

Nom **DAUGE**  
Prénom **Monique**

### 1. ELÉMENTS DE CV

Née le 6 octobre 1956  
A Nantes, France

#### Etudes

- 1978 Agrégation de Mathématique (8e)
- 1980 Thèse de troisième cycle (Nantes)  
*Etude de l'opérateur de Stokes dans un polygone : régularité, singularités et théorème d'indice.*
- 1986 Thèse d'Etat (Nantes)  
*Régularités et singularités des solutions de problèmes aux limites elliptiques sur des domaines singuliers de type à coins.*

#### Emplois

- 1978–80 Boursier DGRST, Nantes.
- 1980–84 Attaché de Recherches CNRS, Nantes.
- 1984–96 Chargé de Recherches CNRS 1e classe, Nantes.
- 1996 Directeur de Recherches CNRS, Rennes

#### Production scientifique

- Auteur d'un livre [1]: *Elliptic boundary value problems in corner domains*. Lecture Notes in Mathematics **1341**, Springer-Verlag 1988.
- Co-auteur avec C. Bernardi et Y. Maday du livre [2]: *Spectral Methods in Axisymmetric Domains*. Series in Applied Mathematics **3**, 1999.
- Co-auteur avec V. Bonnaillie-Noël et N. Popoff de la monographie [3]: *Ground state energy of the magnetic Laplacian on corner domains*. Mémoires de la Société Mathématique de France **145**, 2016.
- Auteur ou co-auteur de plus de 120 articles.

### 2. PRÉSENTATION

Je travaille à l'université de Rennes 1 depuis 1992, en mathématiques, au sein du laboratoire IRMAR, dans l'équipe Analyse Numérique. Mes domaines d'intérêt principaux sont l'électromagnétisme et la mécanique quantique, vus sous le double éclairage de l'analyse mathématique et du calcul scientifique. Les problèmes considérés sont liés à la présence de singularités ou de perturbations.

### 3. PUBLICATIONS

- [1] M. Dauge, *Elliptic boundary value problems on corner domains*, vol. 1341 of *Lecture Notes in Mathematics*. Berlin: Springer-Verlag, 1988. Smoothness and asymptotics of solutions.
- [2] C. Bernardi, M. Dauge, and Y. Maday, *Spectral methods for axisymmetric domains*, vol. 3 of *Series in Applied Mathematics (Paris)*. Éditions Scientifiques et Médicales Elsevier, Paris: Gauthier-Villars, 1999. Numerical algorithms and tests due to Mejdî Azaïez.

- [3] V. Bonnaillie-Noël, M. Dauge, and N. Popoff, “Ground state energy of the magnetic Laplacian on corner domains,” *Mém. Soc. Math. Fr. (N.S.)*, no. 145, pp. vii+138, 2016.
- [4] M. Costabel, M. Dalla Riva, M. Dauge, and P. Musolino, “Converging expansions for Lipschitz self-similar perforations of a plane sector,” *Integral Equations and Operator Theory*, vol. 88, no. 3, pp. 401–449, 2017.
- [5] M. Chaussade-Beaudouin, M. Dauge, E. Faou, and Z. Yosibash, “Free Vibrations of Axisymmetric Shells: Parabolic and Elliptic cases,” *Asymptotic Analysis*, vol. 104, no. 2, pp. 1–47, 2017.
- [6] M. Chaussade-Beaudouin, M. Dauge, E. Faou, and Z. Yosibash, “High frequency oscillations of first eigenmodes in axisymmetric shells as the thickness tends to zero,” in *Operator Theory Advances and Application*, vol. 258 of *Recent Trends in Operator Theory and Partial Differential Equations - The Roland Duduchava Anniversary Volume*, pp. 89–110, Birkhäuser/Springer, 2017.
- [7] C. Bernardi, M. Costabel, M. Dauge, and V. Girault, “Continuity properties of the inf-sup constant for the divergence,” *SIAM J. Math. Anal.*, vol. 48, no. 2, pp. 1250–1271, 2016.
- [8] V. Bonnaillie-Noël, M. Dauge, N. Popoff, and N. Raymond, “Magnetic Laplacian in sharp three-dimensional cones,” in *Spectral theory and mathematical physics*, vol. 254 of *Oper. Theory Adv. Appl.*, pp. 37–56, Birkhäuser/Springer, [Cham], 2016.
- [9] M. Dauge, T. Ourmières-Bonafos, and N. Raymond, “Spectral asymptotics of the Dirichlet Laplacian in a conical layer,” *Commun. Pure Appl. Anal.*, vol. 14, no. 3, pp. 1239–1258, 2015.
- [10] M. Dauge, A. Düster, and E. Rank, “Theoretical and numerical investigation of the finite cell method,” *J. Sci. Comput.*, vol. 65, no. 3, pp. 1039–1064, 2015.
- [11] M. Costabel and M. Dauge, “On the inequalities of Babuška-Aziz, Friedrichs and Horgan-Payne,” *Arch. Ration. Mech. Anal.*, vol. 217, no. 3, pp. 873–898, 2015.
- [12] M. Costabel, M. Crouzeix, M. Dauge, and Y. Lafranche, “The inf-sup constant for the divergence on corner domains,” *Numer. Methods Partial Differential Equations*, vol. 31, no. 2, pp. 439–458, 2015.
- [13] M. Dauge, R. A. Norton, and R. Scheichl, “Regularity for Maxwell eigenproblems in photonic crystal fibre modelling,” *BIT*, vol. 55, no. 1, pp. 59–80, 2015.
- [14] M. Dauge, P. Dular, L. Krähenbühl, V. Péron, R. Perrussel, and C. Poignard, “Corner asymptotics of the magnetic potential in the eddy-current model,” *Math. Methods Appl. Sci.*, vol. 37, no. 13, pp. 1924–1955, 2014.
- [15] M. Dauge, C. Bernardi, M. Costabel, and V. Girault, “On Friedrichs constant and Horgan-Payne angle for LBB condition,” in *Twelfth International Conference Zaragoza-Pau on Mathematics*, vol. 39 of *Monogr. Mat. García Galdeano*, pp. 87–100, Prensas Univ. Zaragoza, Zaragoza, 2014.
- [16] M. Costabel, M. Dauge, and S. Nicaise, “Weighted analytic regularity in polyhedra,” *Comput. Math. Appl.*, vol. 67, no. 4, pp. 807–817, 2014.
- [17] S. Shannon, Z. Yosibash, M. Dauge, and M. Costabel, “Extracting generalized edge flux intensity functions with the quasilocal function method along circular 3-D edges,” *International Journal of Fracture*, vol. 181, no. 1, pp. 25–50, 2013.
- [18] M. Dauge and N. Raymond, “Plane waveguides with corners in the small angle limit,” *J. Math. Phys.*, vol. 53, no. 12, pp. 123529, 34, 2012.
- [19] M. Dauge, Y. Lafranche, and N. Raymond, “Quantum waveguides with corners,” in *Congrès National de Mathématiques Appliquées et Industrielles*, vol. 35 of *ESAIM Proc.*, pp. 14–45, EDP Sci., Les Ulis, 2011.
- [20] F. Buret, M. Dauge, P. Dular, L. Krähenbühl, V. Péron, R. Perrussel, C. Poignard, and D. Voyer, “Eddy currents and corner singularities,” *IEEE Transactions on Magnetics*, vol. 48, pp. 679–682, Jan. 2012.
- [21] V. Bonnaillie-Noël, M. Dauge, N. Popoff, and N. Raymond, “Discrete spectrum of a model Schrödinger operator on the half-plane with Neumann conditions,” *Z. Angew. Math. Phys.*, vol. 63, no. 2, pp. 203–231, 2012.
- [22] M. Costabel, M. Dauge, and S. Nicaise, “Analytic regularity for linear elliptic systems in polygons and polyhedra,” *Math. Models Methods Appl. Sci.*, vol. 22, no. 8, pp. 1250015, 63, 2012.
- [23] D. Boffi, M. Costabel, M. Dauge, L. Demkowicz, and R. Hiptmair, “Discrete compactness for the  $p$ -version of discrete differential forms,” *SIAM J. Numer. Anal.*, vol. 49, no. 1, pp. 135–158, 2011.
- [24] Z. Yosibash, S. Shannon, M. Dauge, and M. Costabel, “Circular edge singularities for the Laplace equation and the elasticity system in 3-D domains,” *International Journal of Fracture*, vol. 168, pp. 31–52, 2011.
- [25] G. Caloz, M. Dauge, E. Faou, and V. Péron, “On the influence of the geometry on skin effect in electromagnetism,” *Comput. Methods Appl. Mech. Engrg.*, vol. 200, no. 9-12, pp. 1053–1068, 2011.

- [26] M. Dauge and R. Stevenson, “Sparse tensor product wavelet approximation of singular functions,” *SIAM J. Math. Anal.*, vol. 42, no. 5, pp. 2203–2228, 2010.
- [27] G. Caloz, M. Dauge, and V. Péron, “Uniform estimates for transmission problems with high contrast in heat conduction and electromagnetism,” *J. Math. Anal. Appl.*, vol. 370, no. 2, pp. 555–572, 2010.
- [28] M. Dauge, E. Faou, and V. Péron, “Comportement asymptotique à haute conductivité de l’épaisseur de peau en électromagnétisme,” *C. R. Math. Acad. Sci. Paris*, vol. 348, no. 7-8, pp. 385–390, 2010.
- [29] M. Dauge and E. Faou, “Koiter estimate revisited,” *Math. Models Methods Appl. Sci.*, vol. 20, no. 1, pp. 1–42, 2010.
- [30] M. Costabel, M. Dauge, and S. Nicaise, “Mellin analysis of weighted Sobolev spaces with nonhomogeneous norms on cones,” in *Around the research of Vladimir Maz’ya. I*, vol. 11 of *Int. Math. Ser. (N. Y.)*, pp. 105–136, Springer, New York, 2010.
- [31] M. Dauge, S. Tordeux, and G. Vial, “Selfsimilar perturbation near a corner: matching versus multiscale expansions for a model problem,” in *Around the research of Vladimir Maz’ya. II*, vol. 12 of *Int. Math. Ser. (N. Y.)*, pp. 95–134, Springer, New York, 2010.
- [32] C. Bernardi, M. Dauge, and Y. Maday, “The lifting of polynomial traces revisited,” *Math. Comp.*, vol. 79, no. 269, pp. 47–69, 2010.
- [33] Z. Yosibash, N. Omer, and M. Dauge, “Edge stress intensity functions in 3-D anisotropic composites,” *Composites Science and Technology*, vol. 68, no. 5, pp. 1216–1224, 2008.
- [34] M. Costabel, M. Dauge, and L. Demkowicz, “Polynomial extension operators for  $H^1$ ,  $H(\text{curl})$  and  $H(\text{div})$ -spaces on a cube,” *Math. Comp.*, vol. 77, no. 264, pp. 1967–1999, 2008.
- [35] V. Bonnaillie-Noël, M. Dauge, D. Martin, and G. Vial, “Computations of the first eigenpairs for the Schrödinger operator with magnetic field,” *Comput. Methods Appl. Mech. Engrg.*, vol. 196, no. 37-40, pp. 3841–3858, 2007.
- [36] S. Tordeux, G. Vial, and M. Dauge, “Matching and multiscale expansions for a model singular perturbation problem,” *C. R. Math. Acad. Sci. Paris*, vol. 343, no. 10, pp. 637–642, 2006.
- [37] G. Caloz, M. Costabel, M. Dauge, and G. Vial, “Asymptotic expansion of the solution of an interface problem in a polygonal domain with thin layer,” *Asymptot. Anal.*, vol. 50, no. 1-2, pp. 121–173, 2006.
- [38] D. Boffi, M. Costabel, M. Dauge, and L. Demkowicz, “Discrete compactness for the  $hp$  version of rectangular edge finite elements,” *SIAM J. Numer. Anal.*, vol. 44, no. 3, pp. 979–1004 (electronic), 2006.
- [39] V. Bonnaillie-Noël and M. Dauge, “Asymptotics for the low-lying eigenstates of the Schrödinger operator with magnetic field near corners,” *Ann. Henri Poincaré*, vol. 7, no. 5, pp. 899–931, 2006.
- [40] M. Costabel, M. Dauge, S. A. Nazarov, and J. Sokolowski, “Analysis of crack singularities in an aging elastic material,” *M2AN Math. Model. Numer. Anal.*, vol. 40, no. 3, pp. 553–595, 2006.
- [41] M. Dauge and M. Suri, “On the asymptotic behaviour of the discrete spectrum in buckling problems for thin plates,” *Math. Methods Appl. Sci.*, vol. 29, no. 7, pp. 789–817, 2006.
- [42] Z. Yosibash, N. Omer, M. Costabel, and M. Dauge, “Edge Stress Intensity Functions in Polyhedral Domains and their Extraction by a Quasidual Function Method,” *International Journal of Fracture*, vol. 136, no. 1-4, pp. 37–73, 2005.
- [43] M. Costabel, M. Dauge, and C. Schwab, “Exponential convergence of  $hp$ -FEM for Maxwell equations with weighted regularization in polygonal domains,” *Math. Models Methods Appl. Sci.*, vol. 15, no. 4, pp. 575–622, 2005.
- [44] A. Buffa, M. Costabel, and M. Dauge, “Algebraic convergence for anisotropic edge elements in polyhedral domains,” *Numer. Math.*, vol. 101, no. 1, pp. 29–65, 2005.
- [45] N. Omer, Z. Yosibash, M. Costabel, and M. Dauge, “Edge flux intensity functions in polyhedral domains and their extraction by a quasidual function method,” *Int. Jour. Fracture*, vol. 129, pp. 97–130, 2004.
- [46] M. Dauge, E. Faou, and Z. Yosibash, “Plates and shells: Asymptotic expansions and hierarchical models,” in *Encyclopedia of Computational Mechanics. Vol I* (E. Stein, R. de Borst, and T. J. Hughes, eds.), pp. 199–236 (Chapter 8), Wiley, 2004.
- [47] M. Costabel, M. Dauge, and S. Nicaise, “Corner singularities of Maxwell interface and eddy current problems,” in *Operator theoretical methods and applications to mathematical physics*, vol. 147 of *Oper. Theory Adv. Appl.*, pp. 241–256, Basel: Birkhäuser, 2004.
- [48] M. Costabel, M. Dauge, and Z. Yosibash, “A quasi-dual function method for extracting edge stress intensity functions,” *SIAM J. Math. Anal.*, vol. 35, no. 5, pp. 1177–1202 (electronic), 2004.

- [49] M. Costabel, M. Dauge, and S. Nicaise, “Singularities of eddy current problems,” *M2AN Math. Model. Numer. Anal.*, vol. 37, no. 5, pp. 807–831, 2003.
- [50] M. Costabel and M. Dauge, “Computation of resonance frequencies for Maxwell equations in non-smooth domains,” in *Topics in computational wave propagation*, vol. 31 of *Lect. Notes Comput. Sci. Eng.*, pp. 125–161, Berlin: Springer, 2003.
- [51] M. Costabel, M. Dauge, and R. Duduchava, “Asymptotics without logarithmic terms for crack problems,” *Comm. Partial Differential Equations*, vol. 28, no. 5-6, pp. 869–926, 2003.
- [52] A. Buffa, M. Costabel, and M. Dauge, “Anisotropic regularity results for Laplace and Maxwell operators in a polyhedron,” *C. R. Math. Acad. Sci. Paris*, vol. 336, no. 7, pp. 565–570, 2003.
- [53] M. Costabel, M. Dauge, D. Martin, and G. Vial, “Weighted regularization of Maxwell equations: computations in curvilinear polygons,” in *Numerical mathematics and advanced applications*, pp. 273–280, Springer Italia, Milan, 2003.
- [54] M. Dauge and M. Suri, “Numerical approximation of the spectra of non-compact operators arising in buckling problems,” *J. Numer. Math.*, vol. 10, no. 3, pp. 193–219, 2002.
- [55] M. Dauge and C. Schwab, “ $hp$ -FEM for three-dimensional elastic plates,” *M2AN Math. Model. Numer. Anal.*, vol. 36, no. 4, pp. 597–630, 2002.
- [56] M. Costabel and M. Dauge, “Weighted regularization of Maxwell equations in polyhedral domains. A rehabilitation of nodal finite elements,” *Numer. Math.*, vol. 93, no. 2, pp. 239–277, 2002.
- [57] M. Dauge and Z. Yosibash, “Eigen-frequencies in thin elastic 3-D domains and Reissner-Mindlin plate models,” *Math. Methods Appl. Sci.*, vol. 25, no. 1, pp. 21–48, 2002.
- [58] M. Dauge, A. Rössle, and Z. Yosibash, “Higher-order responses of three-dimensional elastic plate structures and their numerical illustration by  $p$ -FEM,” *Internat. J. Numer. Methods Engrg.*, vol. 53, no. 6, pp. 1353–1376, 2002.
- [59] M. Costabel and M. Dauge, “Crack singularities for general elliptic systems,” *Math. Nachr.*, vol. 235, pp. 29–49, 2002.
- [60] A. S. Bonnet-BenDhia, G. Caloz, M. Dauge, and F. Mahé, “Study at high frequencies of a stratified waveguide,” *IMA J. Appl. Math.*, vol. 66, no. 3, pp. 231–257, 2001.
- [61] M. Costabel, M. Dauge, and Y. Lafranche, “A fast semi-analytic method for the computation of elastic edge singularities,” *Computer Methods in Applied Mechanics and Engineering*, vol. 190, pp. 2111–2134, 2001.
- [62] C. Bernardi, M. Dauge, and Y. Maday, “Compatibilité de traces aux arêtes et coins d’un polyèdre,” *C. R. Acad. Sci. Paris Sér. I Math.*, vol. 331, no. 9, pp. 679–684, 2000.
- [63] G. Andreoiu, M. Dauge, and E. Faou, “Développements asymptotiques complets pour des coques faiblement courbées encastrées ou libres,” *C. R. Acad. Sci. Paris Sér. I Math.*, vol. 330, no. 6, pp. 523–528, 2000.
- [64] M. Costabel, M. Dauge, and D. Martin, “Numerical investigation of a boundary penalization method for maxwell equations,” in *Proceedings of the 3rd European Conference on Numerical Mathematics and Advanced Applications* (P. Neittaanmäki, T. Tiihonen, and P. Tarvainen, eds.), pp. 214–221, World Scientific, 2000.
- [65] M. Dauge and Z. Yosibash, “Boundary layer realization in thin elastic 3-d domains and 2-d hierarchic plate models,” *Internat. J. Solids Structures*, vol. 37, pp. 2443–2471, 2000.
- [66] M. Dauge, I. Gruais, and A. Rössle, “The influence of lateral boundary conditions on the asymptotics in thin elastic plates,” *SIAM J. Math. Anal.*, vol. 31, no. 2, pp. 305–345 (electronic), 1999/00.
- [67] M. Costabel and M. Dauge, “Singularities of electromagnetic fields in polyhedral domains,” *Arch. Ration. Mech. Anal.*, vol. 151, no. 3, pp. 221–276, 2000.
- [68] M. Dauge, I. Djurdjevic, E. Faou, and A. Rössle, “Eigenmode asymptotics in thin elastic plates,” *J. Math. Pures Appl. (9)*, vol. 78, no. 9, pp. 925–964, 1999.
- [69] A.-S. Bonnet-Bendhia, M. Dauge, and K. Ramdani, “Analyse spectrale et singularités d’un problème de transmission non coercif,” *C. R. Acad. Sci. Paris Sér. I Math.*, vol. 328, no. 8, pp. 717–720, 1999.
- [70] M. Dauge, “Singularities of corner problems and problems of corner singularities,” in *Actes du 30ème Congrès d’Analyse Numérique: CANum ’98 (Arles, 1998)*, vol. 6 of *ESAIM Proc.*, pp. 19–40 (electronic), Paris: Soc. Math. Appl. Indust., 1999.
- [71] M. Costabel, M. Dauge, and S. Nicaise, “Singularities of Maxwell interface problems,” *M2AN Math. Model. Numer. Anal.*, vol. 33, no. 3, pp. 627–649, 1999.
- [72] M. Costabel and M. Dauge, “Maxwell and Lamé eigenvalues on polyhedra,” *Math. Methods Appl. Sci.*, vol. 22, no. 3, pp. 243–258, 1999.

- [73] M. Costabel and M. Dauge, “Un résultat de densité pour les équations de Maxwell régularisées dans un domaine lipschitzien,” *C. R. Acad. Sci. Paris Sér. I Math.*, vol. 327, no. 9, pp. 849–854, 1998.
- [74] M. Dauge and I. Gruais, “Edge layers in thin elastic plates,” *Comput. Methods Appl. Mech. Engrg.*, vol. 157, no. 3-4, pp. 335–347, 1998. Seventh Conference on Numerical Methods and Computational Mechanics in Science and Engineering (NMCM 96) (Miskolc).
- [75] M. Costabel, M. Dauge, and M. Suri, “Numerical approximation of a singularly perturbed contact problem,” *Comput. Methods Appl. Mech. Engrg.*, vol. 157, no. 3-4, pp. 349–363, 1998. Seventh Conference on Numerical Methods and Computational Mechanics in Science and Engineering (NMCM 96) (Miskolc).
- [76] C. Amrouche, C. Bernardi, M. Dauge, and V. Girault, “Vector potentials in three-dimensional non-smooth domains,” *Math. Methods Appl. Sci.*, vol. 21, no. 9, pp. 823–864, 1998.
- [77] M. Dauge and I. Gruais, “Asymptotics of arbitrary order for a thin elastic clamped plate. II. Analysis of the boundary layer terms,” *Asymptot. Anal.*, vol. 16, no. 2, pp. 99–124, 1998.
- [78] M. Dauge, I. Djurdjevic, and A. Rössle, “Full asymptotic expansions for thin elastic free plates,” *C. R. Acad. Sci. Paris Sér. I Math.*, vol. 326, no. 10, pp. 1243–1248, 1998.
- [79] M. Dauge, I. Djurdjevic, and A. Rössle, “Higher order bending and membrane responses of thin linearly elastic plates,” *C. R. Acad. Sci. Paris Sér. I Math.*, vol. 326, no. 4, pp. 519–524, 1998.
- [80] M. Costabel and M. Dauge, “Singularities of Maxwell’s equations on polyhedral domains,” in *Analysis, numerics and applications of differential and integral equations (Stuttgart, 1996)*, vol. 379 of *Pitman Res. Notes Math. Ser.*, pp. 69–76, Harlow: Longman, 1998.
- [81] F. Ben Belgacem, C. Bernardi, M. Costabel, and M. Dauge, “Un résultat de densité pour les équations de Maxwell,” *C. R. Acad. Sci. Paris Sér. I Math.*, vol. 324, no. 6, pp. 731–736, 1997.
- [82] M. Costabel and M. Dauge, “Singularités des équations de Maxwell dans un polyèdre,” *C. R. Acad. Sci. Paris Sér. I Math.*, vol. 324, no. 9, pp. 1005–1010, 1997.
- [83] M. Costabel and M. Dauge, “Solvability of a system of integral equations for clamped plates,” in *IABEM Symposium on Boundary Integral Methods for Nonlinear Problems (Pontignano, 1995)*, pp. 41–46, Dordrecht: Kluwer Acad. Publ., 1997.
- [84] M. Costabel and M. Dauge, “On representation formulas and radiation conditions,” *Math. Methods Appl. Sci.*, vol. 20, no. 2, pp. 133–150, 1997.
- [85] M. Dauge and I. Gruais, “Asymptotics of arbitrary order for a thin elastic clamped plate. I. Optimal error estimates,” *Asymptotic Anal.*, vol. 13, no. 2, pp. 167–197, 1996.
- [86] M. Costabel and M. Dauge, “Invertibility of the biharmonic single layer potential operator,” *Integral Equations Operator Theory*, vol. 24, no. 1, pp. 46–67, 1996.
- [87] M. Dauge, “Strongly elliptic problems near cuspidal points and edges,” in *Partial differential equations and functional analysis*, vol. 22 of *Progr. Nonlinear Differential Equations Appl.*, pp. 93–110, Boston, MA: Birkhäuser Boston, 1996.
- [88] M. Costabel and M. Dauge, “A singularly perturbed mixed boundary value problem,” *Comm. Partial Differential Equations*, vol. 21, no. 11-12, pp. 1919–1949, 1996.
- [89] M. Dauge and I. Gruais, “Développement asymptotique d’ordre arbitraire pour une plaque élastique mince encastrée,” *C. R. Acad. Sci. Paris Sér. I Math.*, vol. 321, no. 3, pp. 375–380, 1995.
- [90] C. Bernardi, M. Dauge, and Y. Maday, “Interpolation of nullspaces for polynomial approximation of divergence-free functions in a cube,” in *Boundary value problems and integral equations in nonsmooth domains (Luminy, 1993)*, vol. 167 of *Lecture Notes in Pure and Appl. Math.*, pp. 27–46, New York: Dekker, 1995.
- [91] M. Costabel and M. Dauge, “Computation of corner singularities in linear elasticity,” in *Boundary value problems and integral equations in nonsmooth domains (Luminy, 1993)*, vol. 167 of *Lecture Notes in Pure and Appl. Math.*, pp. 59–68, New York: Dekker, 1995.
- [92] M. Azaïez, M. Dauge, and Y. Maday, “Méthodes spectrales et des éléments spectraux,” in *Méthodes numériques d’ordre élevé pour les ondes en régime transitoire, Chapitre IV* (G. Cohen, ed.), Collection Didactique, I.N.R.I.A., 1994.
- [93] C. Bernardi, M. Dauge, and Y. Maday, “Interpolation de noyaux d’opérateurs différentiels, application aux méthodes spectrales,” *C. R. Acad. Sci. Paris Sér. I Math.*, vol. 318, no. 4, pp. 373–378, 1994.
- [94] M. Costabel and M. Dauge, “Stable asymptotics for elliptic systems on plane domains with corners,” *Comm. Partial Differential Equations*, vol. 19, no. 9-10, pp. 1677–1726, 1994.
- [95] M. Costabel and M. Dauge, “Construction of corner singularities for Agmon-Douglis-Nirenberg elliptic systems,” *Math. Nachr.*, vol. 162, pp. 209–237, 1993.

- [96] M. Dauge and B. Helffer, “Eigenvalues variation. II. Multidimensional problems,” *J. Differential Equations*, vol. 104, no. 2, pp. 263–297, 1993.
- [97] M. Dauge and B. Helffer, “Eigenvalues variation. I. Neumann problem for Sturm-Liouville operators,” *J. Differential Equations*, vol. 104, no. 2, pp. 243–262, 1993.
- [98] M. Costabel and M. Dauge, “General edge asymptotics of solutions of second-order elliptic boundary value problems. I, II,” *Proc. Roy. Soc. Edinburgh Sect. A*, vol. 123, no. 1, pp. 109–155, 157–184, 1993.
- [99] M. Costabel and M. Dauge, “Singularités d’arêtes pour les problèmes aux limites elliptiques,” in *Journées “Équations aux Dérivées Partielles” (Saint-Jean-de-Monts, 1992)*, pp. Exp. No. IV, 12, Palaiseau: École Polytech., 1992.
- [100] C. Bernardi, M. Dauge, and Y. Maday, “Relèvements de traces préservant les polynômes,” *C. R. Acad. Sci. Paris Sér. I Math.*, vol. 315, no. 3, pp. 333–338, 1992.
- [101] M. Costabel and M. Dauge, “Edge asymptotics on a skew cylinder,” in *Symposium “Analysis on Manifolds with Singularities” (Breitenbrunn, 1990)*, vol. 131 of *Teubner-Texte Math.*, pp. 28–42, Stuttgart: Teubner, 1992.
- [102] M. Dauge, “Neumann and mixed problems on curvilinear polyhedra,” *Integral Equations Operator Theory*, vol. 15, no. 2, pp. 227–261, 1992.
- [103] M. Dauge and S. Nicaise, “Coefficients of the singularities on domains with conical points,” in *Partial differential equations, Part 1, 2 (Warsaw, 1990)*, vol. 2 of *Banach Center Publ.*, 27, Part 1, pp. 91–99, Warsaw: Polish Acad. Sci., 1992.
- [104] M. Costabel and M. Dauge, “Edge asymptotics on a skew cylinder: complex variable form,” in *Partial differential equations, Part 1, 2 (Warsaw, 1990)*, vol. 2 of *Banach Center Publ.*, 27, Part 1, pp. 81–90, Warsaw: Polish Acad. Sci., 1992.
- [105] M. Bourlard, M. Dauge, M.-S. Lubuma, and S. Nicaise, “Coefficients of the singularities for elliptic boundary value problems on domains with conical points. III. Finite element methods on polygonal domains,” *SIAM J. Numer. Anal.*, vol. 29, no. 1, pp. 136–155, 1992.
- [106] M. Costabel and M. Dauge, “Développement asymptotique le long d’une arête pour des équations elliptiques d’ordre 2 dans  $\mathbf{R}^3$ ,” *C. R. Acad. Sci. Paris Sér. I Math.*, vol. 312, no. 2, pp. 227–232, 1991.
- [107] M. Dauge, S. Nicaise, M. Bourlard, and J. M.-S. Lubuma, “Coefficients des singularités pour des problèmes aux limites elliptiques sur un domaine à points coniques. II. Quelques opérateurs particuliers,” *RAIRO Modél. Math. Anal. Numér.*, vol. 24, no. 3, pp. 343–367, 1990.
- [108] M. Dauge, S. Nicaise, M. Bourlard, and J. M.-S. Lubuma, “Coefficients des singularités pour des problèmes aux limites elliptiques sur un domaine à points coniques. I. Résultats généraux pour le problème de Dirichlet,” *RAIRO Modél. Math. Anal. Numér.*, vol. 24, no. 1, pp. 27–52, 1990.
- [109] M. Bourlard, M. Dauge, and S. Nicaise, “Error estimates on the coefficients obtained by the singular function method,” *Numer. Funct. Anal. Optim.*, vol. 10, no. 11–12, pp. 1077–1113 (1990), 1989.
- [110] M. Dauge, “Higher order oblique derivatives problems on polyhedral domains,” *Comm. Partial Differential Equations*, vol. 14, no. 8–9, pp. 1193–1227, 1989.
- [111] M. Dauge and S. Nicaise, “Oblique derivative and interface problems on polygonal domains and networks,” *Comm. Partial Differential Equations*, vol. 14, no. 8–9, pp. 1147–1192, 1989.
- [112] M. Dauge, “Problèmes mixtes pour le laplacien dans des domaines polyédraux courbes,” *C. R. Acad. Sci. Paris Sér. I Math.*, vol. 309, no. 8, pp. 553–558, 1989.
- [113] M. Dauge, “Stationary Stokes and Navier-Stokes systems on two- or three-dimensional domains with corners. I. Linearized equations,” *SIAM J. Math. Anal.*, vol. 20, no. 1, pp. 74–97, 1989.
- [114] M. Dauge and M. Pogu, “Existence et régularité de la fonction potentiel pour des écoulements subcritiques s’établissant autour d’un corps à singularité conique,” *Ann. Fac. Sci. Toulouse Math. (5)*, vol. 9, no. 2, pp. 213–242, 1988.
- [115] M. Dauge, “Problèmes de Neumann et de Dirichlet sur un polyèdre dans  $\mathbf{R}^3$ : régularité dans des espaces de Sobolev  $L_p$ ,” *C. R. Acad. Sci. Paris Sér. I Math.*, vol. 307, no. 1, pp. 27–32, 1988.
- [116] M. Dauge and J.-L. Steux, “Problème de Dirichlet pour le laplacien dans un polygone curviligne,” *J. Differential Equations*, vol. 70, no. 1, pp. 93–113, 1987.
- [117] M. Dauge, M.-S. Lubuma, and S. Nicaise, “Coefficients des singularités pour le problème de Dirichlet sur un polygone,” *C. R. Acad. Sci. Paris Sér. I Math.*, vol. 304, no. 16, pp. 483–486, 1987.
- [118] M. Dauge, “Problèmes aux limites elliptiques sur des domaines à coins: singularités aux sommets et le long des arêtes,” *C. R. Acad. Sci. Paris Sér. I Math.*, vol. 304, no. 18, pp. 563–566, 1987.

- [119] M. Dauge, “Problèmes aux limites elliptiques sur des domaines à coins: cas limite et démonstration d’un résultat de régularité,” *C. R. Acad. Sci. Paris Sér. I Math.*, vol. 304, no. 19, pp. 579–582, 1987.
- [120] M. Dauge, “Problèmes aux limites elliptiques sur des domaines à coins: régularité, indice, estimations,” *C. R. Acad. Sci. Paris Sér. I Math.*, vol. 304, no. 17, pp. 515–518, 1987.
- [121] M. Dauge and D. Robert, “Weyl’s formula for a class of pseudodifferential operators with negative order on  $L^2(\mathbf{R}^n)$ ,” in *Pseudodifferential operators (Oberwolfach, 1986)*, vol. 1256 of *Lecture Notes in Math.*, pp. 91–122, Berlin: Springer, 1987.
- [122] M. Dauge and M. Pogu, “Existence et régularité de la fonction potentiel pour les écoulements de fluides parfaits s’établissant autour de corps à singularité conique,” *C. R. Acad. Sci. Paris Sér. I Math.*, vol. 303, no. 17, pp. 865–868, 1986.
- [123] M. Dauge and D. Robert, “Formule de Weyl pour une classe d’opérateurs pseudodifférentiels d’ordre négatif sur  $L^2(\mathbf{R}^n)$ ,” in *Journées “Équations aux dérivées partielles” (Saint Jean de Monts, 1986)*, pp. No. IV, 10, Palaiseau: École Polytech., 1986.
- [124] M. Dauge and D. Robert, “Formule de Weyl pour une classe d’opérateurs pseudodifférentiels d’ordre négatif sur  $L^2(\mathbf{R}^n)$ ,” *C. R. Acad. Sci. Paris Sér. I Math.*, vol. 302, no. 5, pp. 175–178, 1986.
- [125] P. Bolley, M. Dauge, and J. Camus, “Régularité Gevrey pour le problème de Dirichlet dans des domaines à singularités coniques,” *Comm. Partial Differential Equations*, vol. 10, no. 4, pp. 391–431, 1985.
- [126] M. Dauge, “Second membre analytique pour un problème aux limites elliptique d’ordre  $2m$  sur un polygone,” *Comm. Partial Differential Equations*, vol. 9, no. 2, pp. 169–195, 1984.
- [127] M. Dauge, “Opérateur de Stokes dans des espaces de Sobolev à poids sur des domaines anguleux,” *Canad. J. Math.*, vol. 34, no. 4, pp. 853–882, 1982.
- [128] M. Brahimî and M. Dauge, “Analyticité et problèmes aux limites dans un polygone,” *C. R. Acad. Sci. Paris Sér. I Math.*, vol. 294, no. 1, pp. 9–12, 1982.