List of publications by Delio Mugnolo

Books

(B1) *Semigroup methods for evolution equations on networks*, Springer-Verlag, Berlin (in press)

Journals

(J28) *On moments-preserving cosine families and semigroups in $C[0,1]$*, J. Evol. Equations (joint with A. Bobrowski; in press; as a preprint on `arXiv:1212.4416`)

(J27) *The spectrum of the Hilbert space valued second derivative with general self-adjoint boundary conditions*, Lin. Alg. Appl. (joint with J. von Below; in press; as a preprint on `arXiv:1209.0932`)

(J26) *Construction of exact travelling waves for the Benjamin–Bona–Mahony equation on networks*, (joint with J.-F. Rault; in press; as a preprint on `arXiv:1302.2104`)

(J25) *Well-posedness and spectral properties of heat and wave equations with non-local conditions*, J. Differ. Equ. (joint with S. Nicaise; in press; as a preprint on `arXiv:1112.0415`)

(J24) *Quantum graphs with mixed dynamics: the transport/diffusion case*, J. Phys. A **46** (2013), 235202 (joint with A. Hussein)

(J23) *Parabolic theory of the discrete p-Laplace operator*, Nonlinear Analysis: Theory, Methods and Appl. **87** (2013), 33–60

(J22) *Convergence of sectorial operators on varying Hilbert spaces*, Oper. and Matrices (joint with R. Nittka, O. Post; in press; as a preprint on `arXiv:1007.3932`)

(J21) *Convergence of operator semigroups associated with generalised elliptic forms*, J. Evol. Equations **12** (2012), 593–619 (joint with R. Nittka)

(J20) *Gradient systems on networks*, Disc. Cont. Dyn. Syst. S (2011), 1078–1090 (joint with R. Pröpper)

(J19) *On the domain of a Fleming–Viot type operator on an L^p-space with invariant measure*, Note di Mat. **31** (2011), 139–148 (joint with A. Rhandi)

(J18) *Damped wave equations with dynamical boundary conditions*, J. Appl. Analysis **17** (2011), 241–275

(J17) *Properties of representations of operators acting between spaces of vector-valued functions*, Positivity **15** (2011), 135–154 (joint with R. Nittka)

(J16) *Vector-valued heat equations and networks with coupled dynamic boundary conditions*, Adv. Diff. Equations **15** (2010), 1125–1160

(J15) *Existence of strong solutions for neuronal network dynamics driven by fractional Brownian motions*, Stoch. Dyn. **10** (2010), 441–464 (joint with S. Bonaccorsi)

(J14) *Towards a gauge theory for evolution equations on vector-valued spaces*, J. Math. Phys. **50** (2009), 103520 (joint with S. Cardanobile)

(J13) *Parabolic systems with coupled boundary conditions*, J. Differ. Equ. **247** (2009), 1229–1248 (joint with S. Cardanobile)

(J12) *Well-posedness and symmetries of strongly coupled network equations*, J. Phys. A **41** (2008) 055102 (joint with S. Cardanobile, R. Nittka)

(J11) *Qualitative properties of parabolic systems of evolution equations*, Ann. Sc. Norm. Super. Pisa, Cl. Sci., V. Ser. **VII** (2008), 287–312 (joint with S. Cardanobile)

(J10) *Analysis of a FitzHugh-Nagumo-Rall model of a neuronal network*, Math. Meth. Appl. Sci. **30** (2007), 2281–2308 (joint with S. Cardanobile)

(J9) *Dynamic and generalized Wentzell node conditions for network equations*, Math. Meth. Appli. Sci. **30** (2007), 681–706 (joint with S. Romanelli)

(J8) *Gaussian estimates for a heat equation on a network*, Netw. Heter. Media **2** (2007), 55–79

(J7) *Variational and semigroup methods for waves and diffusion in networks*, Appl. Math. Optim. **55** (2007), 219–240 (joint with M. Kramar Fijavž, E. Sikolya)

(J6) *Dirichlet forms for general Wentzell boundary conditions, analytic semigroups, and cosine operator functions*, Electr. J. Diff. Eq. **118** (2006), 1–20 (joint with S. Romanelli)

(J5) *Matrix methods for wave equations*, Math. Z. **253** (2006), 667–680

(J4) *Operator matrices as generators of cosine operator functions*, Int. Eq. Oper. Theory **54** (2006), 441–464

(J3) *Abstract wave equations with acoustic boundary conditions*, Math. Nachr. **279** (2006), 299–318

(J2) *A semigroup analogue of the Fonf–Lin–Wojtaszczyk ergodic characterization of reflexive Banach spaces with a basis*, Studia Math. **164** (2004), 243–251

(J1) *Theory and applications of one-sided coupled operator matrices*, Conf. Semin. Matem. Univ. Bari **283** (2003), 1–29 (joint with M. Kramar, R. Nagel)

Refereed proceedings

(R3) *A Frucht's theorem for quantum graphs*, in: W. Arendt et al. (eds.): Spectral Theory, Mathematical System Theory, Evolution Equations, Differential and Difference Equations, Birkhäuser, Basel, 2012, 499–508

(R2) *A variational approach to damped wave equations*, in H. Amann et al. (eds.): Functional Analysis and Evolution Equations, Birkhäuser, Basel, 2008, 503–514

(R1) *Semigroups for initial boundary value problems*, in: M. Iannelli, G. Lumer (eds.): Evolution Equations 2000: Applications to Physics, Industry, Life Sciences and Economics (Proceedings Levico Terme 2000), Progress in Nonlinear Differential Equations **55**, Birkhäuser, Basel, 2003, 276–292 (joint with M. Kramar, R. Nagel)

Book contributions

(C5) *Symmetries in quantum graphs*, in W. Arendt, W. Schleich (eds.): Mathematical Analysis of Evolution, Information and Complexity, Wiley-VCH, Weinheim, 2009, 181–196 (joint with J. Bolte, S. Cardanobile, R. Nittka)

(C4) *Relating simulation and modelling of neural networks*, in W. Arendt, W. Schleich (eds.): Mathematical Analysis of Evolution, Information and Complexity, Wiley-VCH, Weinheim, 2009, 137–155 (joint with S. Cardanobile, H. Markert, G. Palm, F. Schwenkert)

(C3) *Investigation of input-output gain in dynamical systems for neural information processing*, in W. Arendt, W. Schleich (eds.): Mathematical Analysis of Evolution, Information and Complexity, Wiley-VCH, Weinheim, 2009, 379–393 (joint with S. Cardanobile, M. Cohen, S. Corchs, H. Neumann)

(C2) *Milestones of evolution, information and complexity*, in W. Arendt, W. Schleich (eds.): Mathematical Analysis of Evolution, Information and Complexity, Wiley-VCH, Weinheim, 2009, XXIII–XXIX (joint with W. Arendt, W. Schleich)

(C1) *Asymptotics of semigroups generated by operator matrices*: Ulmer Seminare über Funktionalanalysis und Differentialgleichungen **10** 2005, 299–311

Submitted

(S2) *The heat equation under linear conditions on the moments in higher dimensions* (joint with S. Nicaise; submitted to Bull. London Math. Soc.; `arXiv:1302.5529`)

(S1) *Diffusion processes on an interval under linear moment conditions* (joint with S. Nicaise; submitted to Semigroup Forum; `arXiv:1301.1522`)

Master's, doctoral and habilitation theses

(T3) *Parabolic Systems and Evolution Equations on Networks*, Habilitation thesis at the University of Ulm, Germany, 2010

(T2) *Second Order Abstract Initial-Boundary Value Problems*, Ph.D. thesis at the University of Tübingen, Germany, 2004

(T1) *Semigruppi di Operatori Non Lineari e Problemi di Cauchy Astratti*, Master's thesis at the University of Bari, Italy, 2000