

19. P. Alotto and I. Perugia, *Matrix Properties of a Vector Potential Cell Method for Magnetostatics*, IEEE Trans. on Magnetics, IEEE Trans. on Magnetics, 40 (2004), 1045-1048.

20. P. Houston, I. Perugia and D. Schötzau, *Nonconforming mixed finite element approximations to time-harmonic eddy current problems*, IEEE Trans. on Magnetics, 40 (2004), 1268-1273.

21. P. Houston, I. Perugia and D. Schötzau, *Mixed discontinuous Galerkin approximation of the Maxwell operator*, SIAM J. Numer. Anal., 42 (2004), 434-459.

22. I. Perugia and D. Schötzau, *The hp-local discontinuous Galerkin method for low-frequency time-harmonic Maxwell equations*, Math. Comp., 72 (2003), 1179-1214.

23. I. Perugia, D. Schötzau and P. Monk, *Stabilized interior penalty methods for the time-harmonic Maxwell equations*, Comp. Meth. Appl. Mech. Engrg., 191 (2002), 4675-4697.

24. P. Alotto, A. Bertoni, I. Perugia and D. Schötzau, *Efficient use of the Local Discontinuous Galerkin method for meshes sliding on a circular boundary*, IEEE Trans. on Magnetics, 38 (2002), 405-408.

25. I. Perugia and D. Schötzau, *An hp-analysis of the local discontinuous Galerkin method for diffusion problems*, J. Sci. Comp., 17 (2002), 561-571.

26. P. Castillo, B. Cockburn, I. Perugia and D. Schötzau, *Local discontinuous Galerkin method for elliptic problems*, Commun. Numer. Meth. Engrg., 18 (2002), 69-75.

27. I. Perugia and D. Schötzau, *On the coupling of local discontinuous Galerkin and conforming finite element methods*, J. Sci. Comp., 16 (2001), 411-433.

28. B. Cockburn, G. Kanschat, I. Perugia and D. Schötzau, *Superconvergence of the local discontinuous Galerkin method for elliptic problems on Cartesian grids*, SIAM J. Numer. Anal., 39 (2001), 264-285.

29. P. Alotto, A. Bertoni, I. Perugia and D. Schötzau, *Discontinuous finite element methods for the simulation of rotating electrical machines*, COMPEL, 20 (2001), 448-462.

30. P. Fernandes and I. Perugia, *Vector potential formulation for magnetostatics and modeling of permanent magnets*, IMA J. Appl. Math., 66 (2001), 293-318.

31. P. Castillo, B. Cockburn, I. Perugia and D. Schötzau, *An a priori error analysis of the Local Discontinuous Galerkin method for elliptic problems*, SIAM J. Numer. Anal., 38 (2000), 1676-1706.

32. I. Perugia and V. Simoncini, *Block-diagonal and indefinite symmetric preconditioners for mixed finite element formulations*, Numer. Linear Algebra Appl., 7 (2000), 585-616.

33. P. Alotto and I. Perugia, *Tree-cotree implicit condensation in Magnetostatics*, IEEE Trans. on Magnetics, 36 (2000), 1523-1526.

34. P. Alotto and I. Perugia, *A field-based finite element method for magnetostatics derived from an error minimisation approach*, Internat. J. Numer. Methods Engrg., 49 (2000), 573-598.

35. P. Alotto and I. Perugia, *An adaptive mixed formulation for 3D magnetostatics*, COMPEL, 19 (2000), 106-120.

36. P. Alotto and I. Perugia, *Mixed finite element methods and tree-cotree implicit condensation*, Calcolo, 36 (1999), 233-248.

37. I. Perugia, *A mixed formulation for 3D magnetostatic problems: theoretical analysis and face-edge finite element approximation*, Numer. Math., 84 (1999), 305-326.

38. I. Perugia, V. Simoncini and M. Arioli, *Linear algebra methods in a mixed approximation of magnetostatic problems*, SIAM J. Sci. Comput., 21 (1999), 1085-1101.

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