

## **CURRICULUM VITAE OF SIMONE BUSO**

### **BIOGRAPHY**

Simone Buso was born in Padova, on February 6<sup>th</sup>, 1968. In 1992 he obtained the Laurea degree (cum laude) in Electronic Engineering from the University of Padova.

Starting in 1993, Simone Buso has been attending the Ph.D. program in Industrial Electronics concluding it on October 31<sup>st</sup>, 1996. The topic of his Ph.D. research has been the application of robust control techniques to switching mode power supplies.

In July 1997, Simone Buso obtained the Ph.D. degree from the University of Padova. In October 1997 he has been chosen for an assistant professor position in Electronics at the Department of Electronic Engineering (today the Department of Information Engineering, DEI) of the University of Padova. He officially joined the Department on October 30<sup>th</sup>, 1997.

In 2006, he obtained an associate professor position in Electronics. He has joined the Department of Technical Management of Industrial Systems, DTG, of the University of Padova on October 1<sup>st</sup>, 2006.

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### **INTERNATIONAL ACTIVITIES AND RELATIONSHIPS**

Simone Buso is a member of the IEEE since 1997. Ever since, he serves as a reviewer for conferences sponsored by the Power Electronics Society and for some journals (IEEE Transactions on Power Electronics, Industrial Electronics e Industry Application Society).

In 1999 and 2001 he was invited as a visiting researcher in different Universities in Brazil, where he gave seminars and short courses. He visited, and periodically continues to visit, the University of Campinas (San Paolo), the Federal University of Rio de Janeiro and the Federal University of Juiz de Fora (Minas Gerais). He maintained active collaborations with those Universities, serving as a tutor for different master and Ph.D. thesis works.

In 2009 he gave, upon invitation, a short course entitled “Digital current mode control of power converters” on the occasion of the 10<sup>th</sup> Brazilian Power Electronics Conference (COBEP).

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### **SUMMARY OF RESEARCH ACTIVITY**

Simone Buso’s research activity is related to different areas in the industrial and power electronics fields. In particular, he has been interested in the following topics:

- development of advanced control techniques, both analog and digital, for power electronic circuits (ac/dc e dc/ac both single and three phase);
- investigation of novel converter topologies for high power factor rectifiers;
- electromagnetic compatibility of power converters and analog integrated circuits.

More recently, he has been interested in the application of power converters in the following areas:

- renewable energy sources;
- solid state lighting.

The results of Simone Buso's research activity are published in over 100 papers, including a book and an international industrial patent. In particular, Simone Buso is the author or co-author of more than 70 papers included in peer reviewed international conference proceedings, and 22 papers published on the IEEE Transactions on Power Electronics, Industrial Electronics and Electromagnetic Compatibility.

A large number of papers were originated within research contracts or cooperation programs with industries or national and international research centres. Among them, it is possible to cite: SELCO Engineering s.r.l., National Semiconductors Corp., Exergy Fuel Cells s.r.l., CERN, Global Display Solutions S.p.A., European Center for Power Electronics (ECPE).

In the years 2004-2007 Simone Buso has been in charge of the Ateneo Research Project entitled "High efficiency and reliability illumination systems based on LEDs".

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## **SUMMARY OF TEACHING EXPERIENCE**

Simone Buso has started teaching in 1997. The first experiences have been represented by short courses and drills for the Power Electronics, Electronics and Advanced Electronics courses, all within the Laurea degree in Electronic Engineering.

Within the Diploma degree program organized by Consorzio Nettuno, Simone Buso has participated to the preparation and registration of video lessons for the Industrial Electronics and Power Electronics courses.

Between the year 2000 and 2003, he has been in charge of the Industrial Electronics course for the Diploma degree in Electronics.

Between 2002 and 2009 he has been in charge of the Fundamentals of Electronics course for the Laurea degree in Computer Engineering. Since 2003, Simone Buso has been in charge of the first course of Microcontrollers and DSPs for the Laurea degree in Electronic Engineering, Automation Engineering and Mechatronics.

Since 2006-2007 Simone Buso is in charge of the Fundamental of Digital Electronics course for the Laurea degree Mechatronics.

He has been tutoring and co-tutoring more than 50 bachelor and master thesis works and 3 Ph.D. thesis works.

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