

INFORMAZIONI PERSONALI

Buzzi Stefano

 (Italia)
 32983XXXXXX
 buzzi@unicas.it

ESPERIENZA
PROFESSIONALE

01/11/2002–alla data attuale

Professore Associato

Università di Cassino e del Lazio Meridionale, Cassino (Italia)

01/03/2000–31/10/2002

Ricercatore Universitario a Tempo Indeterminato

Università di Cassino e del Lazio Meridionale, Cassino (Italia)

ISTRUZIONE E FORMAZIONE

1995–1999

Dottorato di Ricerca in "Ingegneria Elettronica ed Informatica"

Università di Napoli "Federico II"

1988–1994

Laurea in Ingegneria Elettrica, voto 110/110 con Lode

Università di Napoli "Federico II", Napoli

COMPETENZE PERSONALI

Lingua madre italiano

Altre lingue

	COMPRESIONE		PARLATO		PRODUZIONE SCRITTA
	Ascolto	Lettura	Interazione	Produzione orale	
inglese	C1	C2	C1	B2	C2

Livelli: A1 e A2: Utente base - B1 e B2: Utente autonomo - C1 e C2: Utente avanzato
Quadro Comune Europeo di Riferimento delle Lingue

Competenze professionali

ARGOMENTI ATTUALI DI RICERCA:

Sistemi di comunicazione wireless
Reti cellulari
Elaborazione statistica dei segnali

PUBBLICAZIONI SU RIVISTA:

J-60 S. Buzzi and C. D'Andrea, "Cell-free massive MIMO: User-centric approach," in press on *IEEE Wireless Communications Letters*, Vol. 6, pp. 706 – 709., December 2017
J-59 S. Buzzi and C. D'Andrea, "Massive MIMO 5G cellular networks: mm-wave versus mu-wave frequencies," *ZTE Communications*, special issue on 5G New Radio, Vol. 15, No. S1, pp. 41-49, 2017 (invited paper).
J-58 S. Buzzi, C.L. I, T.E. Klein, H.V. Poor, C. Yang, and A. Zappone, "A survey of energy-efficient techniques for 5G networks and challenges ahead," *IEEE Journal on Selected Areas in*

- J-57 L. Venturino, and S. Buzzi, "Energy-aware and rate-aware heuristic beamforming in downlink MIMO OFDMA networks with base station coordination," *IEEE Transactions on Vehicular Technology*, Vol. 64, pp. 2897 - 2910, July 2015
- J-56 L. Venturino, A. Zappone, C. Risi, S. Buzzi, "Energy-Efficient Scheduling and Power Allocation in Downlink OFDMA Networks with Base Station Coordination," *IEEE Transactions on Wireless Communications*, Vol. 14, pp. 1-14, January 2015.
- J-55 A. Zappone, E. Jorswieck, and S. Buzzi, "Energy efficiency and interference neutralization in two-hop MIMO interference channels," *IEEE Transactions on Signal Processing*, Vol. 62, pp. 6481 - 6495, December 15, 2014.
- J-54 S. Buzzi, C. Risi, and G. Colavolpe, "Green and fast DSL via joint processing of multiple lines and time-frequency packed modulation," *Physical Communication (Elsevier)*, vol. 13, Part C, pp. 99 - 108, December 2014.
- J-53 P. Banelli, S. Buzzi, G. Colavolpe, A. Modenini, F. Rusek, and A. Ugolini, "Modulation formats and waveforms for the physical layer of 5G wireless networks: Who will be the heir of OFDM?," *IEEE Signal Processing Magazine*, Vol. 31, No. 6, pp. 80-93, November 2014.
- J-52 J. G. Andrews, S. Buzzi, W. Choi, S. Hanly, A. Lozano, A. C. K. Soong, J. C. Zhang, "What will 5G be?," *IEEE Journal on Selected Areas in Communications*, Vol. 32, pp. 1065 - 1082, June 2014. **(Highly cited paper; Top-5 download in IEEE Xplore – containing 4 Million documents – , Aug. 2014 - December 2015)**
- J-51 A. Zappone, G. Alfano, S. Buzzi, M. Meo, "Distributed energy-aware resource allocation in multi-antenna multi-carrier interference networks with statistical CSI," *EURASIP Journal on Wireless Communications and Networking*, 2013:205, doi:10.1186/1687-1499-2013-205.
- J-50 M. Piezzo, A. Aubry, S. Buzzi, A. De Maio, A. Farina, "Non-cooperative code design in radar networks: a game-theoretic approach," *EURASIP Journal on Advances in Signal Processing*, 2013:63, doi:10.1186/1687-6180-2013-63.
- J-49 A. Zappone, Z. Chong, E. Jorswieck, S. Buzzi, "Energy-aware competitive power control in relay-assisted interference wireless networks," *IEEE Transactions on Wireless Communications*, Vol. 12, pp. 1860 - 1871, April 2013.
- J-48 S. Buzzi, A. Zappone, "Potential games for energy-efficient resource allocation in multipoint-to-multipoint CDMA wireless data networks," *Physical Communication (Elsevier)*, Vol. 7, pp. 1 - 13, June 2013.
- J-47 N. Mazzali, G. Colavolpe, S. Buzzi, "CPM-based spread spectrum systems for multi-user communications," *IEEE Transactions on Wireless Communications*, Vol. 12, pp. 358 - 367, January 2013 (EURACON 2013 Best Published Student Paper Award).
- J-46 S. Buzzi, G. Colavolpe, D. Saturnino, A. Zappone, "Potential games for energy-efficient power control and subcarrier allocation in uplink multicell OFDMA systems," *IEEE Journal on Selected Topics in Signal Processing (special issue on Game Theory in Signal Processing)*, Vol. 6, pp. 89 - 103, April 2012.
- J-45 A. Zappone, S. Buzzi, E. Jorswieck, "Energy-efficient power control and receiver design in relay-assisted DS/CDMA wireless networks via game theory," *IEEE Communications Letters*, Vol. 15, pp. 701-703, July 2011.
- J-44 S. Buzzi, D. Saturnino, "A game-theoretic approach to energy-efficient power control and receiver design in cognitive CDMA wireless networks," *IEEE Journal of Selected Topics in Signal Processing*, Vol. 5, pp. 137 - 150, February 2011.
- J-43 S. Buzzi, H. V. Poor, A. Zappone, "Transmitter waveform and widely-linear receiver design: Non-cooperative games for wireless multiple-access networks," *IEEE Transactions on Information Theory*, Vol. 56, pp. 4874 - 4892, October 2010.
- J-42 S. Buzzi, L. Venturino, A. Zappone, "Multipath delay acquisition in asynchronous doubly-selective DS/CDMA fading channels," *IEEE Communications Letters*, Vol. 14, pp. 276 - 278, April 2010.
- J-41 S. Buzzi, L. Venturino, A. Zappone, A. De Maio, "Blind user detection in doubly-dispersive DS/CDMA fading channels," *IEEE Transactions on Signal Processing*, Vol. 58, pp. 1446 - 1451, March 2010.
- J-40 S. Buzzi, D. Saturnino, "SINR-maximizing spreading code allocation for non-linear serial interference cancellation," *IEEE Transactions on Communications*, Vol. 58, pp. 631 - 641, February 2010.

- J-39 S. Buzzi, H. V. Poor, D. Saturnino, "Noncooperative waveform adaptation games in multiuser wireless communications," *IEEE Signal Processing Magazine*, Vol. 26, pp. 64 - 76, September 2009.
- J-38 S. Buzzi, V. Massaro, H. V. Poor, "Energy-efficient resource allocation in multipath CDMA channels with bandlimited waveforms," *IEEE Transactions on Signal Processing*, Vol. 57, pp. 1494 - 1510, April 2009.
- J-37 S. Buzzi, H. V. Poor, D. Saturnino, "Adaptive cross-layer distributed energy-efficient resource allocation algorithms for wireless data networks," *EURASIP Journal on Advances in Signal Processing*, Volume 2009 (2009), Article ID 532607, 14 pages.
- J-36 S. Buzzi, M. Lops, L. Venturino, M. Ferri, "Track-before-detect procedures in multi-targets environments," *IEEE Transactions on Aerospace and Electronic Systems*, Vol. 44, pp. 1135 - 1140, July 2008.
- J-35 S. Buzzi, V. Massaro, "Parameter estimation and multiuser detection for bandlimited long-code CDMA systems," *IEEE Transactions on Wireless Communications*, Vol. 7, pp. 2307-2317, June 2008.
- J-34 S. Buzzi, H. V. Poor, "Joint receiver and transmitter optimization for energy-efficient CDMA communications," *IEEE Journal on Selected Areas in Communications*, Vol. 26, pp. 459-472, April 2008.
- J-33 S. Buzzi, "Multi-pass channel estimation and joint multiuser detection and equalization for MIMO long-code DS/CDMA systems," *EURASIP Journal on Wireless Communications and Networking*, Volume 2006 (2006), Article ID 24132, 13 pages.
- J-32 S. Buzzi, M. Lops, S. Sardellitti, "Widely-linear reception strategies for layered space-time wireless communications," *IEEE Transactions on Signal Processing*, Vol. 54, pp. 2252-2262, June 2006.
- J-31 S. Buzzi, M. Lops, L. Venturino, "Track-Before-Detect procedures for early detection of moving target from airborne radars," *IEEE Transactions on Aerospace and Electronic Systems*, Vol. 41, pp. 937-954, July 2005.
- J-30 S. Buzzi, A. De Maio, "Code-aided blind detection of the transmission rate for multirate direct sequence CDMA systems," *IEEE Transactions on Signal Processing*, Vol. 53, pp. 2182-2192, June 2005.
- J-29 S. Buzzi, M. Lops, S. Sardellitti, "Further results on Cramer-Rao bounds for parameter estimation in long-code DS/CDMA systems," *IEEE Transactions on Signal Processing*, Vol. 53, pp. 1216-1221, March 2005.
- J-28 S. Buzzi, M. Lops, L. Venturino, "Blind multi-antenna receivers for dispersive DS/CDMA channels with no channel-state information," *IEEE Transactions on Signal Processing*, Vol. 52, pp. 2821-2835, October 2004.
- J-27 S. Buzzi, M. Lops, S. Sardellitti, "Performance of iterative data detection and channel estimation for single-antenna and multiple-antennas wireless communications," *IEEE Transactions on Vehicular Technology*, Vol. 53, pp. 1085-1104, July 2004.
- J-26 S. Buzzi, E. Grossi, M. Lops, "Timing-free blind multiuser detection for multicarrier DS/CDMA systems with multiple antennas," *Eurasip Journal on Applied Signal Processing, Special Issue on MIMO Communications and Signal Processing*, Vol. 2004, pp. 613-628, May 2004.
- J-25 S. Buzzi, H.V. Poor, "A multi-pass approach to joint data and channel estimation in long-code CDMA systems," *IEEE Transactions on Wireless Communications*, Vol.3, pp. 612-626, March 2004.
- J-24 S. Buzzi, V. Krishnamurthy, M. Lops, H. V. Poor, "Blind multiuser detection in multirate CDMA based on cyclic LMS adaptation," *Wireless Personal Communications*, Kluwer academic Publishers, Vol. 27, pp. 293-320, 2003.
- J-23 S. Buzzi, M. Lops, A. Pauciullo, "Iterative cyclic subspace tracking for blind adaptive multiuser detection in multirate CDMA systems," *IEEE Transactions on Vehicular Technology*, Vol. 52, pp. 1463-1475, November 2003.
- J-22 S. Buzzi, A. De Maio, M. Lops, "Code-aided blind adaptive new user detection in DS/CDMA systems with fading time-dispersive channels," *IEEE Transactions on Signal Processing*, Vol. 51, pp. 2637-2649, October 2003.
- J-21 S. Buzzi, M. Lops, H.V. Poor, "Blind adaptive joint multiuser detection and equalization in dispersive differentially encoded CDMA channels," *IEEE Transactions on Signal Processing*, Vol. 51, pp. 1880-1893, July 2003.
- J-20 S. Buzzi, M. Lops, A. Pauciullo, G. Ricci, "Adaptive group detection for DS/CDMA systems over frequency-selective fading channels," *European Transactions on Telecommunications*, Vol. 14, pp.

213-226, May/June 2003.

J-19 S. Buzzi, E. Conte, A. De Maio, "Polarization diversity reception of non-orthogonal multi-pulse signals in multiuser Rayleigh fading channels," IEE Proceedings - Communications, Vol. 150, pp. 96-100, April 2003.

J-18 S. Buzzi, M. Lops, "Two-stage ML-based group detection for direct-sequence CDMA systems," Journal of Communications and Networks, Vol. 5, pp. 33-42, March 2003.

J-17 S. Buzzi, H.V. Poor, "On parameter estimation in long-code DS/CDMA systems: Cramer-Rao bounds and least-squares algorithms," IEEE Transactions on Signal Processing, Vol. 51, pp. 545-559, February 2003.

J-16 S. Buzzi, M. Lops, "Performance analysis for the improved linear multiuser detectors in BPSK modulated DS/CDMA systems," IEEE Transactions on Communications, Vol. 51, pp. 37-42, January 2003.

J-15 S. Buzzi, M. Lops, H.V. Poor, "Code-aided interference suppression for DS/CDMA overlay systems," Proceedings of the IEEE, Vol. 90, pp. 394-435, March 2002.

J-14 S. Buzzi, M. Lops, A.M. Tulino, "A generalized minimum-mean-output-energy strategy for CDMA systems with improper MAI," IEEE Transactions on Information Theory, Vol. 48, pp. 761-767, March 2002.

J-13 S. Buzzi, H.V. Poor, "A single-antenna blind receiver for multiuser detection in unknown correlated noise," IEEE Transactions on Vehicular Technology, Vol. 51, pp. 209-215, January 2002.

J-12 S. Buzzi, H.V. Poor, "Timing-free blind multiuser detection in differentially encoded DS/CDMA systems," IEEE Transactions on Communications, Vol. 49, pp. 2077-2082, December 2001.

J-11 S. Buzzi, H.V. Poor, "Channel estimation and multiuser detection in long-code DS/CDMA systems," IEEE Journal on Selected Areas in Communications, Special Issue on Multiuser Detection Techniques for Wireless and Wireline Applications, Vol. 19, pp. 1476-1486, August 2001.

J-10 S. Buzzi, A. De Maio, M. Lops, G. Ricci, "Diversity reception of nonorthogonal multipulse signals in multiuser Nakagami fading channels," IEEE Communications Letters, Vol. 5, pp. 188-190, May 2001.

J-09 S. Buzzi, E. Conte, A. De Maio, M. Lops, "Optimum diversity detection over fading dispersive channels with non-Gaussian noise," IEEE Transactions on Signal Processing, Vol. 49, pp. 767-776, April 2001.

J-08 S. Buzzi, M. Lops, A.M. Tulino, "Adaptive detection and channel estimation for dual-rate DS/CDMA networks in frequency-selective fading," Wireless Personal Communications, Kluwer academic Publishers, Vol. 16, No. 3, pp. 259-285, March 2001.

J-07 S. Buzzi, M. Lops, A.M. Tulino, "Blind adaptive multiuser detection for asynchronous dual-rate DS/CDMA systems," IEEE Journal on Selected Areas in Communications, Vol. 19, pp. 233-244, February 2001.

J-06 S. Buzzi, M. Lops, A.M. Tulino, "A new family of MMSE receivers for interference suppression in asynchronous multiuser DS/CDMA systems employing BPSK modulation," IEEE Transactions on Communications, Vol. 49, pp. 154-167, January 2001.

J-05 S. Buzzi, M. Lops, A.M. Tulino, "Partially blind adaptive MMSE interference rejection in asynchronous DS/CDMA networks over frequency-selective fading channels," IEEE Transactions on Communications, Vol. 49, pp. 94-108, January 2001.

J-04 S. Buzzi, M. Lops, A.M. Tulino, "MMSE RAKE reception for asynchronous DS/CDMA overlay systems and frequency-selective fading channels," Wireless Personal Communications, Kluwer Academic Publishers, Vol. 13, pp. 295-318, June 2000.

J-03 S. Buzzi, M. Lops, A.M. Tulino, "Time-varying narrowband interference rejection in asynchronous multiuser DS/CDMA systems over frequency-selective fading channels," IEEE Transactions on Communications, Vol. 47, pp. 1523-1537, October 1999.

J-02 S. Buzzi, E. Conte, M. Lops, "Signal detection over Rayleigh-fading channels with non-Gaussian noise," IEE Proceedings - Communications, vol. 144, pp. 381-386, December 1997.

J-01 S. Buzzi, E. Conte, M. Lops, "Optimum detection over Rayleigh-fading, dispersive channels with non-Gaussian noise," IEEE Transactions on Communications, vol. 45, pp.1061-1069, September 1997.

Elaborazione delle informazioni	Comunicazione	Creazione di Contenuti	Sicurezza	Risoluzione di problemi
Utente avanzato	Utente avanzato	Utente avanzato	Utente avanzato	Utente avanzato

Competenze digitali - Scheda per l'autovalutazione

- Uso avanzato del software Matlab