

Bernard Bayle

List of Publications by Year in descending order

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77
papers

1,268
citations

623188

14
h-index

433756

31
g-index

83
all docs

83
docs citations

83
times ranked

1205
citing authors

#	ARTICLE	IF	CITATIONS
1	Soft Robots Manufacturing: A Review. <i>Frontiers in Robotics and AI</i> , 2018, 5, 84.	2.0	201
2	Modeling and Evaluation of Low-Cost Force Sensors. <i>IEEE Transactions on Robotics</i> , 2011, 27, 815-822.	7.3	77
3	In Vivo Model Estimation and Haptic Characterization of Needle Insertions. <i>International Journal of Robotics Research</i> , 2007, 26, 1283-1301.	5.8	63
4	A Patient-Mounted Robotic Platform for CT-Scan Guided Procedures. <i>IEEE Transactions on Biomedical Engineering</i> , 2008, 55, 2417-2425.	2.5	62
5	Manipulability analysis for mobile manipulators. , 0, , .		56
6	Needle insertions modeling: Identifiability and limitations. <i>Biomedical Signal Processing and Control</i> , 2007, 2, 191-198.	3.5	53
7	Kinematic modeling of a 5-DOF parallel mechanism for semi-spherical workspace. <i>Mechanism and Machine Theory</i> , 2009, 44, 1485-1496.	2.7	49
8	Nonholonomic Mobile Manipulators: Kinematics, Velocities and Redundancies. <i>Journal of Intelligent and Robotic Systems: Theory and Applications</i> , 2003, 36, 45-63.	2.0	43
9	A Force Feedback Teleoperated Needle Insertion Device for Percutaneous Procedures. <i>International Journal of Robotics Research</i> , 2009, 28, 1154-1168.	5.8	43
10	Design and Evaluation of a Robotic System for Transcranial Magnetic Stimulation. <i>IEEE Transactions on Biomedical Engineering</i> , 2012, 59, 805-815.	2.5	37
11	Percutaneous extra-spinal cementoplasty in patients with cancer: A systematic review of procedural details and clinical outcomes. <i>Diagnostic and Interventional Imaging</i> , 2019, 100, 743-752.	1.8	34
12	A new robotic system for CT-guided percutaneous procedures with haptic feedback. <i>International Congress Series</i> , 2004, 1268, 515-520.	0.2	27
13	Nonlinear modeling of low cost force sensors. , 2008, , .		25
14	Design considerations for a novel MRI compatible manipulator for prostate cryoablation. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2011, 6, 811-819.	1.7	22
15	Model Predictive Impedance Control. , 2020, , .		20
16	A task-based type synthesis of novel 2T2R parallel mechanisms. <i>Mechanism and Machine Theory</i> , 2014, 77, 59-72.	2.7	19
17	A robotic system for automated image-guided transcranial magnetic stimulation. , 2007, , .		17
18	A custom robot for Transcranial Magnetic Stimulation: First assessment on healthy subjects. , 2013, 2013, 5352-5.		17

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19	Kinematic control of wheeled mobile manipulators. , 0, , .		15
20	A Parallel Robotic System with Force Sensors for Percutaneous Procedures Under CT-Guidance. Lecture Notes in Computer Science, 2004, , 176-183.	1.0	14
21	CTBot: A stereotactic-guided robotic assistant for percutaneous procedures of the abdomen. , 2005, , .		12
22	Biomechanics of the Osseous Pelvis and Its Implication for Consolidative Treatments in Interventional Oncology. CardioVascular and Interventional Radiology, 2020, 43, 1589-1599.	0.9	12
23	Design and Development of a Robotized System Coupled to $\hat{\mu}$ CT Imaging for Intratumoral Drug Evaluation in a HCC Mouse Model. PLoS ONE, 2014, 9, e106675.	1.1	11
24	Online Robust Model Estimation and Haptic Clues Detection during In Vivo Needle Insertions. , 0, , .		10
25	Development of a MR-compatible cable-driven manipulator: Design and technological issues. , 2012, , .		10
26	Design and In Vivo Evaluation of a Robotized Needle Insertion System for Small Animals. IEEE Transactions on Biomedical Engineering, 2013, 60, 2193-2204.	2.5	10
27	Automatic planning of needle placement for robot-assisted percutaneous procedures. International Journal of Computer Assisted Radiology and Surgery, 2018, 13, 1429-1438.	1.7	9
28	Kinematic modelling of wheeled mobile manipulators. , 0, , .		8
29	A robotized positioning platform guided by computed tomography : practical issues and evaluation. , 0, , .		8
30	Design and Evaluation of a Linear Haptic Device. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	8
31	A Parallel 5 DOF Positioner for Semi-Spherical Workspaces. , 2004, , .		8
32	Bilateral controllers for teleoperated percutaneous interventions : evaluation and improvements. , 2006, , .		7
33	Fully Automated Image-Guided Needle Insertion: Application to small animal biopsies. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 194-7.	0.5	7
34	Force feedback teleoperation with periodical disturbance compensation. , 2011, , .		7
35	Robot Interaction Control in Medicine and Surgery: Original Results and Open Problems. , 2014, , 169-191.		7
36	Design and Modeling of a Polymer Force Sensor. IEEE/ASME Transactions on Mechatronics, 2015, , 1-1.	3.7	7

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37	Control of cable-driven manipulators in the presence of friction. Mechanism and Machine Theory, 2017, 107, 139-147.	2.7	7
38	An image-guided robot for needle insertion in small animal. Accurate needle positioning using visual servoing., 2008, , .		6
39	EMG-Based Variable Impedance Control With Passivity Guarantees for Collaborative Robotics. IEEE Robotics and Automation Letters, 2022, 7, 4307-4312.	3.3	6
40	Fully Automatic Needle Calibration for Robotic-Assisted Puncture on Small Animals. , 2007, , .		5
41	User adapted control of force feedback teleoperators: Evaluation and robustness analysis. , 2008, , .		5
42	Design, development and preliminary assessment of a force sensor for robotized medical applications. , 2014, , .		5
43	An Origami-Inspired Flexible Pneumatic Actuator. , 2018, , .		5
44	Bone cement modeling for percutaneous vertebroplasty. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2019, 107, 1504-1515.	1.6	5
45	Robot-Assisted Bone Cement Injection. IEEE Transactions on Biomedical Engineering, 2022, 69, 138-147.	2.5	5
46	Passivity Filter for Variable Impedance Control. , 2020, , .		5
47	From manipulation to wheeled mobile manipulation: analogies and differences. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 97-104.	0.4	4
48	A visual 3D-tracking and positioning technique for stereotaxy with CT scanners. Robotics and Autonomous Systems, 2008, 56, 385-395.	3.0	4
49	Design of a linear haptic display based on approximate straight line mechanisms. , 2010, , .		4
50	Robotically assisted injection of orthopedic cement: System design, control and modeling. , 2016, , .		4
51	A novel actuation technology for safe physical human-robot interactions. , 2014, , .		3
52	Design and control of a thermal device for bone cement injection. , 2016, , .		3
53	Subjective Analysis of the Filling of an Acetabular Osteolytic Lesion Following Percutaneous Cementoplasty: Is It Reliable?. CardioVascular and Interventional Radiology, 2020, 43, 445-452.	0.9	3
54	Robotic needle insertion in moving soft tissues using constraint-based inverse Finite Element simulation. , 2020, , .		3

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55	Inverted Honeycomb Cell as a Reinforcement Structure for Building Soft Pneumatic Linear Actuators. Journal of Mechanisms and Robotics, 2021, 13, .	1.5	3
56	A Robotized Needle Insertion Device for Percutaneous Procedures. , 2005, , 433.		2
57	TOWARDS THE AUTOTUNING OF FORCE-FEEDBACK TELEOPERATORS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 482-487.	0.4	2
58	A methodology for identification of uncertain LFR model of the human operator for telemanipulation with force-feedback. , 2010, , .		2
59	Design and Optimization of a Novel MRI Compatible Wire-Driven Robot for Prostate Cryoablation. , 2011, , .		2
60	Design, Development and Preliminary Assessment of Grasping Devices for Robotized Medical Applications. , 2012, , .		2
61	Design of a Magnetic Resonance Imaging-Compatible Cable-Driven Manipulator With New Instrumentation and Synthesis Methods. Journal of Mechanical Design, Transactions of the ASME, 2014, 136, .	1.7	2
62	Design and characterization of a novel needle insertion tool. , 2016, , .		2
63	Linear Parameter-Varying Identification of the EMGâ€“Force Relationship of the Human Arm. , 2019, , .		2
64	Continuous Injection of Large Volumes of Cement Through a Single 10G Vertebroplasty Needle in Cases of Large Osteolytic Lesions. CardioVascular and Interventional Radiology, 2020, 43, 658-661.	0.9	2
65	Force feedback teleoperation with physiological motion compensation. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 425-430.	0.4	1
66	A New Indirect Actuation Principle for Safe Physical Human-Robot Interactions. , 2013, , .		1
67	Variable Stiffness Mechanism in Robotized Interventional Radiology. Mechanisms and Machine Science, 2016, , 45-58.	0.3	1
68	Using comanipulation with active force feedback to undistort stiffness perception in laparoscopy. , 2019, , .		1
69	Image-Guided Interventions and Robotics. , 2010, , 191-205.		1
70	Combining Structural and Kinematic Analysis Using Interval Analysis for a Wire-Driven Manipulator. , 2010, , 147-156.		1
71	Robotic Needle Insertion Into Viscoelastic Tissue. , 2012, , .		0
72	Dimensional Synthesis of a Novel 2T2R Parallel Manipulator for Medical Applications. , 2014, , .		0

#	ARTICLE	IF	CITATIONS
73	A novel marker for estimating the pose of a CT-guided robotic device using a single slice. , 2015, , .		0
74	Phase space identification method for modeling the viscosity of bone cement. , 2016, , .		0
75	Cement Plug Fragmentation Following Percutaneous Cementoplasty of the Bony Pelvis: Is it a Frequent Finding in Clinical Practice?. CardioVascular and Interventional Radiology, 2021, 44, 421-427.	0.9	0
76	Planification de mouvements des manipulateurs redondants lorsque le mouvement de l'organe terminal est imposé. Journal Europeen Des Systemes Automatisees, 2008, 42, 95-115.	0.3	0
77	Nouvel actionnement pour des interactions homme-robot plus sûres. Journal Europeen Des Systemes Automatisees, 2013, 47, 547-562.	0.3	0