

Paolo Gallina was born in Castelfranco Veneto (TV) (Italy) the 7/18th /1971. He graduated in 1996 in Mechanical Engineering from the University of Padova (Padova) defending the thesis: Cella flessibile e robotizzata per carico e scarico prodotti di fusione (flexible and robotized cell for foundry applications).

In 1996 he was selected for a master program in "Plasma engineering and controlled thermonuclear fusion" at the IGI (Institute for ionized gas, Padova). During this year he designed and implemented a robotized system for inspecting the thyroidal chamber of the RFX (Reverse field pinch esperiment).

In the same year he started the PhD program in Applied Mechanics from the University of Brescia, Brescia (Italy). During this period he focused his interest in the defect detection of surface microdefects by means of optical systems. He received the Ph.D degree 2000 defending the thesis: "An automatic system for the geometric micro and macro defect detection on reflective surfaces".

In 1998 he was for 4 months at the University of Strathclyde, Glasgow (UK). There he collaborate to the simulation of a position control for a stereoscopic vision system to be implemented in a robot navigator.

In 1999 he obtained the position of assistant professor in "Applied mechanics" at the University of Padova.

From 1998 to 2000 he was in charge of the Robotic Laboratory at the Department of Innovation in Mechanics and Management, where he conduct his primary research.

From September 2000 he was visiting professor at the Ohio University, (Athens, Ohio) for 11 months. He spent this period studying and implementing haptic interfaces. In particular he designed a wire-based, spider-like, haptic interface.

From 2002 he is on the faculty of the Mechanical Department, University of Trieste (Trieste), with the position of associated professor in Applied Mechanics.

Also at the University of Trieste he created the Micro Mechanic Laboratory and the Robotic Laboratory where he pursue his primary research.

In 2004, he was at the Colorado University, at the "Center for Advanced Manufacturing and Packaging of Microwave, Optical and Digital Electronics", for two months. He worked in the MEMS field. In particular he studied the dynamic behavior of MEMS for biological applications.

From december 2004 he is in charge for the school of Mechanical Engineering and head of the master's program: "Safety and hygiene in the working environment"

Main publications concerning MEMS and vibrations.

P. Gallina, M. Giovagnoni,

“Design of a screw jack mechanism to avoid self-excited vibrations”, Journal of Dynamic Systems, Measurement and Control, pp. 477-480, Vol. 124, n° 3, September 2002.

P. Gallina,

“About the stability of non-conservative undamped systems”, Journal of Sound and Vibration, pp. 977-988, Vol.262, n°4, 2003.

P. Gallina, “Effect of Damping on Asymmetric Systems”, Journal of Vibration and Acoustics, July 2003, vol. 125, n° 3, pp. 359-365.

L. Bregant, P. Gallina, P. Pascutto,

“Implementation of a DRC (Delayed Reference Control) for Contact Force Control in Robotic Application”, IASME Transactions, Volume 1, n°1, January, 2004, pp. 64-69.

P. Gallina, A. Trevisani,

Delayed-Reference Control (DRC) of a two mass elastic system, Journal of Vibration and Control. Vol. 10, n° 1, pp. 135-159, 2004.

P. Gallina,

“Vibration in screw jack mechanisms: experimental results”, Journal of Sound and Vibrations, pp. 1025-1041, vol. 282, 2005.

N. Scuor, P. Gallina, N. Marino, O. Sbaizero, V. Sergio

“Design and Characterization of a Novel CEMS Platform”

Proceedings (CD ISBN 88-87030-96-0) of 18th International Conference on Production Research - ICPR-18, Salerno, July 31 - August 4, 2005.

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Poster , 7th AITeM International Conference, Lecce 7 9 settembre, 2005.

S. Maggiolino, N. Scuor, P.Gallina, F.Antoniolli, O.Sbaizero,

“Cells characterization using a DSC-MEMS device”, EUROMAT '05, European Congress on Advanced Materials and Processes, 5-8 Settembre, Praga, Repubblica Ceca.

S. Maggiolino, N. Scuor, P.Gallina, F.Antoniolli, O.Sbaizero,

“A MEMS Device for the Biaxial Stress of a Single Cell”, EUROMAT '05, European Congress on Advanced Materials and Processes, 5-8 Settembre, Praga, Repubblica Ceca.

P. Gallina, A. Trevisani,

“Synthesis and experimental validation of a delayed reference controller for active vibration suppression in mechanical systems”, ASME Journal of Applied Mechanics, pp. 623-627, Vol.72 n 4, 2005.

N. Scuor, P. Gallina, O. Sbaizero, R. L. Mahajan,

“Modeling of a Microfluidic Channel in the Presence of an Electrostatic Induced Cross-Flow”, *Biomedical Microdevices*, pp. 231-242, Vol. 7, n 3, 2005.

P. Gallina,
“Delayed Reference Control for Hotwire Cutting of Expandable Polystyrene Foam”, *ASME Journal of Manufacturing Science and Engineering*, pp. 360-365, Vol. 128, n 1, 2006.

F. Antonioli, P. Gallina, R.L. Mahajan, H. Panchawagh, O. Sbaizero, N. Scuur,
“Dynamic characterization of MEMS cantilevers in liquid environment using a low-cost optical system”, *Measurement Science and Technology*, pp. 173-180, Vol 17, 2006.

N. Scuur, P. Gallina, R. L. Mahajan, O. Sbaizero, V. Sergio,
“Design of a novel MEMS platform for the biaxial stimulation of living cells”, *Biomedical Microdevices*, v 8, n 3, September, 2006, p 239-246