

CURRICULUM VITAE

Last up-date: February 1, 2019

Maurizio FALCONE

Degree	Laurea cum Laude in Mathematics Università di Roma "La Sapienza", March 3, 1978
Languages	Oral and written French and English, excellent Russian and Spanish, basic
Programming Languages	C++, FORTRAN, PASCAL, MATLAB
e-mail	falcone@mat.uniroma1.it
WEB	http://www.mat.uniroma1.it/people/falcone/home.html
tel/fax	(+39)0649913279/(+39)0644701007
Affiliations	SIAM, SIMAI, UMI

Grants and Academic Career

since 11/01	Full Professor of Numerical Analysis at Dipartimento di Matematica, University of Roma "La Sapienza"
2/88-11/01	Associate Professor of Mathematical Analysis at Dipartimento di Matematica, University of Roma "La Sapienza"
10/87-2/88	Professeur associé at University of Paris IX-Dauphine
4/85-6/85	Professeur associé at University of Paris XI-Orsay
2/83-7/83	Chargé de cours at University of Paris IX-Dauphine
7/81-2/88	Researcher at Dipartimento di Matematica, University of Roma "La Sapienza"
2/81-3/81	S.I.S.S.A. Grant, Trieste
10/79-7/81	C.N.R. Grant at Istituto Matematico "G. Castelnuovo"
2/77-2/78	Undergraduate C.N.R. Grant

MANAGING ACTIVITY

International

- 2016-2017 Secretary (elected) of the SIAM Activity Group in "Control and System Theory"
- 2014-2015 Secretary (elected) of the SIAM Activity Group in "Control and System Theory"
- 1/11-12/14 Member of the Scientific Board of the ITN Marie Curie "Sensitivity Analysis for Deterministic Controller Design" (SADCO) (WEB: <http://itn-sadco.inria.fr/>)
- 10/08-11/12 Member of the Steering Committee of the ESF Network OPTPDE "Optimal Control with PDE constraints" (WEB: <http://www.esf.org/index.php?id=5377>)
- 2006-08 Coordinator Galileo Project "Algorithms for dislocation dynamics and applications" between Roma "La Sapienza" and CERMICS (Marne La Vallée)
- 2003-05 Coordinator Galileo Project PLATONOV between Roma "La Sapienza" and IRIT (Toulouse)

Local

- 11/16-11/18 Member of the Committee for the Abilitazione Scientifica Nazionale (ASN) in Numerical Analysis (WEB: <http://abilitazione.miur.it/public/index.php>)
- 11/08-6/17 Member of the Scientific Committee of the National Group "Scientific Computing" (GNCS-INDAM) (WEB: <http://gruppi.altamatematica.it/gnacs/>)
- 10/02-10/12 Founder and Head of the Master in "Scientific Computing", University of Roma "La Sapienza" (<http://www.mat.uniroma1.it/mastercs>)
- 1/02-9/03 Head of the Undergraduate Studies in Mathematics, University of Roma "La Sapienza"
- 1/02- 9/03 Member of the Managing Board, Dipartimento di Matematica, La Sapienza
- 11/98-11/99 Member of the Managing Board, Dipartimento di Matematica, La Sapienza

- 1993-2013 Rappresentative of University of Roma "La Sapienza" in the Scientific Board of the CASPUR Consortium
(<https://www.aicanet.it/storia-informatica/calcolo-scientifico-in-italia/caspur>)
- 2/88-2/91 President of the Board for the Computing Center, Dipartimento di Matematica
- 84-87 Member of C.U.N. Panel for the Area "Mathematics"
- 85-86 Member of the Managing Board (Giunta) of Dipartimento di Matematica, La Sapienza

Evaluation and Hiring Committees

in Italy

Member of the Committee for a position of Associate Professor in ANALISI NUMERICA MAT/08 at Lecce

Member of the Committee for a position of Full Professor in ANALISI NUMERICA MAT/08 at Palermo

Member of the National Committee for the habilitation of professors in Numerical Analysis (ASN 2016-2018)

Abroad

Haut Conseil de l'évaluation de la recherche et de l'enseignement supérieur (HCERES, France)

Member of the evaluation committee for the Laboratoire de Mathématiques de Bretagne Atlantique (LMBA), at Brest and Vannes (February 2016)

Comités pour l'Habilitation a Diriger des Recherches (HDR) (France)

Prof. J.D. Durou (IRIT, Paul Sabatier, Toulouse, 2009)

Prof. H. Zidani (ENSTA, Paris, 2010)

SCIENTIFIC ACTIVITY

Main Research Topics

1. Numerical methods for PDEs. Approximation schemes for conservation laws, Hamilton-Jacobi equations and hyperbolic equations.
Applications to front propagation, fluid dynamics, control theory, homogenization and image processing.
2. Control Theory and applications. Optimal control and Hamilton-Jacobi equations: characterization of the value function, optimal controls in feedback form, differential games, pursuit-evasion games, noncooperative games

Conferences, workshops and invited talks (last 5 years)

I have been invited to give talks at the following institutions:

IFIP TC 7/2013 System Modeling and Optimization, September 8-13, 2013, European Science Foundation OPTPDE

9th International Conference on "Large Scale Scientific Computations", Sozopol, June 3-7, 2013 (plenary)

Workshop "Modeling and Control of Large Interacting Dynamical Systems", 10 - 12 September 2013, Université Paris-Dauphine, Paris, France.

New Perspectives in Shape Analysis, February 9 – 14, 2014, Dagstuhl Seminar 14072, Dagstuhl Schloss, Germania

Control Theory and Theory of Generalized Solutions of HJ Equations, Ekaterinburg, April 2015

13th Viennese Workshop on Optimal Control and Dynamic Games, May 13-16, 2015, Wien, Austria

16th Italian Meeting on Hyperbolic Equations, GSSI, October 22-24, 2015, L'Aquila (plenary)

Numerical Aspects of Hyperbolic Balance Laws and Related Problems, December 17-19, 2015, Dipartimento di Matematica, Università di Ferrara (plenary)

Optimal Control for Evolutionary PDEs and Related Topics - OCERTO - Cortona, June 20-24, 2016 (invited)

Recent Advances in Numerical Methods for Hyperbolic Conservation Laws and Nonlinear Time Dependent Partial Differential Equations, Università di Trento, November 2-4, 2016 (invited)

Numerical methods for Hamilton-Jacobi equations in optimal control

and related fields, RICAM (Linz), November 21-25, 2016 (invited)
6th International Conference on Scale Space and Variational Methods
in Computer Vision, Kölding, Danimarca, 4-8 Giugno 2017 (plenary)
One day workshop in applied mathematics, Bari, 8 Giugno 2017
(su invito)

IV Conference on Numerical Aspects of Hyperbolic Balance Laws and
Related Problems & INdAM Day Ferrara 2018, University of Ferrara 16–
20 April, 2018 (plenary)

42th South-African Numerical and Applied Mathematics
Conference (SANUM), Stellenbosch (South Africa), April 4-6, 2018
Final Workshop of the Intensive Bimester INDAM "Computational
Methods for Inverse Problems in Imaging", May-July 2018, Como

Organization of Conferences and Schools (last 5 years)

NETCO Conference "New trends in optimal control ", Tours, June 23-27,
2014, WEB: <http://netco2014.sciencesconf.org/>

Workshop "New perspectives in optimal control and games", Roma,
November 10-12, 2014, WEB:[http://www1.mat.uniroma1.it/ricerca/
convegni/2014/sadco2014](http://www1.mat.uniroma1.it/ricerca/convegni/2014/sadco2014)

Minisymposium "Stochastic Control and Applications" (with H. Zidani),
13th Viennese Workshop on Optimal Control and Dynamic Games,
May 13-16, 2015, Wien, Austria

Minisimposium MS-35 "Advanced Numerical Methods for Partial Differential
Equations and Applications", Congresso SIMAI 2016, Milano, 13-16
Settembre 2016 (con S. Perotto e G. Rozza)

Minisimposium MS-41 "Model Reduction: Methods, Algorithms, Applications",
Congresso SIMAI 2016, Milan, 13-16 Settembre 2016 (con S. Perotto
e G. Rozza)

Minisimposium **MS9 - Innovative models and algorithms for**

astronomical imaging (2 parts) inside SIAM IS 2019 (co-organizers
Silvia Tozza (INdAM/Dept. Mathematics, University of Rome "La
Sapienza"), Marco Castellano (INAF Osservatorio Astronomico di Roma),
Adriano Fontana (INAF Osservatorio Astronomico di Roma))

Minisimposium **MS57 - Recent Trends in Photometric 3D-reconstruction**
(2 parts) inside SIAM IS 2019 (co-organizers Jean-Denis Durou (IRIT,
Université de Toulouse))

Minisimposio "Model order reduction in control and optimization" inside
14th Viennese Conference on Optimal Control and Dynamic Games, 3-6
July, 2018 Wien, Austria

I have been active member of the **Organizing Committee** of the following conferences (last 5 years):

Conference "New Horizons in Optimal Control", Cascais, September 8-10, 2014, WEB:<http://paginas.fe.up.pt/~mrpinho/NHOC2014/>
Imagine Math 6, Convegno Internazionale con circa 200 partecipanti, Istituto Veneto di Scienze, Lettere ed Arti, Venezia,
31/03/2017- 02/04/2017

19th International Conference on Finite Elements in Flow Problems, FEF 2017 , La Sapienza, Roma, 5-7 Aprile 2017

Mean Field Games and related topics, La Sapienza, Roma,
14-16 Giugno 2017

WEB: <http://www1.mat.uniroma1.it/ricerca/convegni/2017/mfg2017/>
Numerical Methods for optimal control problems: algorithm, analysis and applications, INDAM, Roma, 19-23 Giugno 2017

WEB: <http://www1.mat.uniroma1.it/ricerca/convegni/2017/numoc2017/>
SIAM Control Theory 2017, Convegno Internazionale, Pittsburg, USA,
July 10-12, 2017

SIAM Conference on Imaging Sciences 2019, Bologna,
June 5-8, 2018

17th IFAC Workshop on Control Applications of Optimization
Yekaterinburg, Russia, October 15–19, 2018

Intensive Bimester Computational Methods for Inverse problems in Imaging, Final Workshop, July 16-18, 2018, Como (plenary)

EDITORIAL ACTIVITIES FOR SCIENTIFIC JOURNALS

As Editor

Editor for international journals

Associate Editor of the Journal of Dynamic Games and Applications, Springer Verlag (WEB: <http://www.springer.com/mathematics/applications/journal/13235>)

Member of the Scientific Board of the Springer Series

Static & Dynamic Game Theory: Foundations & Applications WEB: <http://www.springer.com/series/10200>

Associate Editor for Special Issues in Journals

Invited associate editor for two special issues of Applied Numerical Mathematics

Invited Associate editor for a special issue of Dynamic Games and Applications on Numerical Methods in Dynamic Games, vol 7 (4), December 2017

Invited Associate editor for one special issue of CAIM <http://caim.simai.eu/index.php/caim> (2016)

Invited Associate editor for a special issue of Computer and Mathematics with Applications (2018, ongoing)

(<https://www.journals.elsevier.com/computers-and-mathematics-with-applications/>)

CONSULTING ACTIVITY FOR RESEARCH AGENCIES

I have given advice on several research proposals submitted to the following agencies:

CNR, Italy
MIUR, Italy
PRIN, Italy
NSF, USA
ISF, Israel
NSF, Canada
NSF, Netherland
AFORS, USA
NSF, Switzeland
NSF, Portugal

SCIENTIFIC PUBLICATIONS

Books

1. I. Capuzzo Dolcetta- M. Falcone, L'analisi al calcolatore, Zanichelli, 1990, ISBN 8808039048
2. M. Falcone, R. Ferretti, Semi-Lagrangian Approximation Schemes for Linear and Hamilton-Jacobi Equations, SIAM, 2014 (319pp)

Articles on international journals and volumes (with referees)

1. M. Falcone, A. Siconolfi
Maximum descent monotone solutions of an ODE with discontinuous right-hand side,
Journal of Optimization Theory and Applications, 39 (3), 1983, 391-402
2. M. Falcone, M. Matzeu
Optimal stopping for a Cauchy problem without uniqueness,
Control and Cybernetics, 12 (3-4), 1983, 85-97
3. M. Falcone, G. Israel
Qualitative and numerical analysis of a class of prey-predators models,
Acta Applicandae Mathematicae, 4, 1985, 225-258
4. M. Falcone
Approximate viscosity solutions of the Hamilton-Jacobi equation,
Methods of Operations Research, 49, 1985, 507-521
- 5a. M. Falcone
A numerical approach to the infinite horizon problem of deterministic control theory,
Applied Mathematics and Optimization, 15, 1987, 1-13

- 5b. M. Falcone
Corrigenda: A numerical approach to the infinite horizon problem of deterministic control theory,
Applied Mathematics and Optimization, 23, 1991, 213-214
6. M. Falcone, P. Saint-Pierre
Slow and quasi-slow solutions of differential inclusions,
Non-linear Analysis TMA, 11, 3, 1987, 367-377
SCOPUS: 2-s2.0-38249038000
7. I. Capuzzo Dolcetta, M. Falcone
Discrete dynamic programming and viscosity solutions,
Annales de l'Institut Henry Poincaré- Analyse non-lineaire, 6
(supplement),
1989, 161-184
8. M. Bardi, M. Falcone
An approximation scheme for the minimum time function,
SIAM Journal of Control and Optimization, 28 , 4, 1990, 950-965
9. M. Falcone, T. Giorgi e P. Loreti
Level sets of viscosity solutions and applications
SIAM J. Appl. Math., 54 (1994), 1335-1354
10. M. Bardi, M. Falcone
Discrete approximation of the minimal time function for systems with regular optimal trajectories,
in A. Bensoussan, J.L. Lions (eds.), Analysis and Optimization of Systems, Lecture Notes in Control and Information Sciences, n. 144,
Springer-Verlag, 1990, 103-112
11. L. Corrias, M. Falcone e R. Natalini
Numerical schemes for Conservation Laws via Hamilton-Jacobi equations
Mathematics of Computation, 64 (1995), 555-580
12. M. Bardi, M. Falcone e P. Soravia
Fully discrete schemes for the value function of pursuit-evasion games,
Advances in Dynamic Games and Applications, T. Basar and A. Haurie eds. , Birkhäuser, (1994), 89-105.

13. F. Camilli e M. Falcone
An approximation scheme for the optimal control of diffusion processes,
Mathematical Modelling and Numerical Analysis , 29, 1, 1995, 97-122
14. M. Falcone
The minimum time problem and its applications to front propagation in A. Visintin e G. Buttazzo (eds) , "Motion by mean curvature and related topics", De Gruyter Verlag, Berlino, 1994
15. M. Falcone, R. Ferretti
Discrete time high-order schemes for viscosity solutions of Hamilton-Jacobi-Bellman equations,
Numerische Mathematik, 67 (1994), 315-344
16. M. Falcone, P. Lanucara e A. Seghini
A splitting algorithm for Hamilton-Jacobi-Bellman equations
Applied Numerical Mathematics, 15 (1994), 207-218
17. F. Camilli, M. Falcone
Approximation of optimal control problems with state constraints: estimates and applications,
B.S. Mordukhovic, H.J. Sussman eds., "Nonsmooth analysis and geometric methods in deterministic optimal control",
IMA Volumes in Applied Mathematics 78, Springer Verlag, 1996, 23-57
18. F. Camilli, M. Falcone, P. Lanucara e A. Seghini, A domain decomposition method for Bellman equations, in D.E. Keyes and J.Xu (eds), Domain Decomposition methods in Scientific and Engineering Computing, Contemporary Mathematics n.180, AMS, 1994, 477-483
19. M. Falcone, R. Ferretti
Convergence analysis for a class of high-order semi-lagrangian advection schemes,
SIAM J. Numerical Analysis 35 (1998), no. 3, 909--940
20. M. Bardi, S. Bottacin, M. Falcone
Convergence of discrete schemes for discontinuous value functions of pursuit-evasion games, in G.J. Olsder (ed.), "New Trends in Dynamic Games and Applications", Birkhäuser, (1995), 273-304.

21. M. Falcone, T. Giorgi
An approximation scheme for evolutive Hamilton-Jacobi equations,
in W.M. McEneaney, G. Yin and Q. Zhang (eds.),
"Stochastic Analysis, Control, Optimization and Applications: A Volume
in Honor of W.H. Fleming", Birkhäuser, 1999, 289-303.
22. M. Falcone, R. Rosace
Discrete- time approximation of optimal control problems for
delayed equations,
Control & Cybernetics, 25 (1996), 665-675
23. F. Camilli, M. Falcone
Approximation of control problems involving ordinary and impulsive
controls
Control, Optimisation and Calculus of Variation, 4 (1999), 159-176.
24. F. Camilli, M. Falcone
Analysis and approximation of the infinite horizon problem with
impulsive controls
Avtomatika i Telemekanika, 7, 1997, 169-184.
25. A. Briani, M. Falcone
A priori estimates for the approximation of a parabolic boundary
control problem,
in W. Desch, F. Kappel, K. Kunisch, eds., "Control and Estimation of
Distributed Parameter Systems", International Series of Numerical
Mathematics, vol.126, Birkhäuser Verlag, Berlin, 1998, 49-65.
26. M. Falcone
Numerical solution of dynamic programming equations,
Appendice del libro M. Bardi, I. Capuzzo Dolcetta, "Optimal control
and viscosity solutions of Hamilton-Jacobi-Bellman equations",
Birkhäuser, Boston, 1997, 471-504.
27. M. Bardi, M. Falcone, P. Soravia
Numerical methods for pursuit-evasion games via viscosity solutions,
Dipartimento di Matematica, in M. Bardi, T. Parthasarathy e T.E.S.
Raghavan (eds.) "Stochastic and differential games: theory and
numerical methods", Annals of the I.S.D.G., 4, Birkhäuser, 1999,
289-303.

28. M. Falcone
Some remarks on the synthesis of feedback controls via numerical methods,
J.L. Menaldi, E. Rofman, A. Sulem (eds), "Optimal Control and Partial Differential Equations", IOS Press, 2001, 456-465.
29. M. Falcone, R. Ferretti, T. Manfroni
Optimal discretization steps in semi-Lagrangian approximation of first order PDEs,
M. Falcone, Ch. Makridakis (eds), "Numerical Methods for Viscosity Solutions and Applications", World Scientific, Singapore, 2001.
30. M. Falcone, P. Lanucara, M. Marinucci
Parallel Algorithms for the Isaacs equation, in E. Altman and O. Pourtallier (eds), "Advances in Dynamic Games and Applications", Annals of the ISDG, vol. 6, 2001, Birkhauser, 203-223
31. M. Falcone, O. Lopez-Pouso,
Analysis and comparison of two approximation schemes for the radiative transfer system,
Math. Mod. Meth. Appl. Sc. 13 (2003), n. 2, 159-186.
32. M. Falcone, R. Ferretti
Semi-Lagrangian schemes for Hamilton-Jacobi equations, discrete representation formulae and Godunov methods,
Journal of Computational Physics, 175, (2002), 559-575.
33. M. Falcone, P. Stefani
Advances on Parallel Algorithms for the Isaacs equation,
Advances in dynamic games, 515–544, Ann. Internat. Soc. Dynam. Games, 7, Birkhäuser, Boston, 2005.
34. M. Falcone, M. Sagona and A. Seghini,
A global algorithm for the Shape-from-Shading problem with black shadows,
in F. Brezzi, A. Buffa, S. Corsaro, A. Murli (eds), "Numerical Mathematics and Advanced Applications - ENUMATH 2001", Springer-Verlag, 2003, 503-512.

35. M. Falcone, R. Ferretti
Consistency of a large time--step scheme for mean curvature motion,
in F. Brezzi, A. Buffa, S. Corsaro, A. Murli (eds), "Numerical
Mathematics and Advanced Applications- ENUMATH 2001",
Springer-Verlag, 2003, 495-502.
36. E. Carlini, M. Falcone e R. Ferretti,
An efficient algorithm for Hamilton-Jacobi equations in high
dimensions,
Computing and Visualization in Science, 7 (2004), 15-29.
37. J.D. Durou, M. Falcone e M. Sagona
Numerical Methods for Shape from Shading: a new survey with
benchmarks
Computer Vision and Image Understanding, Elsevier,
vol. 109, n. 1 (2008), p. 22-43.
38. M. Falcone
Numerical Methods for Differential Games via PDEs
International Game Theory Review, vol. 8, 2 (2006), 231-272.
39. M. Falcone, S. Finzi Vita
A finite difference approximation of a two-layers system for growing
sandpile
SIAM J. Scientific Computing, Vol. 28, No. 3 (2006), 1120–1132.
40. E. Carlini, M. Falcone e R. Ferretti
A semi-Lagrangian scheme for the curve shortening flow in
co-dimension 2
Journal of Computational Physics, vol. 225, n. 3 (2007), 1388-1408
41. E. Cristiani, M. Falcone
Fast semi-Lagrangian schemes for the eikonal equation and
applications
SIAM J. Num. Anal., vol. 45, n. 5 (2007), 1979-2011.
42. E. Cristiani, M. Falcone
A fully-discrete scheme for the value function of differential games
with state constraints,
Annals of Dynamic Games, vol. 10 (2009), 179-210
Special issue "Advances in Dynamic Games and Their Applications:

Analytical and Numerical Developments", P. Bernhard, V. Gaitsgory, and O.Pourtallier (eds),

43. E. Carlini, M. Falcone, N. Forcadel, R. Monneau
Convergence of a generalized fast marching method for a non-convex eikonal equation,
SIAM J. Numer. Anal. 46 (2008), 2920-2952.
44. E. Cristiani, M. Falcone,
A characteristics driven Fast Marching method for the eikonal equation,
in K. Kunisch, G. Of, O. Steinbach (eds.),
Numerical Mathematics and Advanced Applications (Proceedings of ENUMATH 2007, Graz, Austria, September 10-14, 2007), 695-702,
Springer, Berlin Heidelberg, 2008, 695-702.
45. M. Falcone, S. Finzi Vita,
A semi-Lagrangian scheme for the open table problem in granular matter theory,
in K. Kunisch, G. Of, O. Steinbach (eds.),
Numerical Mathematics and Advanced Applications
(Proceedings of ENUMATH 2007, Graz, Austria, September 10-14, 2007), Springer, Berlin Heidelberg, 2008, 711-718.
- 46.. M. Falcone, M. Rorro,
On a variational approximation of the effective Hamiltonian,
in K. Kunisch, G. Of, O. Steinbach (eds.),
Numerical Mathematics and Advanced Applications
(Proceedings of ENUMATH 2007, Graz, Austria, September 10-14, 2007), Springer Berlin Heidelberg, 2008, 719-726.
47. M. Falcone, C. Truini
A level-set algorithm for front propagation in the presence of obstacles, *Rendiconti di Matematica e delle sue Applicazioni*, vol. 29 (2009), 1-19
48. M. Falcone, M. Rorro,
Optimization techniques for the computation of the effective Hamiltonian,
M. Diehl, F. Glineur, E. Jarlebring and W. Michiels (eds.), "Recent Advances in Optimization and its Applications in Engineering" -
Proceedings of the 14th Belgian-French-German Conference on

Optimization, (Leuven, September 2009), Springer, 2010, 225-236

49. M. Falcone, M. Rorro,
On the computation of the effective Hamiltonian in the non convex case, Trudy Instituta Matematiki i Mekhaniki UrO RAN, 2010, v. 16, no.5, 253-260.
50. M. Breuss, E. Cristiani, J.-D. Durou, M. Falcone, O. Vogel,
Numerical algorithms for Perspective Shape from Shading, Kybernetika, vol. 46 (2010), 207-225.
51. E. Carlini, M. Falcone, R. Ferretti
Convergence of a large time-step scheme for mean curvature motion, Interfaces and Free Boundaries, vol. 12 (2010), 409-441.
52. M. Breuss, E. Cristiani, J.-D. Durou, M. Falcone, O. Vogel
Perspective Shape from Shading: ambiguity analysis and numerical approximations, SIAM J. Imaging Sci., 5 (2012), 311-342.
53. S. Cacace, E. Cristiani, M. Falcone, A. Picarelli
A patchy dynamic programming scheme for a class of Hamilton-Jacobi-Bellman equations, SIAM Journal on Scientific Computing, 34 (2012), 2625–2649.
54. Y. Achdou, M. Falcone
A numerical scheme for mean curvature motion with nonlinear Neumann conditions, Interfaces and Free Boundaries 14 (2012), 455-485
55. E. Carlini, M. Falcone, Ph. Hoch
A Generalized Fast Marching Method on Unstructured Triangular Meshes,
SIAM J. Numerical Analysis, 51(6) (2013), 2999-3035.
56. M. Falcone, R. Mecca
Uniqueness and approximation of a Photometric Shape-from-Shading model, SIAM Journal on Imaging Sciences, 6 (1) (2013), 616-659.
57. M. Falcone, S. Finzi Vita, T. Giorgi, R. Smits
A Semi-Lagrangian Scheme for the Game p-Laplacian via p-averaging,
Applied Numerical Mathematics, 73 (2013), 63-80.

58. A. Alla, M. Falcone, D. Kalise
An Efficient Policy Iteration Algorithm for Dynamic Programming Equations, PAMM · Proc. Appl. Math. Mech. 13 (2013), 467 – 468
59. A. Alla, M. Falcone, D. Kalise
An Efficient Policy Iteration Algorithm for Dynamic Programming Equations, SIAM J. Sci. Comp., 37 (2015), n.1, 181–200.
59. A. Festa, M. Falcone
An approximation scheme for an eikonal equation with discontinuous coefficients, SIAM J. Num. Anal., 52 (2014), 236-257
60. S. Cacace, E. Cristiani. M. Falcone
Can local single pass methods solve any Hamilton-Jacobi-Bellman equation?,
SIAM Journal on Scientific Computing, 36 (2014), 570-587.
61. S. Cacace, E. Cristiani. M. Falcone,
Numerical approximation of Nash equilibria for a class of non-cooperative differential games
in L. Petrosjan e V. V. Mazalov (eds), Game Theory and Applications, vol. 16 (Chapter 4: pages 45-58), Nova Publishers, New York, 2013
62. S. Cacace, E. Cristiani. M. Falcone:
A local ordered upwind method for Hamilton-Jacobi and Isaacs equations
in Proceedings of 18th IFAC World Congress 2011.
IFAC Proceedings Volumes (IFAC-PapersOnline), 18 (2011), PART 1, 6800-6805
63. E. Carlini, M. Falcone, A. Festa
A brief survey on semi-Lagrangian schemes for Image Processing
in M. Breuss, A. Bruckstein, P. Maragos "Innovations for Shape Analysis: Models and Algorithms", Proceedings of Dagstuhl Seminar 11142, Springer Verlag, 2013, pp. 191-218.

64. A. Alla, M. Falcone.
An adaptive POD approximation method for the control of advection-diffusion equations, in Karl Kunisch, Kristian Bredies, Christian Clason and Gregory Von Winckel (eds.), "Control and Optimization with PDE Constraints", International Series of Numerical Mathematics, Birkhäuser, Basel, 2013, pp.1-18
65. A. Alla, M. Falcone.
A time -adaptive POD method for optimal control problems, in Y. Le Gorrec (eds.), Proceedings of the 1st IFAC Workshop on Control of Systems Governed by Partial Differential Equations (CPDE 2013), Curran Associates Inc., 2014 pp. -1-6
66. S. Bhattacharya, T. Basar, M. Falcone
Surveillance for Security as a Pursuit-Evasion Game, in R. Poovendran, W. Saad (eds), Decision and Game Theory for Security, GAMESEC 2014, Lecture Notes in Computer Science, LNCS XXX, 2014, pp. 370-379
67. M. Falcone
Recent results in the approximation of nonlinear optimal control problems, in I. Lirkov, S. Margenov, J. Wasniewski (eds.), Large Scale Scientific Computing, LNCS 8353, Springer Verlag, 2014, pp. 15-32
68. M. Falcone, M. Verani
Recent results in Shape Optimization and Optimal Control for PDEs, in R. Hoppe (ed.), Optimization with PDE constraints, Lecture Notes in Computational Science and Engineering, Vol. 101 Springer Verlag, 2014, pp. 65-94
69. M. Falcone
Optimal control and the Dynamic Programming Principle in J. Baillieul, T. Samad (eds), Encyclopedia of Systems and Control, Springer Verlag, 2015
ISBN 978-1-4471-5057-2
70. A. Alla, A. M. Falcone, M. D. Kalise
An accelerated value/policy iteration scheme for optimal control problems and games
Lecture Notes in Computational Science and Engineering,

103 (2015), 489-497,

70. A. Festa, M. Falcone
L¹ convergence of a SL scheme for the eikonal equation with discontinuous coefficients,
in F. Ancona, A. Bressan, P. Marcati, A. Marson (eds), Hyperbolic problems: theory, numerics, applications, AIMS on Applied Mathematics, vol. 8, 2014, pp. 559-566
71. O. Bokanowski, M. Falcone, R. Ferretti, L. Grüne, D. Kalise, H. Zidani
Value iteration convergence of ε -monotone schemes for stationary Hamilton- Jacobi equations, Discrete and Continuous Dynamical Systems - Series A, 35 (9), 2015, pp. 4041-4070.
72. S. Cacace, M. Falcone
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