

**Session Tue-1.1****Parallel Robots session 1**

Session Chair : Jean-Pierre Merlet

Time	ID	Presentation
09:10 – 09:30	101	Introductory presentation – Wire-driven parallel robot: open issues <i>Jean-Pierre Merlet</i>
09:30 – 09:50	2	A New 3-DOF Translational Parallel Manipulator: Kinematics, Dynamics, Workspace Analysis <i>Pavel Laryushkin, Victor Glazunov</i>
09:50 – 10:10	10	On the accuracy of N-1 wire-driven parallel robots <i>Jean-Pierre Merlet</i>
10:10 – 10:30	12	Calibration of a Fully-Constrained Parallel Cable-Driven Robot <i>Julien Alexandre Dit Sandretto, David Daney, Marc Gouttefarde</i>
10:30 – 10:50	42	Clearance, Manufacturing Errors Effects on the Accuracy of the 3-RCC Spherical Parallel Manipulators <i>Abdelbadiaa Chaker, Abdelfattah Mlika, Mohamed Amine Laribi, Lotfi Romdhane, Said Zeghloul</i>

**Session Tue-1.2****Design session**

Session Chair : Alin Albu-Schäffer

Time	ID	Presentation
11:20 – 11:40		Introductory presentation <i>Alin Albu-Schäffer</i>
11:40 – 12:00	27	Portable Posture Guiding System With Visual, Verbal Feedback for Upper Extremity <i>Wei-Ting Yang, I-Ming Chen, Ke Yeng Tee</i>
12:00 – 12:20	29	An Innovative Actuation Concept for a New Hybrid Robotic System <i>Basilio Lenzo, Antonio Frisoli, Fabio Salsedo, Massimo Bergamasco</i>
12:20 – 12:40	30	Development of 3-Axis Flexure Stage for Bio-Cellular Experimental Apparatus <i>Daisuke Matsuura, Chia-Hsiang Meng</i>
12:40 – 13:00	39	Development of Expressive Robotic Head for Bipedal Humanoid Robot with Wide Moveable Range of Facial Parts, Facial Color <i>Tatsuhiko Kishi, Takuya Otani, Nobutsuna Endo, Przemyslaw Kryczka, Kenji Hashimoto, Kei Nakata, Atsuo Takanishi</i>

**Session Tue-1.3****Parallel Robots session 2**

Session Chair : Antonio Frisoli

Time	ID	Presentation
16:05 – 16:25	31	A New Algorithm for Gravity Compensation of a 3-UPU Parallel Manipulator <i>Antonio Frisoli</i>
16:25 – 16:45	15	Structural synthesis of the families of parallel manipulators with 3 degrees of freedom <i>Jose Ignacio Ibarreche, Oscar Altuzarra, Victor Petuya, Alfonso Hernández, Charles Pinto</i>
16:45 – 17:05	18	Global Identification of Drive Gains, Dynamic Parameters of Parallel Robots - Part 1: Theory <i>Sébastien Briot, Maxime Gautier</i>
17:05 – 17:25	19	Global Identification of Drive Gains, Dynamic Parameters of Parallel Robots - Part 2: Case Study <i>Sébastien Briot, Maxime Gautier</i>
17:25 – 17:45	7	On the Conditioning of the Observation Matrix for Dynamic Parameters Identification of Parallel Robots <i>Miguel Diaz-Rodriguez, Vicente Mata, Angel Valera, Sebastian Provenzano</i>

**Session Wed-2.1****Control session 1**

Session Chair : Luigi Villani

Time	ID	Presentation
09:10 – 09:30	103	Introductory presentation – Null-Space Impedance Control For Physical Human-Robot Interaction <i>Luigi Villani</i>
09:30 – 09:50	3	Wrench Recovery for Wire-Actuated Parallel Manipulators <i>Leila Notash</i>
09:50 – 10:10	4	Vibration control of an industrial robot with a flexible arm using IDCS <i>Kengo Aoki, Gentiane Venture, Yasutaka Tagawa</i>
10:10 – 10:30	6	Predictive Functional Control System for Stroke Control of a Pneumatic Tendon-driven Balloon Actuator <i>Jun-Ya Nagase, Toshiyuki Satoh, Norihiko Saga, Koichi Suzumori</i>
10:30 – 10:50	8	Angular Momentum Based Controller for Balancing an Inverted Double Pendulum <i>Morteza Azad, Roy Featherstone</i>

**Session Wed-2.2****Robotic Hands session**

Session Chair : Antonio Bicchi

Time	ID	Presentation
11:20 – 11:40		Introductory presentation – Grasp Force Optimization: A Solved Problem? <i>Antonio Bicchi</i>
11:40 – 12:00	32	Dexterous Manipulation Planning For an Anthropomorphic Hand <i>Jean-Philippe Saut, Anis Sahbani, Jean-Pierre Gazeau, Said Zegloul, Philippe Bidaud</i>
12:00 – 12:20	37	Design Of A New Hand Exoskeleton For Rehabilitation Of Post-Stroke Patients <i>Vincenzo Parenti Castelli, Mohammad Mozaffari Foumashi, Marco Troncossi</i>
12:20 – 12:40	38	Development of Anthropomorphic Soft Robotic Hand WSH-1RII <i>Nobutsuna Endo, Takuya Kojima, Keita Endo, Fumiya Iida, Kenji Hashimoto, Atsuo Takanishi</i>
12:40 – 13:00	44	Guidelines for the design of multi-finger haptic interfaces for the hand <i>Florian Gosselin</i>

**Session Wed-2.3****Control session 2**

Session Chair : Oussama Khatib

Time	ID	Presentation
16:05 – 16:25		Introductory presentation <i>Oussama Khatib</i>
16:25 – 16:45	9	Analysis and Design of Planar Self-Balancing Double-Pendulum Robots <i>Roy Featherstone</i>
16:45 – 17:05	17	Redundancy Resolution of the Underactuated Manipulator ACROBOTER <i>Ambrus Zelei, László Bencsik, László L. Kovács, Gábor Stépán</i>
17:05 – 17:25	33	Wrench Recovery of Parallel Manipulators for Full Retrieval of Subtasks <i>Vahid Nazari, Leila Notash</i>
17:25 – 17:45	40	Development of Distributed Control System, Modularized Motor Controller for Expressive Robotic Head <i>Takuya Otani, Tatsuhiko Kishi, Przemyslaw Kryczka, Nobutsuna Endo, Kenji Hashimoto, Atsuo Takanishi</i>

**Session Thu-3.1****Human and Humanoids session**

Session Chair : Ambarish Goswami

Time	ID	Presentation
08:30 – 08:50		Introductory presentation <i>Ambarish Goswami</i>
08:50 – 09:10	13	A new approach to muscle fatigue evaluation for Push/Pull task <i>Ruina Ma, Damien Chablat, Fouad Bennis</i>
09:10 – 09:30	24	Calibration of the Human-Body inertial Parameters Using Inverse Dynamics, LS technique, anatomical values <i>Gentiane Venture, Maxime Gautier</i>
09:30 – 09:50	43	Assessment of Physical Exposure to Musculoskeletal Risks in Collaborative Robotics Using Dynamic Simulation <i>Pauline Maurice, Yvan Measson, Vincent Padois, Philippe Bidaud</i>
09:50 – 10:10	45	Muscle Activity Estimation Based on Inverse Dynamics, Muscle Stress Analysis by Finite Element Method <i>Kensho Hirasawa Ko Ayusawa Yoshihiko Nakamura</i>
10:10 – 10:30	49	Healthy Subject Testing with the Robotic Gait Rehabilitation (RGR) Trainer <i>Maciej Pietrusinski, Iahn Cajigas, Paolo Bonato, Constantinos Mavroidis</i>

**Session Thu-3.2****Parallel Robots session 3**

Session Chair : Jorge Angeles

Time	ID	Presentation
10:50 – 11:10	102	Introductory presentation – Design Challenges in the Development of Fast Pick-and-place Robots <i>Jorge Angeles</i>
11:10 – 11:30	11	Optimal Force Generation of 3-RRR Decoupled Planar Robots for Ensuring Unlimited Platform Rotation <i>Sébastien Briot, Vigen Arakelian, Damien Chablat, Philippe Wenger</i>
11:30 – 11:50	14	A Low Energy Consumption Solar Tracker based in Parallel Kinematics <i>Oscar Altuzarra, Iván Seras, Jokin Aginaga, Erik Macho</i>
11:50 – 12:10	34	Inverse Static Analysis of Massive Parallel Arrays of Three-State Actuators via Artificial Intelligence <i>Felix Pasila, Rocco Vertechy, Giovanni Berselli, Vincenzo Parenti Castelli</i>
12:10 – 12:30	25	On the addition of degrees of freedom to force-balanced linkage <i>Volkert van der Wijk, Just L. Herder</i>

**Session Fri-4.1****Mobile Robots session**

Session Chair : Cédric Pradalier

Time	ID	Presentation
09:00 – 09:20		Introductory presentation – Mobile Robot Navigation <i>Cédric Pradalier</i>
09:20 – 09:40	5	Peristaltic Crawling Robot for Running on Ground, in the Pipe Plumbing <i>Satoshi Tesen, Norihiko Saga, Toshiyuki Satoh</i>
09:40 – 10:00	47	Off-road mobile robot control: an adaptive approach for accuracy, integrity <i>Roland Lenain, Benoit Thuilot, Nicolas Bouton, Philippe Martinet</i>
10:00 – 10:20	26	On-Line Obstacle Avoidance at High Speeds <i>Zvi Shiller, Sanjeev Sharma</i>
10:20 – 10:40	46	Torque control of a poly-articulated mobile robot during obstacle clearance <i>Pierre Jarrault, Christophe Grand, Philippe Bidaud</i>
10:40 – 11:00	22	An Approach to the Dynamics of a Vibration-Driven Robot <i>Felix Becker, Victor Lysenko, Vladimir Minchenya, Igor Zeidis, Klaus Zimmermann</i>

**Session Fri-4.2****Perception session**

Session Chair : Giorgio Cannata

Time	ID	Presentation
11:30 – 11:50	104	Introductory presentation – The ROBOSKIN Project: Challenges and Results <i>Giorgio Cannata</i>
11:50 – 12:10	16	Modeling Verticality Estimation During Locomotion <i>Ildar Farkhatdinov, Hannah Michalska, Alain Berthoz, Vincent Hayward</i>
12:10 – 12:30	23	The Whole-Arm Exploration of Harsh Environments <i>Francesco Mazzini, Steven Dubowsky</i>
12:30 – 12:50	36	BIM Based Indoor Navigation System of Hermes Mobile Robot <i>Barbara Siemiątkowska, Maciej Przybylski, Monika Różańska-Walczyk, Mateusz Wiśniowski, Bogdan Harasymowicz-Boggio, Michał Kowalski</i>
12:50 – 13:10	41	Overload Protection Mechanism for 6-axis Force/Torque Sensor <i>Kenji Hashimoto, Teppei Asano, Yuki Yoshimura, Yusuke Sugahara, Hun-Ok Lim, Atsuo Takanishi</i>