

# *Curriculum Vitae*

**Sean Denis Connor**

## **Personal Details**

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## **Education**

Liverpool University B.Eng. (Special Hons) Electronics  
Liverpool University Ph.D. Solid State Physics

## **Current Responsibilities**

My current role involves managing the Characterization and Modeling Group at Plus Semi. This includes the management of both internal and external modeling projects and support activities for new product development and integration. The Characterization and Modeling Group is responsible for supplying electrical measurement data and device models to the company. Internally, I manage a laboratory that utilizes state of the art electronic measurement tools and software. My specialties include noise measurement and modeling (I introduced on wafer noise measurement to the company) and high frequency compact models. I also have extensive experience of modeling RF passive non-linear devices (inductors and capacitors) on a number of technologies as well as providing parasitic models. Most of my compact modeling work involves the production of MEXTRAM and SPICE models Our main extraction tool is ICCAP (currently ver 2006) with models verified in SPECTRE. I am also responsible for identifying and qualifying external laboratories for contract work .I have recently managed a modeling project which was contracted out of the company. This involved the technical alignment of two laboratories and the related project logistics. The project was delivered on time and within budget. I have also been involved in both assessing and developing various software tools (recently as part of a European Commission Team) with a view to their application to I.C. design and manufacture.

## **Positions Held**

**Characterization and Modeling Manager**                      2000 - Present  
Zarlink Semiconductor / Plus Semi ltd

**Senior Principle Development Engineer**                      1998-2000  
Mitel Semiconductor Ltd

Main responsibilities included establishment of the Characterization Lab at Swindon and development of the measurement and modeling systems to accommodate new technologies.

**Senior Characterization Engineer**                                      1991-1998  
GEC Plessey Semiconductors Ltd

My role at G.P.S. was to research and develop new modeling and measurement tools which would then be integrated into the characterization activity.

**Senior Scientist**    1989-1991

The Allen Clark Research Centre, Plessey Research (Caswell) Ltd.

My main areas of interest were novel device research and the development of software tools for both device and process modeling.

**Research Assistant**    1987-1989  
Liverpool University

My major research project was the computer modeling of novel semiconductor devices and plasma enhanced film growth kinetics . Other responsibilities included laboratory supervision and general teaching duties in The Department of Electrical and Electronic Engineering.

## Computer Skills

HP ICAP ver 5	(Unix environment electrical characterization tool)
SAS	(PC/Unix Statistical modeling tool)
Quark Xpress	(PC DTP package)
Cadence DFII design suite	(Unix environment circuit simulation tool)
HP EESOF tools	(Unix environment RF design tool)
TMA Studio (Raphael)	(Unix Environment Field Solver)

I have programmed in the following languages:

Pascal  
SAS programming Language  
'C' - some self taught

I am familiar with both UNIX and Microsoft Windows systems and tools.

## Recent Publications

S.D. Connor; D. Evanston; "Automated Extraction of Matching Parameters for Bipolar Transistor Technologies", Proceedings of IEEE International Conference on Microelectronic Test Structures, pp33-38, March 25-28, 1996.

S.D. Connor; "On Wafer Noise Measurement Using Bipolar Transistor RF Test Structures", Proceedings of IEEE International Conference on Microelectronic Test Structures, pp43-48, March 17-20, 1997.

S.D. Connor; "Measurement of  $1/f$  Noise in Poly-silicon Emitter Bipolar Transistor Structures", Proceedings of IEEE International Conference on Micro-electronic Test Structures, pp153-157, March 23-26, 1998.

M.C. Wilson, S Nigrin, S.J. Harrington A.J. Manson, S. Thomas, S.D. Connor, P. H. Osborne. "A 12 Volt 12 GHz Complementary Bipolar Technology For High Frequency Analogue Applications", Proceedings of the IEEE 32<sup>th</sup> European Solid-State Device Research Conference, pp375-378, Sept 24-26, 2002.

S Nigrin, M.C. Wilson, S. Thomas, S.D. Connor, P. H. Osborne  
"A Complementary Bipolar Technology on SOI Featuring 50GHz NPN and 35 GHz PNP Devices for High Performance RF Applications", Proceedings of the IEEE International SOI Conference, Oct 7-10, 2002.

## **Recent Publications Continued**

M C Wilson, S Nigrin, S J Harrington, A J Manson, S Thomas and S Connor; "A Modular Approach to the Manufacture of a High Performance Complementary Bipolar Technology Family" Semicon 2004

S.D. Connor, S.J. Harrington, A.J.Manson, S. Nigrin, S. Thomas and M.C. Wilson; "Automated On-wafer Measurement of Noise Figure and Base Spreading Resistance" Proceedings of the 7th International Conference on Solid-State and Integrated-Circuit Technology October 18-21, 2004, Beijing, China ICSICT'2004.

## **Accepted for publication ESSDERC 2009**

L. Tan†, M. M. A. Hakim, S. Connor , A. Bousquet , W. Redman-White, P. Ashburn, S. Hall. Characterisation of CMOS Compatible Vertical MOSFETs with New Architectures through EKV Parameter Extraction and RF Measurement

## **Languages**

French to 'O' level

German to 'O' level

Japanese to IOL level 2

## **Licenses and Certificates**

SAS fundamentals certificate.

SAS programming certificate.

Japanese Language (IOL) levels I and II.

UK Driving License.

## **Hobbies**

I have an interest in aviation, aerospace and home computing. I am also interested in horology and I collect examples of early electric and electronic watches.

