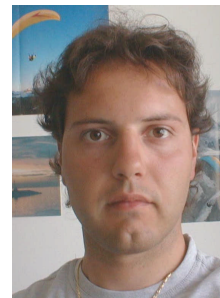


Gilles Caprari
Dr. sc. techn. EPFL, Dipl. Ing. ETHZ

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PERSONAL DATA

Date and place of birth: 24th September 1972, Locarno, Switzerland
Nationality: Swiss
Telephone office: +41 21 693 5956
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Internet address: <http://asl.epfl.ch/index.html?content=member.php?ID=7>
<http://www.gctronic.com>

CORE COMPETENCES

- Mechatronics systems integration and miniaturization
- Product development and project management
- Miniature, autonomous and low-power robotics
- Mobile robotics
- Software / Hardware

WORK EXPERIENCE

November 2005 – now GCtronic, Electronics & Mechatronics, Mendrisio, Switzerland
Founder and Director

- Development and consulting
- Production, sale and support of mobile robots

May 2003 – October 2005 Autonomous Systems Lab, EPFL, Lausanne, Switzerland
Senior researcher

- European project LEURRE: Artificial Life Control in Mixed-Societies
- Swiss project ANT: Evolution of Cooperation in Artificial Ants

Dec. 1997 - April 2003 Autonomous Systems Lab, EPFL, Lausanne, Switzerland
Research Assistant and Doctoral Student

- Thesis: Autonomous Micro-Robots: Applications and Limitations

Nov. 1996 - Nov. 1997 Institute of Robotics, Automatic Control Lab, Institute of Machine Tools and Manufacturing, ETH Zurich, Switzerland
Research Assistant

- Control board for micro motor Smoovy
- Matlab toolbox: Model Predictive Control
- Hardware and Software for a 6D mouse

Summer 1994 Systems West, Inc., Carmel Valley, California, USA
Summer Internship

EDUCATION

Dec. 1997 – April 2003 Autonomous Systems Lab, EPFL, Lausanne, Switzerland
Dr. sc. techn. EPFL

Oct. 1991 – Oct 1996 Abteilung Elektrotechnik, ETH Zurich, Switzerland
Degree of Electrotechnical engineering ETHZ
Diploma thesis: Flexibler Mobiler MiniRoboter

Sept. 1987 – June 1991 Secondary Education: Liceo Scientifico, Locarno, Switzerland

TEACHING EXPERIENCE

- Lecture Assistant: Mobile Robotics
- Project Supervisor: 4 diploma theses, 23 semester projects
- Practical exercises of robotics

SOFTWARE SKILLS

- Programming: C, C++, Assembler
- Software tools: Protel, Matlab, ProEngineer, SolidWorks
- Operating Systems: Windows, Linux

LANGUAGES

- Fluently, written, spoken: Italian, French, German, English

HOBBIES

- Sailing, paragliding and traveling

Awards

- Best paper award at AMiRE'03, Brisbane.
- Winner of the Micro Robot Contest 1999 and 2000, Category 2: autonomous robots. Nagoya, Japan.

List of Publications

Journals

- Asadpour, M., Tâche, F., Caprari, G., Karlen, W. and Siegwart, R. (2006) Robot-Animal Interaction: Perception and Behavior of InsBot. Int. Journal of Advanced Robotic Systems. Vol. 3, No. 2, pp 93-98.
- Caprari, G., Colot, A., Siegwart, R., Halloy, J. and Deneubourg, J.-L. (2005) Animal and Robot Mixed Societies - Building Cooperation Between Microrobots and Cockroaches. IEEE Robotics & Automation Magazine. Vol.12, No. 2, June, pp 58-65.
- Caprari, G., Estier, T. and Siegwart, R. (2002) Fascination of Down Scaling - Alice the Sugar Cube Robot. Journal of Micro-Mechatronics, VSP, Utrecht, Vol. 1, No. 3, 177-189.

Peer-reviewed Proceedings

- Bouabdallah, S., Caprari, G. and Siegwart, R. (2006) Design and Control of an Indoor Coaxial Helicopter. In Proc. of IEEE/RSJ Int. Conf. on Intelligent Robots and Systems, China. [IROS'2006]
- Tâche, F., Asadpour, M., Caprari, G., Karlen, W. and Siegwart, R. (2005) Perception and Behavior of InsBot : Robot-Animal Interaction Issues. IEEE Int. Conf. on Robotics and Biomimetics, ROBIO'2005.
- Greuter, M., Shah, G., Caprari, G., Tâche, F., Siegwart, R. and Sitti, M. (2005) Toward Micro Wall-Climbing Robots Using Biomimetic Fibrillar Adhesives. Proc. of the 3rd Int. Symp. on Autonomous Minirobots for Research and Edutainment, Fukui, Japan. [AMIRE'2005]
- S. Garnier, C. Jost, R. Jeanson, J. Gautrais, Asadpour, M., Caprari, G. and G. Theraulaz (2005) Collective Decision-Making by a Group of Cockroach-like Robots. IEEE Swarm Intelligence Symp., p. 233-240.
- Caprari, G. and Siegwart, R. (2005) Mobile Micro-Robots Ready to Use: Alice. In Proc. of IEEE/RSJ Int. Conf. on Intelligent Robots and Systems, Canada, p. 3295-3300. [IROS'2005]
- Colot, A., Caprari, G. and Siegwart, R. (2004) InsBot: Design of an Autonomous Mini Mobile Robot Able to Interact with Cockroaches. ICRA'04, New Orleans, p. 2418-2423.
- Caprari, G. and Siegwart, R. (2003) Design and Control of the Mobile Micro Robot Alice. Proceedings of the 2nd International Symposium on Autonomous Minirobots for Research and Edutainment, AMiRE'03, Brisbane, Australia, p. 23-32.
- Lauria, M., Freese, M., Estier, T., Lamon, P., Caprari, G. and Siegwart, R. (2003) LameAlice, a Nanorover for Planetary Exploration. In Video Proceedings of the IEEE International Conference on Robotics and Automation, Taipei, Taiwan.
- Floreano, D., Schoeni, N., Caprari, G. and Blynell, J. (2002) Evolutionary Bits'n'Spikes. In R. K. Standish, M. A. Beadau and H. A. Abbass, editors. Artificial Life VIII: Proceedings of the Eight International Conference on Artificial Life, MIT Press.
- Caprari, G., Arras, K.O. and Siegwart, R. (2001) Robot Navigation in Centimeter Range Labyrinths. In Proceedings of the First International Conference on Autonomous Minirobots for Research and Edutainment, Heinz Nixdorf Institute, Paderborn, Germany, October 22-25. [AMIRE'2001]
- Caprari, G., Estier, T. and Siegwart, R. (2000) Fascination of Down Scaling - Alice the Sugar Cube Robot. In Workshop Proceedings on Mobile Micro-Robots, IEEE International Conference on Robotics and Automation, San Francisco, USA, April 24-28.
- Caprari, G., Arras, K.O. and Siegwart, R. (2000) The Autonomous Miniature Robot Alice: From Prototypes to Applications. In Proceedings of IEEE/RSJ International Conference on Intelligent Robots and Systems, Takamatsu, Japan, October/November, 793-798.
- Freese, M., Kaelin, M., Lehky, J.-M., Caprari, G., Estier, T. and Siegwart, R. (1999) LAMALice : A Mini Mobile Robot for Planetary Exploration. In Proceedings of the International Symposium on Micromechatronics and Human Science, Nagoya, Japan, p. 129-133.
- Caprari, G., Balmer, P., Piguet, R. and Siegwart, R. (1998) The Autonomous Micro Robot ALICE: A platform for Scientific and Commercial Applications. In Proc. of the Int. Symp. on Micromechatronics and Human Science, Nagoya, Japan, p. 231-235.

- Nicoud, J.D.; Matthley, O.; Caprari, G. (1998) Control and analysis of low inertia miniature synchronous motors. In Proc. of the Int. Symp. on Micromechatronics and Human Science, p 97-103.
- Büchi, R., Caprari, G., Vuscovic, V. and Siegwart, R. (1996) A Remote Controlled Mobile Mini Robot. In Proceedings of the Seventh International Symposium on Micro Machine and Human Science - Toward Micro-Mechatronics, Nagoya, Japan, October 2-4. p. 203-206.

PhD Thesis

- Caprari, G. (2003) Autonomous Micro-Robots: Applications and Limitations. Thèse n° 2753, Faculté Sciences et Techniques de l'Ingénieur, École Polytechnique Fédérale de Lausanne, 2003. Acceptée sur proposition du jury: Prof. R. Siegwart (directeur de thèse), Prof. D. Floreano (rapporteur), Dr. F. Mondada (rapporteur), Prof. J-D. Nicoud (rapporteur), Prof. S. Shooter (rapporteur).