CURRICULUM VITAE

Name: **Sebastian LOURDUDOSS**

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Date of birth: *June 11, 1953*

Nationality: *Swedish*

Education:

1976-79	Ph.D. at Faculté Libre des Sciences de Lille, Lille, France. Specialisation: Electrochemistry. Title: *"Études électrochimiques du cuivre(I) et de l'argent(I) en vue de l'électroraffinage du cuivre."*

Career:

1980-85	Guest Researcher and Research Associate, Department of Physical Chemistry, Royal Institute of Technology, Stockholm.
1985-93	Scientist, principal scientist, Institute of Microwave Technology, Stockholm and Swedish Institute of Microelectronics (IM), Kista
1993-94	After the integration of IM with Royal Institute of Technology, Stockholm in July 1993, joined the Laboratory of Photonics and Microwave Engineering, Department of Electronics.
1994	Promoted as Docent (associate professor) in process technology for photonics by School of Electrical Engineering and Information Technology, Royal Institute of Technology, Stockholm .
1994-98	Associate professor, Laboratory of Artificial Semiconductor Materials, Department of Electronics, Royal Institute of Technology, Stockholm.
1998-	"Universitetslektor" (Reader or Associate professor), Department of Electronics, Royal Institute of Technology, Stockholm.
1997-1999	Managed the EU financed Long Term Research Esprit project, NANOLASE: Nanofabrication of strongly gain coupled lasers for high speed communication and sensor applications. Also actively involved in two other EU-projects namely VERTICAL (fabrication of vertical cavity surface emitting lasers)

Present position:

- Professor, School of Engineering Sciences
- Project leader for the SSF (Foundation for Strategic Research) financed research on selective epitaxy of semi-insulating and conducting materials pertinent to device fabrication. This also comprises project on heteroepitaxy.
- Managing NUTEK financed KOFUMA project for developing high performance short wavelength lasers. Also actively involved in two other EU-projects namely GIFT (GaAs based emitters for fibre optical data and telecommunication) and Q-Switch (Heterostructure-defined electron waveguides for quantum-based switching applications)

- Teaching subjects related to optoelectronic materials and processing
- Supervising doctoral and final year students

Research experience:

- Physico-chemical aspects of electro-refining of copper (doctoral thesis), thermal energy storage and absorption heat pumps.
- Thermodynamic modelling of certain chemical absorption systems
- Vapour Phase Epitaxial growth of III-V compounds and their characterisation. Good knowledge on characterisation techniques such as X-ray, photluminescence, Hall measurements, C-V profiling, SIMS, I-V measurements, SEM etc.
- Thermodynamic analysis of the vapour growth of III-V compounds.
- Epitaxy including selective epitaxy and characterisation of semi-insulating III-V compounds on planar and non-planar substrates for optoelectronic device applications. Electrical measurements on semi-insulating materials.
- Design of transversal structure and characterisation of buried heterostructure lasers
- Developed an attractive technology for fabricating lasers that could be modulated up to 30 GHz. This technology has also been demonstrated useful for integrating heterojunction bipolar transistor and laser, improved electrical and optical performance of quantum wires and long and short wavelength VCSELs.

Teaching experience:

1977-79	Taught chemistry to the chemical and agricultural engineering students *in French* at Hautes Etudes Industrielles and Institut Supérieur d'Agriculture, Lille, France.
1984-85	Lab course in Physical Chemistry to the second year students, KTH, Stockholm.
1991	Taught an advanced tutorial course on "Growth of semi-insulating III-V compounds on planar and non-planar substrates," to scientists, teachers and doctoral students during International Workshop on Crystal Growth of Technologically Important Materials for Device Applications, Anna University, Madras, India, November 1991.
1993	Taught an introductory course on "GaInAsP/InP based advanced semi-conductor lasers - from materials to devices," to scientists and doctoral students of Crystal Growth Centre, Anna University, Madras, India, December, 1993.
1991-	Engaged in teaching doctoral and final year students. Subjects related to optoelectronic mateials and processing technology.

Project Evaluation:

Evaluation expert for EU's ESPRIT and BRITE-EURam programmes

Ph.D. thesis evaluation:

Opponent to one Swedish Ph.D. thesis, Feb. 2000.
Member of the jury for the defence of a French Ph.D. thesis, 2000.
Evaluation committee member for two Swedish Ph.D. theses, 1995 and 1997.
External evaluation committee member for four Indian Ph.D. theses, 1998-2000.

Publications:

Author and co-author of over 100 reviewed papers in international journals and conference proceedings.

Membership:

Member of Electrochemical Society and TMS and Senior Member of IEEE.

Award:

Laureate of Fondation de France for the year 1978
Member of the group that received the "*guldfot*" (gold foot) from *Nyteknik* magazine for the breakthrough within Information Technology in the year 1999.
IPRM (Indium Phosphide and Related Materials) AWARD WINNER 2017