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Nationality: Switzerland  
born: 26 may 1976  
married  
two children

## RF Engineer EPFL

### Education

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- 1994-1998      Electrical engineer study at swiss federal institute of technology in Lausanne, orientation **infotronique**. Specialized in
- Telecommunications
  - Electronics
  - Industrial computing
  - Signal processing
- autumn 1998      Diploma Work: **Doppler direction finder for rescuing people in the sea**. The system is based on the Doppler effect. The carrier frequency of an emitter located on the man who fell in the water is received on the boat. By demodulating this carrier, the direction of arrival of the electromagnetic wave can be computed and displayed. This work gave birth to the startup company *Wavemind*, whose first commercial product is the *Wavefinder* ([www.wavefinder.ch](http://www.wavefinder.ch))
- spring 1998      Semester project at the EPFL, in collaboration with FastCom, **images transmission via ISDN**
- winter 1997      Semester project at the EPFL: **remote control via telephone line**
- 1991-1994      Federal maturity type C (scientific)

### Skills

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- Design, building and debugging of electronics prototypes using high frequencies
- Circuit and system simulations
- Prototyping, assembly
- Electromagnetic simulations (antennas, structures, filters)
- Antennas measurements tuning and optimization
- Low noise preamplifiers design
- Development of test environments for prototypes, including PCB if required
- Measurement automation (Python, Matlab and Visual Basic)
- Integrated circuits measurement on die/wafer, using probe cards
- Specification of products and systems
- Intellectual property surveying
- Trainee work proposal, and follow up.
- UWB (6-8.5 GHz)
- GPS (1575 MHz)
- Inductive communications (10.6 MHz)
- ISM bands (434, 868 and 2450 MHz)
- Good knowledge of the *Nordic semiconductors* radios
- RF and general electronic consulting

## Professional experience

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- 2007 - ... Employee of *Phonak Communications* in Morat / Murten as “Senior RF Engineer”. Contribution on the development of HF stages of remote control and a multimedia hub for hearing aid interfacing at 10.6 MHz. Development of an UWB channel measurement setup (6-8.5 GHz). Internal support for 2.4 GHz system definition, development and antenna design. Patch antennas and ultra miniaturized antennas for ear-level receivers. Remote controls design at 434, 868 and 2450 MHz. Contribution to the design of an ASIC transceiver at 2.4 GHz.
- 1999 - 2006 Employee of *The Swatch Group Research and Development, division Asulab* in Marin (Neuchâtel), central research and development laboratories of the *Swatch Group*. Took part in different R&D projects, such as **GPS Watch**, **PDA Watch with wireless connectivity**, **GSM Watch** and **smart vehicle key with RF transmission** and RF-ID module. Frequency band used: 433-1800 MHz mainly
- autumn 1994 Full time work during 2 months at *Siemens-Albis* in Bern, computer installation and customer support, task automation with Word and Excel macros.
- spring 1994 Introductory course: *Lonza*. Introduction to organic chemistry. Analysis of the PP vitamin using high performance liquid chromatography. This work was organized by the foundation "Science call young people".
- summer 1993 Introductory course: *Téléphonie SA* in Lausanne: cables installation for computers and telephones, work at the inventory.
- spring 1993 Introductory course in an electrical engineer bureau: *Perrin-Spaeth* in Lausanne: First contact with CAD and technical drawing, meetings and visit of building site.
- summer 1992 Introductory course at the central computing service of the *EPFL*, familiarization with supercomputers, telecommunications networks and PC installation.
- Different experiences in the enterprise owned by my family (*Chaussures Gillon-Rey SA*): articles handling, inventory management, internal customer computer support and consulting.

## Most important followed courses

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Date	Course title	Organizer, location
10-14 march 2008	Electromagnetic shielding engineering for wired and wireless communications and electronics	CEI, Davos
25-26 september 2006	ION GNSS Tutorials	Navtech, Fort Worth
17-21 october 2005	Antennas for communications	CEI, Barcelona
10-14 march 2003	Antenna measurements techniques	CEI, Davos
9-14 february 2003	ISSCC 2003 conferences + tutorials	ISSCC, San Francisco
24-28 september 2001	Wireless measurements	CEI, Dublin
10-14 july 2000	RF Circuit design for Wireless communications	Mead Education, Lausanne (EPFL)
19-20 october 1999	International Workshop on low power IC's	Mead Education, Lausanne (EPFL)
13-14 september 1999	Navtech Seminars (different GPS courses)	Navtech, Nashville

# Patents

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(Source : European patent office, 21.4.2011)

Title	Publication number	Publication Date	Inventor(s)
HEARING ASSISTANCE SYSTEM AND METHOD	<a href="#"><u>WO2011015675 (A2)</u></a>	2011-02-10	OESCH YVES [CH] RICHARD CLAUDE [CH] JOST TIMOTHEE [CH] SECALL MARC [CH] SCHMID CHRISTOPH [CH] PLATZ RAINER [CH] DIJKSTRA EVERT [CH]
METHOD OF DETERMINING A POSITION OF A LOW-POWER RADIOFREQUENCY SIGNAL RECEIVER	<a href="#"><u>WO2009071468 (A1)</u></a>	2009-06-11	ETIENNE JEAN-DANIEL [CH] OESCH YVES [CH]
RADIO-FREQUENCY SIGNAL FREQUENCY CONVERSION DEVICE FOR A LOW POWER RF RECEIVER	<a href="#"><u>HK1076546 (A1)</u></a>	2009-06-19	ZELLWEGER EMIL OESCH YVES IMFELD KILIAN FARINE PIERRE-ANDRE
ADAPTER FOR PORTABLE ELECTRONIC INSTRUMENT AND TRANSMISSION SYSTEM BETWEEN THESE TWO ELEMENTS	<a href="#"><u>HK1075304 (A1)</u></a>	2010-04-09	FERRI YVAN OESCH YVES
PORTABLE ELECTRONIC INSTRUMENT	<a href="#"><u>HK1075303 (A1)</u></a>	2010-04-23	OESCH YVES ETIENNE JEAN-DANIEL ZELLWEGER EMIL FERRI YVAN
WIRELESS DATA COMMUNICATION DEVICE AND COMMUNICATION SYSTEM INCLUDING SUCH A DEVICE	<a href="#"><u>HK1066110 (A1)</u></a>	2010-07-16	OESCH YVES
PATCH AERIAL INCLUDED IN WRIST WATCH	<a href="#"><u>JP2005077414 (A)</u></a>	2005-03-24	CASAGRANDE ARNAUD OESCH YVES
APPARATUS FOR WIRELESS TRANSMISSION OF INFORMATION AND COMMUNICATION SYSTEM COMPRISING SAID APPARATUS	<a href="#"><u>EP1420524 (A1)</u></a>	2004-05-19	OESCH YVES [CH]
RADIOFREQUENCY SIGNAL RECEIVER WITH MEANS FOR IMPROVING THE RECEPTION	<a href="#"><u>HK1051574 (A1)</u></a>	2008-04-25	YVES OESCH ANNE MONTHEARD PIERE-ANDRE FARINE
RADIO FREQUENCY SIGNAL RECEIVER WITH MEANS FOR CORRECTING THE RADIOFREQUENCY SIGNAL RECEIVER WITH MEANS FOR CORRECTING THE AFFECTS OF MULTIPATH SIGNALS, AND METHOD FOR ACTIVATING THE RECEIVER	<a href="#"><u>HK1051573 (A1)</u></a>	2008-10-31	OESCH YVES MONTHEARD ANNE FARINE PIERRE-ANDRE

RADIO-FREQUENCY SIGNAL FREQUENCY CONVERSION DEVICE FOR A LOW POWER RF RECEIVER	<b><u>TW583825 (B)</u></b>	2004-04-11	ZELLWEGER EMIL [CH] OESCH YVES [CH] IMFELD KILIAN [CH] FARINE PIERRE-ANDRE [CH]
RADIO RECEIVER WITH MEANS FOR CORRECTING MULTIPATH EFFECTS AND METHOD	<b><u>EP1265371 (A1)</u></b>	2002-12-11	OESCH YVES [CH] MONTHEARD ANNE [CH] FARINE PIERRE-ANDRE [CH]
RF SIGNAL RECEIVER WITH MEANS TO IMPROVE THE DYNAMICS OF THE RECEPTION OF THE SIGNALS	<b><u>EP1255123 (A1)</u></b>	2002-11-06	OESCH YVES [CH] MONTHEARD ANNE [CH] FARINE PIERRE-ANDRE [CH]

## Computing

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Programming	Basic knowledge in Visual Basic, Pascal, C, C++, Assembler 8051 and PIC (Microchip). Python scripting
PCB Design	Altium designer, Kicad
Circuit simulation	Ltspice, QUCS
EM simulation	Empire(IMST), IE3D (Zeland), FEMM
Mathematics	Good knowledge of Matlab/Freemat, Basic knowledge of Maple
Internet	Knowledge of HTML and network protocols
Office	Word, Excel, Powerpoint

## Hobbies

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Scouting	Until 2002, Chief of the "Brigade de Montbenon" in Lausanne (about 120 people). Organization of big activities and camps, management of the leading team (15 people), public relationship, administration and logistics. License 2 Jeunesse & Sport for open air excursion and winter activities.
Sports	Sailing (with license), regattas organization, mountain bike, climbing.
Technical	Amateur radio (with license since 1995), electronics.

## Languages

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French	Mother language
English	Good level, no problem with technical English
German	Good level
Swiss-German	Good level

**More informations** on [www.yvesoesch.ch](http://www.yvesoesch.ch)

- Technical presentations
- Articles
- Realisations

