Martino BARDI was born in 1956 in Trieste, got married in 1995, and adopted a son and a daughter in Brazil in 2007.

<u>Current position</u>: Full professor of Mathematical Analysis at the Department of Mathematics "Tullio Levi-Civita" of the University of Padova, Chairman of the Ph.D. Program in Mathematical Sciences of the University of Padova.

<u>Education.</u>
- Laurea in Mathematics cum laude at the University of Padova in 1979, thesis published on J. Mathematical Biology.
- C.N.R. scholarship at the University of Padova 1981-82.
- Visiting research assistant at the University of Maryland 1983-4, supervisor L.C. Evans.

<u>Earlier positions.</u>
- Researcher at the Faculty of Sciences of the University of Padova 1984-87.
- Associate professor at the Faculty of Engineering in Padova 1988-90, full professor since 1990.
- Visiting positions: CeReMaDe, Universitè Paris-Dauphine, 1987; Institute for Mathematics and Applications - Minneapolis, 1993; Ècole Normale Supèrieure - Paris, 2001; Institut Mittag-Leffler - Stockholm, 2003; Universitè de Rouen, 2003.

<u>Honors:</u>
- Isaacs Award of the International Society for Dynamic Games, 2016.
- Corresponding fellow of the Istituto Veneto di Scienze, lettere ed Arti, 2021.

<u>Scientific interests:</u> Nonlinear differential equations and applications: viscosity solutions of Hamilton-Jacobi equations; optimal control and differential games; fully nonlinear elliptic and parabolic partial differential equations; Mean-Field Games.

<u>Publications:</u> About 60 papers on international journals and 20 on books, with several collaborators such as L.C. Evans, B. Perthame, S. Osher, H. Ishii, R. Jensen, Y. Giga, Y. Achdou (the complete list is at the web page http://www.math.unipd.it/~bardi/).
MathSciNet counts 2223 citations by 1360 authors.
<u>Books and memoirs:</u>
- Bardi, M.; Crandall, M.G.; Evans, L.C.; Soner, H.M.; Souganidis, P.E.: Viscosity solutions and applications. Lecture Notes in Mathematics, 1660. Springer-Verlag, Berlin, 1997.
- Bardi, M.; Capuzzo-Dolcetta, I.: Optimal control and viscosity solutions of Hamilton-Jacobi-Bellman equations. Birkhauser, Boston, 1997. 2nd printing: Modern Birkhauser Classics, 2008.
- Bardi, M.; Parthasarathy, T.; Raghavan, T.E.S. eds.: Stochastic and differential games: theory and numerical methods, Birkhauser, Boston, 1999.
- O. Alvarez, M. Bardi: Ergodicity, stabilization, and singular perturbations for Bellman-Isaacs equations, Mem. Amer. Math. Soc. 204, 2010.
<u>A selection of 6 journal papers</u>
-M. Bardi, P. Cardaliaguet: Convergence of some Mean Field Games systems to aggregation and flocking models, Nonlinear Analysis 204 (2021), no. 112199, 24 pp.
- Y. Achdou, M. Bardi, M. Cirant: Mean Field Games models of segregation, Math. Models Methods Appl. Sci. 27 (2017), 75-113
- M. Bardi, A. Cesaroni, D. Ghilli: Large deviations for some fast stochastic volatility models by viscosity methods, Discrete Contin. Dyn. Syst. 35 (2015), 3965-3988.
- O. Alvarez, M. Bardi: Singular perturbations of nonlinear degenerate parabolic PDEs: a general convergence result, Arch. Rat. Mech. Anal. 170 (2003), 17-61
- M. Badiale, M. Bardi: Asymptotic symmetry of solutions of nonlinear partial differential equations. Comm. Pure Appl. Math. 45 (1992), 899-921
- M. Bardi, M. Falcone: An approximation scheme for the minimum time function. SIAM J. Control Optim. 28 (1990), 950-965

<u>Teaching:</u> At the Faculty of Engineering: many undergraduate courses; at the Faculty of Sciences: courses for the Master degree; at the Doctoral Schools in Mathematics of Padova (6), Pisa, and Trento, S.M.I. Summer course (Cortona 2005); at the Galilean School of Higher Education (Padova).

<u>Training of young researchers:</u> Faculty Member of the Ph.D. Program in Mathematical Sciences of this University continuously since 1989 and currently the Chairman.
- Supervisor of 11 Ph. D. students, among whom P. Soravia (1992, now prof. at Univ. Padova), F. Da Lio (1998, now titular prof. at ETH, Zurich), P. Bettiol (2002, now prof. at Univ. Brest), A. Cesaroni (2004, now prof. at Univ. Padova),
- Advisor of 8 post-docs, among whom O. Ley (2000, now prof. at Univ. Rennes), L. Rifford (2000, now prof. at Univ. Nice), and F. Dragoni (2008, now reader at the Univ. Cardiff).

<u>Scientific Committees</u> (a selection):
- International Society of Dynamic Games: Vice president 2006-08, member of the Executive Board 2004-08;
- Italian Mathematical Union, U.M.I.: member of the Scientific Committee 2006-12;
- Editorial Committee of NoDEA - Nonlinear Differential Equations and Applications, 2019-.

<u>Current Editorial Boards:</u> Communications in Pure and Applied Analysis, Numerical Functional Analysis and Optimization, Dynamic Games and Applications, Minimax Theory and its Applications, NoDEA.

<u>Principal Investigator of research projects:</u>
- Progetto di Eccellenza Fondazione Ca.Ri.Pa.Ro. "Nonlinear Partial Differential Equations: model, analysis and control-theoretic problems" 2010-2014.
- P.I. of local units of the European research projects T.M.R. Network "Viscosity solutions and applications" 1999-2003 (P.I.: P.-L. Lions), and E.S.F. Programme "Optimization with PDE Constraints" 2008-2013.
- P.I. of local unit in the International research project "Mean-Field Games and Applications" 2018-2021.
- National research projects I.N.D.A.M.-G.N.A.M.P.A. 2001, 2002, 2006, 2010.
- P.I. of local research units in 17 national research projects from 1989 until 2013.

<u>Organization of scientific meetings:</u> 13 international meetings from 1990 to 2019 and the XV Conference of the Unione Matematica Italiana (Padova 1995); member of scientific committees of conferences in the USA, Canada, Russia, Australia, France, China, Poland, Italy.

<u>Plenary invited talks at international conferences:</u> more than 50, a selection of 8:
- Newton Institute Euro Workshop "Geometric evolutions and nonlinear elliptic equations", Cambridge (UK) 2001;
- Pacific Institute for Mathematical Sciences "Canada Programme on PDEs", Vancouver 2009;
- "Mean Field Games and Related Topics," Rome 2011;
- "Dynamical Optimization in PDE and Geometry," Bordeaux 2011;
- "Mean Field Games and Related Topics - 3," Paris 2015;
- 59th Meeting of the Australian Mathematical Society, Adelaide 2015;
- "New Trends in Nonlinear PDEs", Cardiff 2016;
- "Crowds: models and control", CIRM Marseille 2019.