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Skill certification (1-2-3-4-5-7) by Marche Region- N° 119/FSE-06 - 10/05/2007

- Born in Ancona (Italy) on February,9th 1954, he is graduated in Electronics Engineering at the University of Ancona in 1978 with summa cum laude.
- In the years 1980-1982 he worked with SGS-ATES Agrate Brianza (Mi) as an integrated circuit designer, contributing to the design and development of a 64Kbits Eprom with redundancy .
- In 1982 he joined the "Istituto Elettronico per la Qualità Industriale ISELQUI" of Ancona (Italy) a consortium of musical instrument manufacturers as responsible of the semi-custom

integrated circuit design group, managing both the design and testing aspects. During this period he developed some Asic devices like a domestic heating management station, a musical instrument dynamic keyboard controller and two musical instrument Dsp integrator/oscillator macrocells.

- In 1986 he contributed to the set-up and development of the ST-SGS THOMSON Design Centre of Ancona (Italy), where he contributed till 1994 as project leader to the development of the first italian microprocessor (ST9), designing peripherals and custom versions for the consumer market .
- During the period '94/'97 he has been one of the partners of the Studio Associato Eltec Ancona (Italy) working as an external consultant mainly for the ST-SGS Thomson Microelectronics S.p.A..
- Starting from 1998 he is involved, with his private consulting studio (SPE Studio Progettazioni Elettroniche) in consulting on electronic systems and programmable logics CPLD/FPGA design, and VHDL programming. Since 2004 he also works on Wireless Sensor Networks and embedded systems.
  - Since 1999 member of ASSIPE Italian Association of Electronic Design.

## **Academic activities**

- He held seminars on the integrated circuit design at the Universities of Ancona, Bologna and Parma (Italy).
  - He has been Appointed lecturer:

since A.Y. 1995/96 till A.Y. 2003/04 for the course of "Automation design of VLSI circuits" - Faculty of Electronics Engineering at the Bologna University;

since A.Y. 1994/95 till A.Y. 2000/01 for the course of "Applied Electronics – VLSI circuits design" and "Applied Electronics – Mod. I" – Faculty of Electronics Engineering at the Ancona University;

since A.Y.. 2001/02 till A.Y.. 2004/05 for the course of "Electronic Elements" – Faculty of Informatics Engineering, Automation Engineering, Logistics and Production Engineering at the Ancona University;

for the A.Y. 2006/07 for the course of "Data Acquisition, Elaboration and Transmission" - Faculty of Electronics Engineering at the Ancona University.

- Since A.Y. 2008/2009 he is appointed lecturer for the courses of "Digital controls" and "Digital Systems" - Faculty of industrial Automation Engineering and Faculty of Informatics at the on-line University Uniecampus.

## Main activities and designs

- 64K Eprom with redundancy
- ASIC Dynamics menager for musical keyboards
- 2 ASIC DSP units for audio signals
- ASIC for domestic heating management station
- uP-ST9 Multifunction 16bit Timer
- uP-ST9 Bank Switch Memory Management Unit
- ST90R50 Microprocessor
- ST90R51 Microprocessor
- uP-ST9 PWM Unit
- uP-ST9291J7 technology remapping
- uP-ST7 Infrared unit
- uP-ST7 Serial Communication Controller
- uP-ST9 Embedded macrocells
- uP-ST9 peripherals technology remapping
- MSPI Vhdl model
- Vhdl-FPGA for printer head management
- Vhdl-CPLD for biomedical applications
- General Purpose Memory Programmer FPGA
- GPS-core ASIC to FPGA porting
- FPGA IP interfacing to embedded ARM core
- Dynamic programmable FPGA waveform generator for biomedical applications
- Studies and designs Studio e sviluppo reti e dispositivi wireless IEEE 802.15.4 e ZigBee

## **Pubblications**

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- Co-author of the paper "Semi-custom Standard Cell 12x12 Bit Multiplier/Accumulator for Acoustic Field Applications" - International Symposium - Measurement, Signal Processing and Control - MECO '86

## Seminars and Congresses

- In Sept. 1986 he attended the International Symposium Measurement, Signal Processing and Control MECO '86 as co-author of the paper "Semi-custom Standard Cell 12x12 Bit Multiplier/Accumulator for Acoustic Field Applications".
- At the RFM Seminar 2006 7-8 Sept. 2006 in Ylivieska Finland he held a speech on "Using wireless technologies for facing localisation/positioning problems and activities on IEEE 802.15.4

ZigBee

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- At the RF&Wireless Forum in Milan – 13 mar. 2007 – he held a speeach on "Positioning and localization techniques

IEEE 802.15.4 e ZigBee

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- At the RF&Wireless Forum in Milan – 14 feb. 2008 – he held an educational on "IEEE 802.15.4 Protocol and ZigBee-2006(TM)"

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