

Curriculum vitae

Thierry Sartenaer

Born in Namur, Belgium, on November, 21st 1974.

Education

1992 - 1997 : Electrical Engineer, Université catholique de Louvain.

Orientation : Telecommunications.

Master thesis : “Analyse des données altimétriques Topex-Poséidon obtenues en cas de pluie.”

Professional background

1997-1998 : Modem design engineer, Alcatel ETCA, Charleroi, Belgium.

Collaborations with Alcatel Bell (Antwerp, Belgium) and Alcatel Espace (Toulouse, France).

1998-2004 : Teaching assistant, Communications and Remote Sensing Laboratory, Université catholique de Louvain.

Research

1998-2004 : PhD in Applied Sciences, Université catholique de Louvain.

Subject : “Multiuser communications over frequency selective wired channels and applications to the powerline access network.”

List of publications

Journal papers

- Thierry Sartenauer, Luc Vandendorpe, "Resource allocation for frequency-selective multiple access channels with adaptive QAM modulation", *Revue HF Tijdschrift (Belgian Journal of Electronics and Communications)*, n° 1 / 2001, pp. 51-63.
- Jérôme Louveaux, Luc Vandendorpe, Thierry Sartenauer, "Cyclic prefixed single carrier and multicarrier transmission : bit rate comparison", *IEEE Communications Letters*, Volume 7, N° 4, April 2003, pp. 180-182.
- Jérôme Louveaux, Luc Vandendorpe, Thierry Sartenauer, "Early-late timing recovery with decision-feedback equalizers", *IEEE Communications Letters*, Volume 7, N° 7, July 2003, pp. 332-334.
- Thierry Sartenauer, Luc Vandendorpe, "Linear and DF joint detectors for DS-CDMA communications using periodic long codes", *IEEE Transactions on Signal Processing*, Volume 52, N°7, July 2004, pp. 2080-2091.
- Thierry Sartenauer, Jérôme Louveaux, Luc Vandendorpe, "Balanced capacity of downlink and uplink wireline multiuser channels", submitted to *IEEE Transactions on Communications*, February 2004.

Conferences papers

- Thierry Sartenauer, François Horlin, Luc Vandendorpe, "DMT-FDMA as a multiple access technique for wideband upstream powerline communications", ISPLC'2000 - International Symposium on Powerline Communications, April 5-7, 2000, Limerick, Ireland, pp. 89-96.
- Thierry Sartenauer, François Horlin, Luc Vandendorpe, "Multiple access techniques for wideband upstream powerline communications: CAP-CDMA and DMT-FDMA ", ICC'2000 - IEEE International Conference on Communications, New Orleans, USA, June 18-22, 2000, Vol. 2, pp. 1064-1068.
- Thierry Sartenauer, Luc Vandendorpe, "Resource allocation for frequency-selective multiple access channels with adaptive QAM modulation",

SCVT 2000 - IEEE Symposium on Communications and Vehicular Technology, October 19, 2000, Leuven, Belgium, pp. 178-185.

- Thierry Sartenar, Luc Vandendorpe, "Resource allocation for frequency-selective multiple access channels with adaptive QAM modulation", Proceedings URSI Forum 2000, December 2000, Brussels, Belgium.
- Thierry Sartenar, Paul Delogne, "Powerline cables modelling for broadband communications", ISPLC'2001 - International Symposium on Powerline Communications, April 4-6, 2001, Malmö, Sweden, pp. 331-337.
- Luc Vandendorpe, François Horlin, Thierry Sartenar, "FSLE and FDSF joint detectors for long code DS-CDMA codes", ICASSP'01 - IEEE International Conference on Acoustics, Speech and Signal Processing, May 7-11, 2001, Salt Lake City, USA, Vol. 4, pp. 2261-2264.
- Luc Vandendorpe, François Horlin, Thierry Sartenar, "Linear and DF joint detectors for DS-CDMA communications using periodic long codes", ICC'2001 - IEEE International Conference on Communications, June 11-15, 2001, Helsinki, Finland, Vol. 3, pp. 821-825.
- Fawzi Issa, Thierry Sartenar et al., "Analysis of power line communication networks using a new approach based on scattering parameters matrix", IEEE International Symposium on Electromagnetic Compatibility, August 19-23, 2002, Minneapolis, USA, Vol. 2, pp. 1043-1047.
- Thierry Sartenar, Luc Vandendorpe, "About the sensitivity of FB modulations to timing offsets", ICC'2002, IEEE International Conference on Communications, April 28 - May 2, 2002, New York, USA, Vol. 3, pp. 1485-1489.
- Thierry Sartenar, Luc Vandendorpe, "ML DA timing estimation for multiuser FB uplink transmission over static time dispersive channels", EUSIPCO'2002 - XI European Signal Processing Conference, September 3-6, 2002, Toulouse, France, Vol. II, pp. 35-38 (Invited paper).
- Jérôme Louveaux, Luc Vandendorpe, Thierry Sartenar, "Cyclic prefixed single carrier and multicarrier transmission : bit rate compari-

son", SCVT'02 - IEEE Symposium on Communications and Vehicular Technology, Louvain-la-Neuve, Belgium, October 2002, pp. 61-64.

- Thierry Sartenar, Luc Vandendorpe, "Balanced capacity of wireline multiaccess channels", EUSIPCO'2004 - XII European Signal Processing Conference, September 7-10, 2004, Vienna, Austria.

COST contributions

- Thierry Sartenar, François Horlin, Luc Vandendorpe, "Multiple access techniques for wideband upstream powerline communications: CAP-CDMA and DMT-FDMA ", COST 262 - 4th Management Committee Meeting, Barcelona, Spain, November 22-23, 1999, TD020.
- Thierry Sartenar, Paul Delogne, "Powerline cables modelling for broadband communications", COST 262 - 2nd PLCs Group Meeting, Malmö, Sweden, April 4-6, 2001, TD054.

Reports

- Luc Vandendorpe, François Deryck, Gaetan Castelein, Thierry Sartenar, "Study of Peak-to-Average power Ratio (PAR) reduction techniques in DMT systems", Confidential Report with Alcatel Bell, September 1998, 81 pp.