Abridged Curriculum Vitae

- José Miguel Urbano; born in Coimbra, Portugal, in 1970.
- Full Professor, Department of Mathematics, University of Coimbra (since 2009). `http://www.mat.uc.pt/~jmurb`
- BS in Pure Mathematics, University of Coimbra, 1992; PhD in Mathematical Analysis, University of Lisbon, 1999; *Agregação* in Mathematics, University of Coimbra, 2005.
- Long-term visits: Ecole Polytéchnique (Paris) in 1995 and Northwestern University (Chicago) in 1999.
- Prizes: José Anastácio da Cunha (*ex aequo*, 2002), Gulbenkian Program *Estímulo à Investigação* (1998), João Farinha (1992), Gold medal in the Portuguese Mathematical Olympiad (1988).
- Corresponding Academician of the Sciences Class (Mathematics Section) of the *Lisbon Academy of Sciences*.
- Special Visiting Researcher of the Brazilian program *Science Without Borders* [2013–2015].
- Member of the *National Council for Science and Technology* (CNCT) [2012–2015], chaired by the Prime-Minister of Portugal.
- Member of the Scientific Council for the Exact Sciences and Engineering of *Fundação para a Ciência e a Tecnologia* (FCT) [2013–2016].
- Member of the Steering Committee of the Gulbenkian Program *Novos Talentos em Matemática* [2000–].
- Scientific Director of the Carnegie Mellon|Portugal ICTI Program [2014–2018].
- Member of the Advisory Board of the UTexas–Austin|Portugal CoLab Program [2014–2018].
- Director of the Centre for Mathematics of the University of Coimbra (CMUC) [2007–2011], Vice-President of the Portuguese Mathematical Society (SPM) [2006–2008], member of the Executive Board of the International Centre for Mathematics (CIM–member of ERCOM) [2004–2008], member of the Scientific Council of the *Faculdade de Ciências e Tecnologia da Universidade de Coimbra* (FCTUC) [2009–2013].
- Main research interests: Nonlinear Partial Differential Equations; Free Boundary Problems.
- Principal Investigator (PI) of five research projects evaluated by FCT [Total funding: around 900K Euros].
- Supervisor of five MS thesis, four PhD thesis and ten Post-Doctoral Fellows.
- Short courses at IMPA (Rio de Janeiro, Brazil), the University of Florence (Italy), Aalto University (Finland), the Federal University of Ceará (Fortaleza, Brazil), KAUST (Saudi Arabia) and Seoul National University (South Korea).
- Evaluator of grants and research projects for EU (Marie-Curie Fellowships), ERC (Starting Grants), the Academy of Finland, the Latvian Council of Science and FCT. Member of the editorial board of *Nonlinear Analysis: Theory, Methods & Applications* [2013–2020].
- Invited speaker in 30+ international conferences; member of several PhD committees abroad (Amiens, Bonn, Concepción, Erlangen-Nürnberg, Fortaleza, Helsinki, Jyväskylä, Pavia, Rome); 45+ research seminars.
- Co-organizer of the CIM Thematic Term *Mathematics and the Environment* (2004), the International Conference *Trends in Partial Differential Equations of Mathematical Physics* (2003), the CIM/UC Summer School *Topics in Nonlinear PDEs* (2007) and the *69th European Study Group with Industry* (2009).
- Author of one book; editor of two books; around 60 research publications.

Main Research Publications

- *The Method of Intrinsic Scaling*
  Lecture Notes in Mathematics, Vol. 1930, Springer, 2008.

- *Current issues on singular and degenerate evolution equations*
  (with E. DiBenedetto and V. Vespri)
  in: **Handbook of Differential Equations**, Evolutionary Equations, vol. 1, pp. 169–286, Elsevier, 2004.

- *Fully nonlinear integro-differential equations with deforming kernels*
  (with L.A. Caffarelli and R. Teymurazyan)
  Comm. Partial Differential Equations 45 (2020), 847–871.

- *A proof of the $C^{p'}$-regularity conjecture in the plane*
  (with D. Araújo and E.V. Teixeira)
  Adv. Math. 316 (2017), 541–553.

- *On the bulk velocity of Brownian ratchets*
  (with S. Kondratyev and D. Vorotnikov)
  SIAM J. Math. Anal. 48 (2016), 950–980.

- *Regularity for anisotropic fully nonlinear integro-differential equations*
  (with L. Caffarelli and R. Leitão)
  Math. Ann. 360 (2014), 681–714.

- *A quantitative modulus of continuity for the two-phase Stefan problem*
  (with P. Baroni and T. Kuusi)
  Arch. Rational Mech. Anal. 214 (2014), 545–573.

- *A geometric tangential approach to sharp regularity for degenerate evolution equations*
  (with E.V. Teixeira)
  Anal. PDE 7 (2014), 733–744.

- *Hölder continuity for Trudinger's equation in measure spaces*
  (with T. Kuusi, R. Laleoglu and J. Siljander)
  Calc. Var. Partial Differential Equations 45 (2012), 193–229.

- *p(x)-Harmonic functions with unbounded exponent in a subdomain*
  (with J.J. Manfredi and J.D. Rossi)
  Ann. Inst. H. Poincaré Anal. Non Linéaire 26 (2009), 2581–2595.

- *Entropy solutions for the p(x)-Laplace equation*
  (with M. Sanchón)
  Trans. Amer. Math. Soc. 361 (2009), 6387–6405.

- *On a two-sidedly degenerate chemotaxis model with volume-filling effect*
  (with M. Bendahmane and K.H. Karlsen)
  Math. Models Methods Appl. Sci. 17 (2007), 783–804.

- *On the doubly singular equation $\gamma(u)_t = \Delta_p u$*
  (with E. Henriques)
  Comm. Partial Differential Equations 30 (2005), 919–955.

- *Uniqueness for nonlinear degenerate problems*
  (with N. Igbida)
  NoDEA Nonlinear Differential Equations Appl. 10 (2003), 287–307.