

## **Breve storia di una collaborazione tra Università e Industria**

Il Centro Studi Giorgio Barzilai (CSGB) è stato istituito a seguito di un Accordo di Collaborazione tra l'Università La Sapienza di Roma, Dipartimento di Ingegneria Elettronica e l'Elettronica SpA e le sue consociate. L'Accordo fu firmato in data 9 marzo 1989 e impegnava le parti ad una collaborazione scientifica su un vasto numero di potenziali argomenti di ricerca.

La ragione dell'ampiezza del campo considerato risiedeva nel desiderio di non precludere alcuna strada all'attività che stava nascendo, ma anche dalla volontà di affermare una visione unitaria del settore "elettronica" senza quelle partizioni suggerite da esigenze didattiche proprie dell'ambiente accademico e da questo adottate.

Dopo 5 anni di questa esperienza in comune, l'8 aprile del 1994, un Incontro di Studio simile a quello odierno, concluse l'esperienza con le seguenti acquisizioni.

L'Elettronica aveva dimostrato a se stessa che non era impossibile o sbagliato dal punto di vista aziendale entrare in contatto con una realtà accademica che si aprisse alle esigenze della produzione e aveva sollecitato l'ampio ambiente industriale romano a seguire tale esempio.

Il CSGB aveva dimostrato di poter essere un punto forte di idee, ricerca, progettazione e formazione di personale di alta qualificazione e, dalla impostazione primigenia, mantenne la volontà e la capacità di intervenire su un ampio spettro di argomenti e di applicazioni.

Quindi, dal 1994 il CSGB vive come struttura puramente universitaria e si sostiene, oltre che con fondi di didattica e di ricerca, con contratti di collaborazione con aziende e con la partecipazione a programmi europei.

## **Short History of an University-Industry co-operation**

*The Centro Studi Giorgio Barzilai (CSGB) has been established following Co-operation Agreement between the University of Rome "La*

*Sapienza”, Department of Electronic Engineering, and Elettronica SpA and its corporation. The Agreement was signed on March 9th, 1989 and committed the parties into a scientific co-operation on a wide range of potential research subjects.*

*The reason of the amplitude of the considered field resides in the wish of not hindering any possibility to the birthing activity. Moreover, the researchers had the will to consider “electronics” as a whole, without those partitions due more to academic than to real needs.*

*After 5 years, during a Meeting rather similar to the today’s one, on April 8th, 1994, this experience was considered to be over: but it had, happily, left the following conclusions.*

*Elettronica SpA had demonstrated to itself that it was not impossible or wrong from the firm point of view to get in touch with an academic institution that were open minded toward the production needs and had stimulated the wide roman industrial environment to follow its example.*

*The CSGB had demonstrated to be a strong source of ideas, research, design and training of personnel of high qualification. Furthermore, from its original planning, CSGB kept the will and the skill to act in a wide spectrum of subjects and applications.*

*Hence, since 1994, CSGB lives as a pure university’s structure and is supported by academic funding as well as by contracts with electronic firms and participation to EU Programmes.*

### **Le persone del CSGB/Folks at CSGB**

Piero Marietti, Full Professor, Scientific Coordinator

Mauro Olivieri, Associate Professor, VLSI and Architectures

Alessandro Trifiletti, Associate Professor, Analog and Mixed Signal IC,

Marco Balsi, Univ. Researcher, Circuit Theory and Neural Networks

Pasquale Tommasino, Researcher

Francesco Centurelli, Researcher

Giuseppe Scotti, Researcher

Renato Menicocci, Researcher  
Pietro Monsurrò, Ph.D. Student with Government Grant  
<family name>@mail.die.uniroma1.it

**Relazioni con aziende e altri gruppi di ricerca**  
*Links with firms and other research groups*

Atmel, Roma  
Elettronica SpA , Roma  
Ericsson Lab., Roma  
Infineon, Graz  
ISE, Instytut Systemow Elektronicznych, Warsaw  
Oerlikon Contraves, Roma  
Parades, Cnr, Roma  
Philips Semiconductors, Zürich  
Politecnico di Torino  
ST-Microelectronics, Agrate  
ST-Microelectronics, Catania  
Technische Universitaet, Wien  
Telecom Italia, Roma  
Univ. Catania  
Univ. Maastricht  
Univ. Paderborn  
Univ. “Ramon Lull”, Barcelona  
Univ. “Tor Vergata”, Roma.

**Cosa fa o può fare oggi il CSGB**

Il CSGB è oggi un centro di progettazione di circuiti integrati analogici o digitali in Si e in GaAs, custom e semi-custom, analogici in banda base, per frequenze radio, microonde e onde millimetriche, digitali per PLC, operazioni di I/O, per il recupero dei dati e del sincronismo, per

architetture di calcolo dedicate e orientate al basso consumo. Recentemente il Centro ha acquisito la capacità di progettare IC per segnali misti.

Il Centro è dotato dei più avanzati sistemi di simulazione e CAD, offre fino a 15 stazioni di lavoro dove il software, che risiede in un server centralizzato, può essere usato su terminali SUN o X-Windows che girano su PC. I sistemi CAD coprono completamente il flusso di progetto analogico/misto digitale, digitale e RF:

- Cadence Design System analog & mixed-signal design
- Synopsys digital design
- Mentor Design Architect/ModelSim digital design (VHDL)
- Agilent ADS RF design.

E' anche disponibile un simulatore elettromagnetico (Ansoft HFSS) così come alcune licenze Spice per simulazione circuitale, di PCB (PSPice, HSpice, Orcad) e per MATLAB da usare come ambiente di simulazione sistemica.

#### ***What CSGB does or can today do***

*The CSGB is today a design centre on analogue and digital integrated circuits on Si and GaAs, custom and semi-custom, analogue at base band, at RF, at  $\mu$ waves or at millimetric waves, digital for PLC, I/O operations, data and clock recovery, for dedicated computing and low power oriented architecture. Recently the Centre has acquired skill on mixed signals IC design.*

*The Centre is equipped with the best on simulation and CAD systems, it offers up to 15 work sites where software, residing on a central server station, can be used through SUN terminals or X-Windows terminals running on PC. The CAD tools to cover the full analog/mixed- signal, digital and RF design flows:*

- *Cadence Design System*                      *analog & mixed-signal design*
- *Synopsys*    *digital design*
- *Mentor Design Architect/ModelSim*      *digital design (VHDL)*
- *Agilent ADS*                                        *RF design.*

*An electromagnetic simulation tool (Ansoft HFSS) is available, as well as some licenses for Spice tools for circuit simulation and PCB design (PSpice, HSpice, Orcad) and for MATLAB to be used as system simulation environment.*

### **La didattica del CSGB**

Il CSGB trasferisce le sue competenze nella didattica istituzionale della Facoltà di Ingegneria di Roma La Sapienza nei Corsi di Laurea e Laurea Specialistica in Ingegneria Elettronica e Ingegneria delle Telecomunicazioni per le Sedi di Roma e di Latina.

I componenti del CSGB sono stati relatori di almeno 150 Tesi di Laurea negli ultimi 10 anni.

I componenti del CSGB sono stati tutori di almeno 10 studenti di Dottorato di Ricerca in Ingegneria Elettronica negli ultimi 10 anni.

### ***The CSGB's didactics***

*The CSGB makes its skill available to the students of the Faculty of Engineering of Roma La Sapienza through Lectures dedicated to the Electronic and Telecommunication Engineering Degrees and Master Degree given in Rome's and Latina's premises.*

*People from CSGB have been supervisor of at least 150 Degree's Thesis during the last ten years.*

*People from CSGB have been tutor of at least 10 students applying to the Ph.D. Thesis during the last ten years.*

## **Come contattare il CSGB**

Per informazioni sulla possibilità di ottenere tesi di laurea e di laurea specialistica si prega di rivolgersi al prof. Piero Marietti.

Per spiegazioni tecniche riguardanti i corsi si prega di rispettare gli orari di ricevimento dei rispettivi docenti come esposti nella bacheca di Elettronica II o nei siti internet personali.

Per informazioni su orari, date di esame e questioni burocratiche in genere, si prega di rivolgersi alla Segreteria Didattica o alla Portineria del Dipartimento di Ingegneria Elettronica.

L'ammissione al CSGB deve essere autorizzata da uno dei suoi componenti.

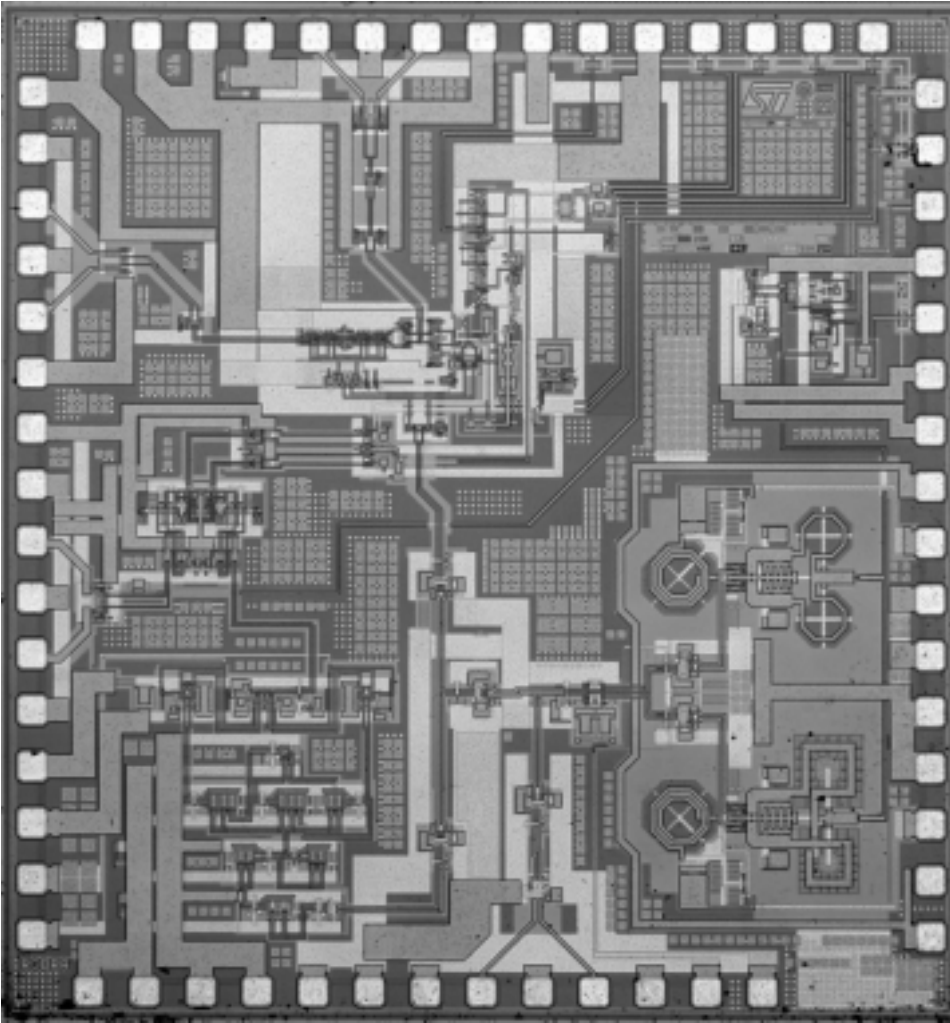
## ***How to get in touch with CSGB***

*For information about the procedures to obtain a Degree's or a Master Degree's Thesis please apply to prof. Piero Marietti.*

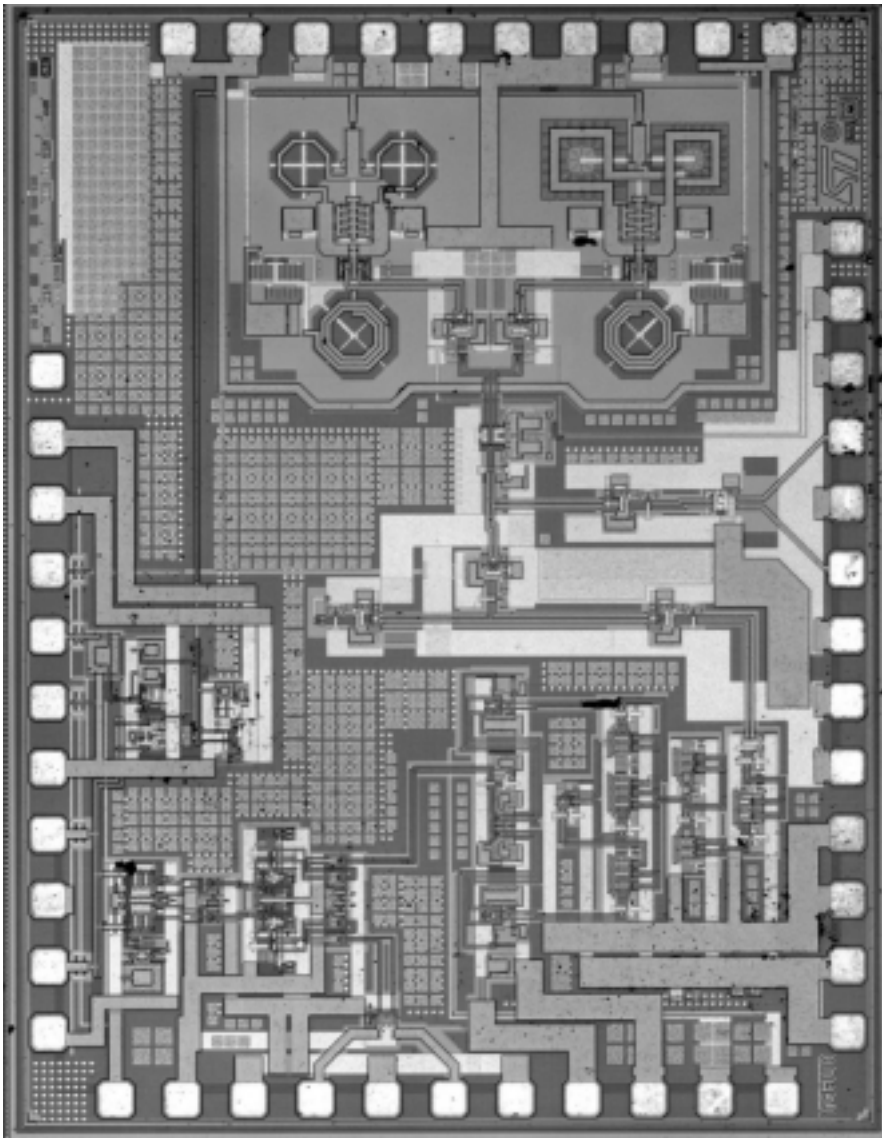
*If technical explications regarding given lectures are required, please follow the receiving time established by each teacher as they are shown in the Electronic II wall table or in each personal web site.*

*For information on time tables, exam dates and other burocratic subject, please apply to the Didactic Secretariat or to the Reception of Dept of Electronic Engineering.*

*The admission at CSGB must be authorised by one of its personnel.*



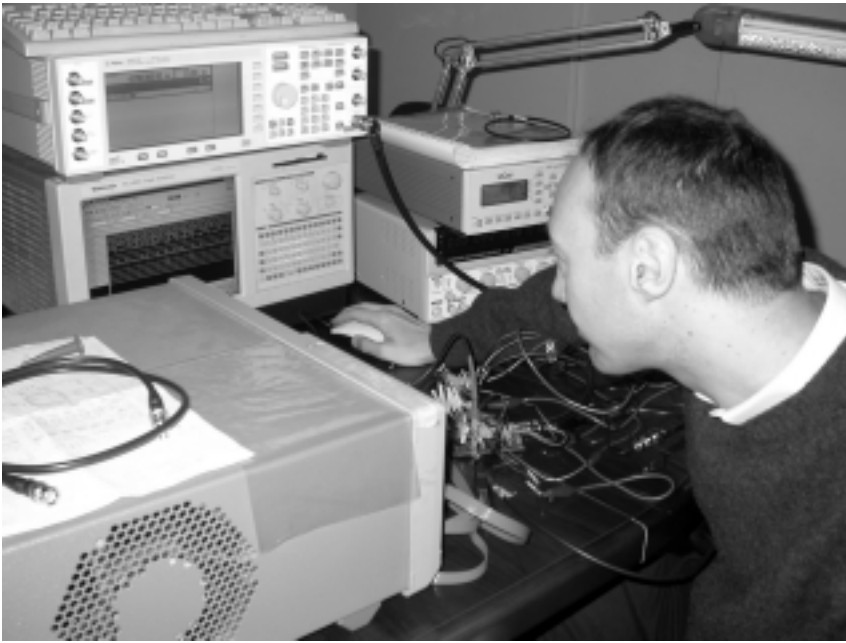
*SiGe multistandard 10 Gb/sec CDR*



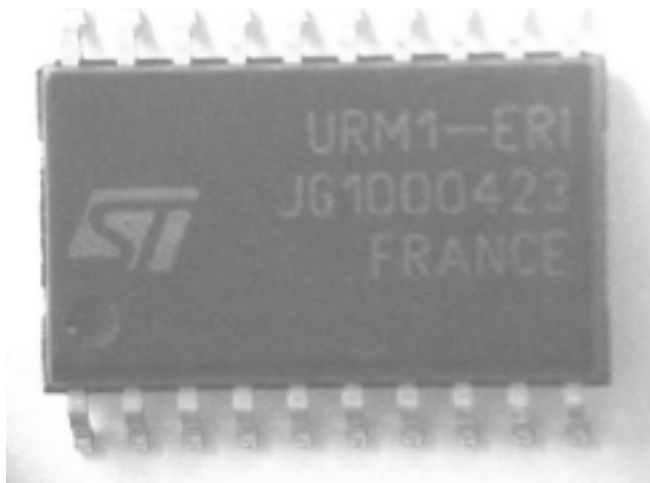
*SiGe multistandard 10 Gb/sec CMU*



*Students at work*



*Workbench for testing*



*BiCMOS antialiasing lowpass filter for 128QAM*

## Le pubblicazioni del CSGB

### *CSGB's Publication list*

#### 1994

V. Cocco, G. Gatti, P. Marietti, G. Parafioriti, S. Rotolo, A. Trifiletti  
*Optical receivers for IM-DD systems operating at 2.488 Gbit/s*  
OE\_LASE 94 (SPIE): Design, Simulation and Fabrication of Optoelectronic Devices and Circuits, SPIE Conf. 2150, Los Angeles CA (USA), 24-25 January 1994; pp 279-282.

S. D'Agostino, P. Marietti, N. Renzella, A. Trifiletti  
*Novel topologies for MMIC four-quadrant multipliers for T/R wideband systems*  
GaAs 94: 3rd European Gallium Arsenide and related III-V compounds Applications Symposium, Torino, 28-30 April 1994; pp 51-54.

A. De Gloria, P. Faraboschi, and M. Olivieri  
*Block placement with a Boltzmann machine*  
IEEE Transactions on CAD, 13(6):694-701, June 1994.

A. Costa, A. De Gloria, P. Faraboschi and M. Olivieri  
*An Evaluation System for Distributed-Time VHDL Simulation*  
PADS 94, pp. 147-150. Edimburgh, UK, June 1994. IEEE.

A. De Gloria, P. Faraboschi, and M. Olivieri  
*Design and characterization of a standard cell set for delay insensitive VLSI design.*  
IEEE Transactions on Circuits and Systems., 41(6): 410-414, June 1994.

A. De Gloria, P. Faraboschi and M. Olivieri  
*A self-timed interrupt controller: a case study in asynchronous micro-architecture design*  
ASIC94, pp. 296-299. Rochester, NY, Sept 1994. IEEE.

V. Cocco, P. Marietti, A. Trifiletti  
*A new design approach for monolithic transimpedance receivers based on root-locus techniques*  
Microwave and Optical Technology Letters, Vol. 7 No.15, October 1994; pp.692-696.

**1995**

V. Cocco, N. Leone, P. Marietti, A. Trifiletti

*New topology for optical receivers based on a differential sensing of photodiode current*

OE\_LASE 95 (SPIE): Functional Photonic Integrated Circuits, SPIE Conf. 2401, San Jose CA (USA), 9-10 February 1995; pp. 53-59.

V. Cocco, P. Marietti, A. Trifiletti

*Analysis and reduction of coupling effects between photodiode and MMIC amplifier in optical receivers*

OE\_LASE 95 (SPIE): Functional Photonic Integrated Circuits, SPIE Conf. 2401, San Jose CA (USA), 9-10 February 1995; pp. 125-136.

A. De Gloria and M. Olivieri

*Design and Development of a multi-processor embedded system for high performance label printers*

12th IASTED Conference on Applied Informatics, pp. 235-237. Innsbruck, Austria, Feb. 1995. IASTED.

V. Cocco, P. Marietti, G. Torino, A. Trifiletti, G. Gatti

*Design approach and performance analysis of optical receivers bases on input matching network*

ANS 95: European Symposium on Advanced Networks and Services (Europto), Fiber Optic Network Components, SPIE Conf. 2449, Amsterdam (The Netherlands), 20-24 March 1995; pp. 121-132.

V. Cocco, P. Marietti, A. Trifiletti

*A comparison among GaAs monolithic processes with respect to the requirements of transimpedance amplifiers using root-locus techniques*

ANS 95: European Symposium on Advanced Networks and Services (Europto), Fiber Optic Network Components, SPIE Conf. 2449, Amsterdam (The Netherlands), 20-24 March 1995; pp. 133-141.

G. Aru, L. Franchina, F. Gemma, P. Marietti

*A Real-Time Control Data System for Drilling Plants*

XXII Congresso Internazionale CAD 95 Yalta 9-12 maggio 1995.

G. Cardinale-Ciccotti, L. Franchina, L. Macera, P. Marietti  
*Application of Neural Networks to the Transduction of Voice Signal into ASCII Format*  
XXII Congresso Internazionale CAD 95 Yalta 9-12 maggio 1995.

G. Cardinale-Ciccotti, L. Franchina, L. Macera, P. Marietti  
*Application of Neural Networks to Voice Synthesis*  
XXII Congresso Internazionale CAD 95 Yalta 9-12 maggio 1995.

A. De Gloria and M. Olivieri  
*Efficient Semi-custom Micropipeline Design*  
IEEE Transactions on Very Large Scale Integration (VLSI) Systems,  
3(3):464-469, Sept. 1995.

N. Leone, F. Loriga, P. Marietti, A. Trifiletti  
*Non linear control of PLL operation in clock recovery circuits*  
International Symposium on Synchronisation, Essen (BRD), 14-15 December  
1995; pp. 115-121.

N. Leone, P. Marietti, A. Trifiletti  
*A model of symmetry clock recovery circuit based on I/Q components*  
International Symposium on Synchronisation, Essen (BRD), 14-15 December  
1995; pp. 137-143.

## **1996**

A. De Gloria and M. Olivieri  
*Statistical Carry Lookahead Adders*  
IEEE Transactions on Computers, 45(3):340-347, Mar. 1996.

V. Cocco, P. Marietti, A. Trifiletti  
*High yield design of MMIC transimpedance amplifiers for multigigabit transmission systems*  
GAAS 96: 4th European Gallium Arsenide and related III-V compounds  
Applications Symposium, Paris (France), 5-7 June 1996; paper 1B2.

N. Larciprete, F. Loriga, P. Marietti, A. Trifiletti  
*A high CMRR GaAs single-input to differential convertor*  
GAAS 96: 4th European Gallium Arsenide and related III-V compounds  
Applications Symposium, Paris (France), 5-7 June 1996; paper 4C9.

F. Ancarani, A. De Gloria, M. Olivieri, A. Uber  
*System Level Modelling and Simulation*  
IEEE-SMC Conference on Computational Engineering in System  
Applications, pp. 56-61. Lille, Francia, Luglio 1996. IEEE.

A. Costa, A. De Gloria, M. Olivieri  
*Hardware Design of Asynchronous Fuzzy Controllers*  
IEEE Transactions on Fuzzy Systems, Vol. 4, n.3, Aug. 1996.

F. Ancarani, A. De Gloria, M. Olivieri, C. Stazzone  
*Design of an ASIC Architecture for High Speed Fractal Image Compression*  
ASIC 96, Rochester, U.S.A., September 1996. IEEE.

A. De Gloria e M. Olivieri  
*An asynchronous distributed architecture scheme for the Boltzmann Machine  
control mechanism*  
IEEE Transactions on Neural Networks, vol. 7, n. 6, Nov. 1996.

M. Balsi, V. Cimagalli, F. Galluzzi  
*A Proposal to Implement Optoelectronic CNN Systems by Amorphous Silicon  
Thin-Film Technology*  
International Journal of Circuit Theory and Applications, 24(1), 121-125 (1996).

## **1997**

A. Costa, A. De Gloria, F. Giudici, M. Olivieri  
*Fuzzy Logic Micro-Controller*  
IEEE Micro, vol. 17, n. 1, Jan-Feb. 1997.

A. Pallotta, F. Centurelli, F. Loriga, A. Trifiletti  
*Estrattore di clock e rigeneratore dati integrato in silicio per SDH STM-16 su  
fibra ottica*  
Fotonica 97: 5° Convegno Nazionale sulle Tecniche Fotoniche nelle  
Telecomunicazioni, Roma, 20-23 Maggio 1997; pp. 86-89.

F. Ancarani, G. Cervetto, A. De Gloria, M. Olivieri  
*Analytic Performance Modeling of Clusters of PC Servers based on the  
Scalable Coherent Interface*

Workshop on Performance Analysis and its Impact on Design , presso International Symposium on Computer Architecture, Denver, CO, June 1997. IEEE-ACM.

A. Pallotta, F. Centurelli, A. Trifiletti

*A monolithic GaAs clock and data recovery circuit for 2.5 Gb/s NRZ data stream*  
GAAS 97: 5th European Gallium Arsenide and related III-V compounds Applications Symposium, Bologna, 3-5 September 1997; pp. 263-266.

F. Curti, P. Tommasino, A. Trifiletti

*Optimization criteria of band-pass matching networks for optical receivers in microwave optical links*

GAAS 97: 5th European Gallium Arsenide and related III-V compounds Applications Symposium, Bologna, 3-5 September 1997; pp. 301-304.

F. Ancarani, F. Bellotti, A. De Gloria, M. Olivieri

*Instruction level analytic prediction of parallel CPU architecture performance*  
International Conference on Intelligent Information Systems, The Bahamas, Dec. 1997. IEEE-LASTED.

## 1998

A. Pallotta, F. Centurelli, F. Loriga, A. Trifiletti

*A monolithic 2.5 Gb/s clock and data recovery circuit based on Silicon bipolar technology*

SyBEN 98: Symposium on Broadband European Networks (Europto), Broadband Long Distance Networks, SPIE Conf. 3408, Zürich Regensdorf (Switzerland), 18-20 May 1998; pp. 183-190.

A. Trifiletti, F. Centurelli, G. Fiacco, A. Pallotta

*A low power Silicon bipolar integrated circuit for 2.5 Gb/s communication system receivers with a novel topology for the transimpedance amplifier*

MIXDES 98: 5th International Conference on Mixed Design of Integrated Circuits and Systems, Lodz (Poland), 18-20 June 1998; pp. 53-56.

F. Bellotti, A. De Gloria, M. Olivieri

*Trace statistic extraction techniques for fast instruction level microprocessor evaluation.*

Workshop on Performance Analysis and its Impact on Design, presso International Symposium on Computer Architecture, Barcelona, Spain, June 1998. IEEE-ACM.

A. Di Martino, S. Pisa, P. Tommasino, A. Trifiletti

*An extraction procedure for MESFET's and HEMT's non-linear model determination*

GAAS 98: 6th European Gallium Arsenide and related III-V compounds Applications Symposium, Amsterdam (The Netherlands), 5-7 October 1998; pp 285-290.

A. Trifiletti, F. Centurelli, P. Tommasino

*Positive feedback GaAs comparators for SDH/SONET applications*

GAAS 98: 6th European Gallium Arsenide and related III-V compounds Applications Symposium, Amsterdam (The Netherlands), 5-7 October 1998; pp. 367-372.

### 1999

A. De Gloria, M. Olivieri, P. Palma

*Delay-insensitive synthesis of the MCS 251 microcontroller core for low power applications*

25th EUROMICRO Conference. Los Alamitos, CA, USA; 1999; pp. p.244-7 vol. IEEE.

A. De Gloria, D. Grosso, M. Olivieri, P. Ferrari, L. Puglisi

*Implementation Techniques for Fuzzy Theory Systems and Their Applications*

Fuzzy Theory Systems Techniques and Applications, edited by Cornelius T. Leondes, Academic Press, San Diego, CA, 1999. (ISBN: 0124438709)

A. De Gloria, F. Bellotti, D. Grosso, L.Noli and M. Olivieri

*An interactive VHDL simulator for IEEE 802.11 networks*

Recent Advances in Signal Processing and Communications Century. World Scientific Engineering Society, 1999. pp. 239-248 (ISBN: 960-8052-03-3).

F. Curti, P. Tommasino, A. Trifiletti

*Design criteria for optical receivers in broad-band optical systems*

Microwave and Optical Technology Letters, Vol. 20 No. 1, 5 January 1999; pp.50-53.

A. Di Martino, S. Pisa, P. Tommasino, A. Trifiletti  
*A new algorithm to extract the non-linear model of MESFET's and HEMT's*  
Microwave and Optical Technology Letters, Vol. 20 No. 5, 5 March 1999; pp. 297-302.

A. De Gloria, D. Grosso, M. Olivieri, G. Restani  
*A novel stability analysis of a PLL for timing recovery in hard disk drives*  
IEEE Transactions on Circuits and Systems, 46(18), Aug. 1999.

A. Trifiletti, F. Centurelli, G. Fiacco, A. Pallotta  
*A low power Silicon bipolar integrated circuit for 2.5 Gb/s communication systems receivers with a novel topology for the transimpedance amplifier*  
Electron Technology Journal, Vol. 32 No. 3, March 1999; pp. 277-281.

F. Centurelli, A. Trifiletti  
*A novel topology for four-quadrant GaAs monolithic multipliers*  
Microwave and Optical Technology Letters, Vol. 21 No. 4, 20 May 1999; pp. 277-282.

F. Centurelli, A. Pallotta, P. Tommasino, A. Trifiletti  
*Input-matching and offset-compensation network for limiting amplifiers in optical communication systems*  
SSMSD 99: Southwest Symposium on Mixed-Signal Design, Tucson AZ (USA), 11-13 April 1999; pp. 113-116.

F. Centurelli, P. Tommasino, A. Trifiletti  
*A new topology of controlled C3A differentiator for multi-Gb/s optical applications*  
SSMSD 99: Southwest Symposium on Mixed-Signal Design, Tucson AZ (USA), 11-13 April 1999; pp. 185-188.

F. Centurelli, A. Di Martino, L. Germani, R. Luzzi, S. Pisa, P. Tommasino, A. Trifiletti, P. Marietti  
*A new cost function for the extraction of the small-signal model for MESFET and HEMT devices*  
MIXDES 99: 6th International Conference on Mixed Design of Integrated Circuits and Systems, Krakow (Poland), 17-19 June 1999; pp. 159-162.

F. Centurelli, A. Di Martino, L. Germani, R. Luzzi, S. Pennisi, P. Tommasino, A. Trifiletti, P. Marietti

*A signal and noise model for a GaAs single-input to differential convertor*  
MIXDES 99: 6th International Conference on Mixed Design of Integrated Circuits and Systems, Krakow (Poland), 17-19 June 1999; pp. 347-350.

A. Trifiletti, P. Tommasino, D. Hannes

*Transimpedance amplifier measurement*  
ESA ESTEC ETP Technical Notes, Vol. 8 No. 5, September 3 1999.

S. Pennisi, P. Tommasino, A. Trifiletti

*A 20-dB 200 MHz CMOS single-to-differential amplifier*  
ECS 99: 2nd Electronic Circuits and Systems Conference, Bratislava (Slovakia), 6-8 September 1999, pp. 109-112.

A. Pallotta, M. Magliocco, A. Trifiletti, F. Centurelli, P. Tommasino

*2.5 Gb/s 20-pin DIL receiver module*  
ECOC 99: 25th European Conference on Optical Communications, Nice (France), 26-30 September 1999; Vol. 1, pp. 362-363.

M. Olivieri, A. Trifiletti, A. De Gloria

*A low-power microcontroller with on-chip self-tuning digital clock-generator for variable-load applications*  
ICCD 99: International Conference on Computer Design, Austin TX (USA), 10-13 October 1999, pp. 476-481.

M. Olivieri, A. Trifiletti, A. De Gloria

*A Low-Power Microcontroller with On-Chip Self-Tuning Digital Clock-Generator for Variable-Load Applications*  
International Conference on Computer Design, ICCD'99, Austin, Texas, Oct. 1999. IEEE.

G. Scotti, P. Tommasino, A. Trifiletti

*A synthesis-oriented approach to design stable circuits*  
Microwave and Optical Technology Letters, Vol. 23 No. 6, 20 December 1999, pp. 354-357.

M. Balsi, V. Cimagalli, F. Galluzzi

*Optically programmable optoelectronic cellular neural network*

US patent no. 5,864,836 (1999) (estensione del brevetto italiano: M. Balsi, V. Cimagalli, F. Galluzzi, "Rete neurale cellulare optoelettronica programmabile otticamente", brevetto di invenzione industriale RM95A000678).

## 2000

F. Centurelli, S. Pisa, P. Tommasino, A. Trifiletti

*A novel bias-depending rational model for MESFET and HEMT devices*

Microwave and Optical Technology Letters, Vol. 24 No. 2, 20 January 2000, pp. 102-106.

F. Centurelli, G. Scotti, P. Tommasino, A. Trifiletti

*A synthesis oriented approach to design microwave multi-device amplifiers with a prefixed stability margin*

IEEE Microwave and Guided Wave Letters, Vol. 10 No. 3, March 2000, pp. 102-104.

M. Olivieri and A. De Gloria

*Completion Detecting Carry Select Addition*

IEE Proceedings: Computer and Digital Techniques, 147(2), Mar. 2000.

F. Centurelli, L. Germani, R. Luzzi, P. Tommasino, A. Trifiletti

*A new topology for a transimpedance amplifier with postfabrication bandwidth adjustment*

Microwave and Optical Technology Letters, Vol. 25 No. 1, 5 April 2000, pp. 47-51.

A. Di Martino, E. Dutisseuil, C. Ladner, S. Pisa, P. Tommasino, A. Trifiletti

*A new procedure for the extraction of a multi-bias linear model for MESFET's and HEMT's*

Microwave and Optical Technology Letters, Vol. 25 No. 4, 20 May 2000, pp. 263-266.

R. Luzzi, M. Olivieri, S. Pennisi, A. Trifiletti

*A new wideband negative current source*

MIXDES 00: 7th International Conference on Mixed Design of Integrated Circuits and Systems, Gdynia (Poland), 15-17 June 2000, pp. 161-164.

F. Centurelli, R. Luzzi, M. Olivieri, A. Trifiletti  
*A bootstrap technique for wideband amplifiers*  
MIXDES 00: 7th International Conference on Mixed Design of Integrated Circuits and Systems, Gdynia (Poland), 15-17 June 2000, pp. 383-386.

R. Luzzi, M. Olivieri, S. Pennisi, A. Trifiletti  
*A new wideband negative bias current source*  
MIXDES 2000: 7th International Conference on Mixed Design of Integrated Circuits and Systems, Gdynia, Poland, July 2000.

F. Centurelli, R. Luzzi, M. Olivieri, A. Trifiletti,  
*A bootstrap technique for wideband amplifiers*  
MIXDES 2000: 7th International Conference on Mixed Design of Integrated Circuits and Systems, Gdynia, Poland, July 2000.

R. Luzzi, P. Marietti, G. Scotti, A. Trifiletti  
*Yield optimization design procedure of MMIC transimpedance amplifiers for multi-gigabit optical receivers*  
Microwave and Optical Technology Letters, Vol. 26 No. 2, 20 July 2000, pp. 110-114.

A. Pallotta, F. Centurelli, A. Trifiletti  
*A low-power clock and data recovery circuit for 2.5 Gb/s SDH receivers*  
ISLPED 00: IEEE International Symposium on Low Power Electronics and Design, Rapallo, 25-27 July 2000, pp. 67-72.

M. Bertacchi, A. De Gloria, D. Grosso, M. Olivieri  
*Semi-custom Design of a 400Mb/s IEEE 1394 Compliant IC core*  
IEEE Design & Test, Set. 2000.

J. Van der Tang, D. Kasperkovitz, F. Centurelli, A. Van Roermund  
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