

Enrico Bertolazzi

List of Publications by Year in descending order

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68
papers

1,460
citations

393982
19
h-index

344852
36
g-index

69
all docs

69
docs citations

69
times ranked

991
citing authors

#	ARTICLE	IF	CITATIONS
1	Symbolic–Numeric Indirect Method for Solving Optimal Control Problems for Large Multibody Systems. Multibody System Dynamics, 2005, 13, 233-252.	1.7	128
2	Symbolic-numeric efficient solution of optimal control problems for multibody systems. Journal of Computational and Applied Mathematics, 2006, 185, 404-421.	1.1	120
3	real-time motion planning for multibody systems. Multibody System Dynamics, 2007, 17, 119-139.	1.7	116
4	A Second-Order Maximum Principle Preserving Finite Volume Method for Steady Convection-Diffusion Problems. SIAM Journal on Numerical Analysis, 2005, 43, 2172-2199.	1.1	86
5	Supporting Drivers in Keeping Safe Speed and Safe Distance: The SASPENCE Subproject Within the European Framework Programme 6 Integrating Project PREVENT. IEEE Transactions on Intelligent Transportation Systems, 2010, 11, 525-538.	4.7	78
6	ON VERTEX RECONSTRUCTIONS FOR CELL-CENTERED FINITE VOLUME APPROXIMATIONS OF 2D ANISOTROPIC DIFFUSION PROBLEMS. Mathematical Models and Methods in Applied Sciences, 2007, 17, 1-32.	1.7	66
7	G^1 fitting with clothoids. Mathematical Methods in the Applied Sciences, 2015, 38, 881-897.	1.2	59
8	A CELL-CENTERED SECOND-ORDER ACCURATE FINITE VOLUME METHOD FOR CONVECTION–DIFFUSION PROBLEMS ON UNSTRUCTURED MESHES. Mathematical Models and Methods in Applied Sciences, 2004, 14, 1235-1260.	1.7	58
9	Artificial Co-Drivers as a Universal Enabling Technology for Future Intelligent Vehicles and Transportation Systems. IEEE Transactions on Intelligent Transportation Systems, 2015, 16, 244-263.	4.7	58
10	Notes on Numerical Methods for Solving Optimal Control Problems. IEEJ Journal of Industry Applications, 2016, 5, 154-166.	0.9	58
11	Comparison of direct and indirect methods for minimum lap time optimal control problems. Vehicle System Dynamics, 2019, 57, 665-696.	2.2	52
12	Combining safety margins and user preferences into a driving criterion for optimal control-based computation of reference maneuvers for an ADAS of the next generation. , 2005, , .		47
13	A Holistic Approach to the Integration of Safety Applications: The INSAFES Subproject Within the European Framework Programme 6 Integrating Project PREVENT. IEEE Transactions on Intelligent Transportation Systems, 2010, 11, 554-566.	4.7	45
14	Semi-analytical minimum time solutions with velocity constraints for trajectory following of vehicles. Automatica, 2017, 86, 18-28.	3.0	35
15	On the Hermite Interpolation Problem with clothoids. Journal of Computational and Applied Mathematics, 2018, 341, 99-116.		
16	Feed-rate and trajectory optimization for CNC machine tools. Robotics and Computer-Integrated Manufacturing, 2014, 30, 667-677.	6.1	31
17	Autonomous pallet localization and picking for industrial forklifts: a robust range and look method. Measurement Science and Technology, 2011, 22, 085502.	1.4	30
18	Path planning maximising human comfort for assistive robots. , 2016, , .		27

#	ARTICLE	IF	CITATIONS
19	Interpolating clothoid splines with curvature continuity. Mathematical Methods in the Applied Sciences, 2018, 41, 1723-1737.	1.2	26
20	Construction of a Finite Element Basis of the First de Rham Cohomology Group and Numerical Solution of 3D Magnetostatic Problems. SIAM Journal on Numerical Analysis, 2013, 51, 2380-2402.	1.1	25
21	Algorithm 817: P2MESH. ACM Transactions on Mathematical Software, 2002, 28, 101-132.	1.6	24
22	Semianalytical minimum-time solution for the optimal control of a vehicle subject to limited acceleration. Optimal Control Applications and Methods, 2018, 39, 774-791.	1.3	18
23	DISCRETE CONSERVATION AND DISCRETE MAXIMUM PRINCIPLE FOR ELLIPTIC PDEs. Mathematical Models and Methods in Applied Sciences, 1998, 08, 685-711.	1.7	16
24	A unified treatment of boundary conditions in least-square based finite-volume methods. Computers and Mathematics With Applications, 2005, 49, 1755-1765.	1.4	14
25	Semi-analytical minimum time solutions for a vehicle following clothoid-based trajectory subject to velocity constraints. , 2016, , .		14
26	Trajectory planning for car-like vehicles: A modular approach. , 2016, , .		14
27	Positive and conservative schemes for mass action kinetics. Computers and Mathematics With Applications, 1996, 32, 29-43.	1.4	12
28	Limiting strategies for polynomial reconstructions in the finite volume approximation of the linear advection equation. Applied Numerical Mathematics, 2004, 49, 277-289.	1.2	11
29	Least square-based finite volumes for solving the advection-diffusion of contaminants in porous media. Applied Numerical Mathematics, 2004, 51, 451-461.	1.2	11
30	Point data reconstruction and smoothing using cubic splines and clusterization. Mathematics and Computers in Simulation, 2020, 176, 36-56.	2.4	11
31	Finite element simulation of eddy current problems using magnetic scalar potentials. Journal of Computational Physics, 2015, 294, 503-523.	1.9	9
32	Efficient Re-planning for Robotic Cars. , 2018, , .		9
33	A Note on Robust Biarc Computation. Computer-Aided Design and Applications, 2019, 16, 822-835.	0.4	9
34	A Triangle-Based Unstructured Finite-Volume Method for Chemically Reactive Hypersonic Flows. Journal of Computational Physics, 2001, 166, 84-115.	1.9	8
35	A finite volume method for transport of contaminants in porous media. Applied Numerical Mathematics, 2004, 49, 291-305.	1.2	7
36	State-of-the art concepts and future directions in modelling oxygen consumption and lactate concentration in cycling exercise. Sport Sciences for Health, 2019, 15, 295-310.	0.4	7

#	ARTICLE	IF	CITATIONS
37	Efficient intersection between splines of clothoids. Mathematics and Computers in Simulation, 2020, 176, 57-72.	2.4	7
38	A combination formula of Michaelis-Menten-Monod type. Computers and Mathematics With Applications, 2005, 50, 201-215.	1.4	6
39	Pallet Pose Estimation with LIDAR and Vision for Autonomous Forklifts. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 612-617.	0.4	6
40	Development of a reduced size unmanned car. , 2008, , .		5
41	Numerical processing of thin-film thermometer data for determining transient heat fluxes. Applied Mathematical Modelling, 2012, 36, 3645-3662.	2.2	5
42	Preconditioning Complex Symmetric Linear Systems. Mathematical Problems in Engineering, 2015, 2015, 1-20.	0.6	5
43	Cooperative Safety Applications for C-ITS Equipped and Non-equipped Vehicles Supported by an Extended Local Dynamic Map built on SAFE STRIP Technology. , 2019, , .		5
44	A finite volume scheme for two-dimensional chemically reactive hypersonic flow. International Journal of Numerical Methods for Heat and Fluid Flow, 1998, 8, 888-933.	1.6	4
45	Finite volume modelling of free surface draining vortices. Journal of Computational and Applied Mathematics, 1999, 103, 175-185.	1.1	4
46	Fast matrix decomposition in $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si36.gif" display="inline" overflow="scroll"} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi mathvariant="double-struck"} \rangle F \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 2 \langle \text{mml:mn} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:math} \rangle$. Journal of Computational and Applied Mathematics, 2014, 260, 519-532.	1.1	4
47	Efficient Construction of 2-Chains with a Prescribed Boundary. SIAM Journal on Numerical Analysis, 2017, 55, 1159-1187.	1.1	4
48	DIMEX Runge-Kutta finite volume methods for multidimensional hyperbolic systems. Mathematics and Computers in Simulation, 2007, 75, 141-160.	2.4	3
49	A Web Based "Virtual Racing Car Championship" to Teach Vehicle Dynamics and Multidisciplinary Design. , 2011, , .		3
50	Point-Clothoid Distance and Projection Computation. SIAM Journal of Scientific Computing, 2019, 41, A3326-A3353.	1.3	3
51	Interpolating Splines of Biarcs from a Sequence of Planar Points. Computer-Aided Design and Applications, 2020, 18, 66-85.	0.4	3
52	Acme: A small 3D geometry library. SoftwareX, 2021, 16, 100845.	1.2	3
53	On-Line power management optimization of a hybrid electric vehicle with Non linear MPC and battery re-charge equivalent cost. , 2016, , .		2
54	On the Distance between a Point and a Clothoid Curve. , 2018, , .		2

55	Structure Exploitation in an Interior-Point Method for Fully Discretized, State Constrained Optimal Control Problems. Vietnam Journal of Mathematics, 2018, 46, 1089-1113.	0.4	2
56	Development and Testing of an Autonomous Driving Module for Critical Driving Conditions. , 2008, , .		2
57	Monte Carlo-based 3D surface point cloud volume estimation by exploding local cubes faces. Acta IMEKO (2012), 2022, 11, 1.	0.4	2
58	FAST, POSITIVE AND CONSERVATIVE SCHEME FOR CHEMICALLY REACTIVE HYPERSONIC FLOW. International Journal of Numerical Methods for Heat and Fluid Flow, 1993, 3, 379-398.	1.6	1
59	A mixed finite element solver for liquid-liquid impacts. Communications in Numerical Methods in Engineering, 2004, 20, 595-606.	1.3	1
60	A New Direct Deformation Measurement System to Enhance Positioning Accuracy of Machine Tools. , 2006, , 51.		1
61	Curve warning driver support systems. A sensitivity analysis to errors in the estimation of car velocity. , 2010, , .		1
62	Optimal control of a laser source to generate a minimum time trajectory of a droplet in a liquid layer. , 2016, , .		1
63	Necessary and sufficient stability conditions for equilibria of linear SISO feedbacks with a play operator**Work supported in part by ANR under project LimCoS, contract number 12 BS03 005 01 and by the University of Trento, grant OptHySYS.. IFAC-PapersOnLine, 2016, 49, 211-216.	0.5	1
64	Computer modeling of liquidâ€“solid impacts. Mathematical and Computer Modelling, 2007, 45, 162-176.	2.0	0
65	Integration of optimal maneuver prediction in active safety control systems: considerations on driving safety improvements. , 2010, , .		0
66	Efficient construction of 2-chains representing a basis of $H_2(\hat{\mathbb{C}}^n, \hat{\mathbb{C}}; \mathcal{H}_\infty)$. \$H_{\{2\}}(\overline{\Omega}, \partial \Omega)\$ Tj ETQq0 0 0 rgBT /Ov	0.81	0
67	Optimal Synthesis, Verification and Identification of a High-Performance Inertial Isolation System. , 2006, , .		0