## **Summary**

Febo Cincotti is Associate Professor of Biomedical Engineering (ING-INF/06) at Sapienza University of Rome. He holds a PhD degree in Biophysics, and an MSc degree in Electronics Engineering.

His scientific activity is generally framed in the methodological and applicative research on processing of neurophysiological signals and includes the development of direct Brain-Computer Interfaces for assistive and rehabilitation purposes.

He is co-author of 124 journal papers and 96 conference papers. His (Scopus) H-Index is 50.

He has been principal investigator in 5 EU-funded projects, and coordinator of a national charity-funded project. He was also co-PI in 6 EU-funded projects, and participated to numerous international and national research projects.

As expert in the field of Brain-Computer Interfaces, he was member of advisory board of a EU-funded project, opponent in PhD dissertations, and keynote speaker in several international conferences.

He teaches in the MSc programs in Biomedical Engineering, Artificial Intelligence and Robotics, and Control Engineering (courses: Advanced Methods for Biomedical Data Analysis, 12 CFU; Biosignal Processing, 3 CFU; Neuroengineering, 3 CFU).

Since 2014 he holds the National Scientific Habilitation as Full Professor of Biomedical Engineering.

## Part I – General Information

Full Name	CINCOTTI Febo
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## Part II - Education

Type	Year	Institution	Notes (Degree, Experience,)
PhD	2003	Sapienza University of Rome	Biophysics
MSc graduation	1998	Sapienza University of Rome	Electronics Engineering

# Part III – Appointments

## $IIIA-A cademic\ Appointments$

Start	End	Institution	Position
2015		Sapienza University of Rome Dept of Computer, Control and Management Engineering	Associate Professor
2011	2015	Sapienza University of Rome Dept of Computer, Control and Management Engineering	Assistant Professor ("Ricercatore a tempo indeterminato")
2008	2009	Sapienza University of Rome Dept. of Human Physiology	Post-Doc Fellow ("Assegnista di ricerca")

## IIIB - Other Appointments

Start	End	Institution	Position
2009	_	IRCCS Fondazione Santa Lucia, Rome	Senior Research Scientist
2003	2008	IRCCS Fondazione Santa Lucia, Rome	Research Scientist
1999	2002	IRCCS Fondazione Santa Lucia, Rome	Research Fellow (Borsista)

## IIIC - Academic Service

## Executive committees

2018 –	Appointed member of the review committee for scientific and educational activities of the Faculty ("Comitato di Monitoraggio dell'attività didattica e scientifica di Facoltà")
2018 –	Elected member of the planning and evaluation committee of the Department ("Commissione Programmazione e Valutazione di Dipartimento"), as representative of the ING-INF/06 scientific sector
2017 –	Elected member of the executive committee of the Faculty ("Giunta di Facoltà")
2016 –	Elected member of the executive committee of the Department ("Giunta di Dipartimento")
2016 – 2018	Appointed member of the education committee of the Department ("Commissione didattica di Dipartimento")

2014 – 2017	Invited member of the planning and evaluation committee of the Department ("Commissione Programmazione e Valutazione di Dipartimento"), as representative of the ING-INF/06 scientific sector
2014 - 2015	Elected member of the executive committee of the Faculty ("Giunta di Facoltà")
2013 – 2015	Elected member of the executive committee of the Department ("Giunta di Dipartimento")

## Boards of higher education programs

2016 – 2019	Member of the academic board ("Consiglio di Area Didattica") of the MSc program in Data Science
2014 –	Member of the curriculum committee ("Commissione offerta formative") of the BSc and MSc programs in Clinical and Biomedical Engineering
2013 –	Member of the academic board ("Collegio dei docenti") of the PhD program in Control Engineering, Bioengineering and Operations Research
2012 –	Member of the academic board ("Consiglio di Area Didattica" - CAD) of the BSc and MSc programs in Clinical and Biomedical Engineering

## **Evaluation committees**

2019	Member of an evaluation committee for the selection of an associate professor at Sapienza University of Rome
2019	Member of 2 evaluation committees for the selection of assistant professors ("RTDA") at the universities of Catanzaro and Chieti
2018	Member of an evaluation committee for the selection of tenure-track assistant professor ("RTDB") at the University of Bologna
2017 – 2018	Member of 2 PhD admissions committees (Sapienza University of Rome and Campus Biomedico)
2016 – 2018	Member of 2 committees for the final examination of PhD students (Sapienza University of Rome and University of Catanzaro)
2013 – 2018	Member of 8 evaluation committees for the selection of post-doc research fellows ("Assegnista di Ricerca") at Sapienza University of Rome

# Part IV – Teaching experience

## Courses in BSc and MSc programs

Year	Institution	Lecture/Course
Starting 2019/2020	Sapienza University of Rome	Neuroengineering (ING-INF/06, 3 CFU), MSc programs in Artificial Intelligence and Robotics (LM-32) and Control Engineering (LM-25)
Since 2015/16	Sapienza University of Rome	Metodi Avanzati per l'Analisi di Dati Biomedici (ING-INF/06, 12 CFU),
		Elaborazione Dati e Segnali Biomedici II (ING-INF/06, 3 CFU),  Laurea Magistrale in Ingegneria Biomedica (LM-21)
2016/17 2017/18 2018/19	Sapienza University of Rome	Bioinformatics (ING-INF/06, 3 CFU), MSc Program in Data Science (LM-91)
2015/16 2014/15	Sapienza University of Rome	Modelli di Sistemi Biologici (ING-INF/06, 3 CFU), Laurea Magistrale in Ingegneria Biomedica (LM-21)
2014/15 2013/14 2012/13	Sapienza University of Rome	Analisi Biosistemi Complessi (ING-INF/06, 12 CFU), Laurea Magistrale in Ingegneria Biomedica (LM-21)
2011/12	Sapienza University of Rome	Analisi Biosistemi Complessi (ING-INF/06, 9 CFU), Laurea Magistrale in Ingegneria Biomedica (LM-21)
2002/2003  2010/2011	Tor Vergata University of Rome	C.I. Strumentazione laboratorio di neurofisiologia (modulo Biofisica, FIS/07, 1 CFU),  Laurea in Tecniche Diagnostiche in  Neurofisiopatologia (L/SNT3)
2002/2003  2010/2011	Tor Vergata University of Rome	C.I. Elaborazione Computerizzata dei Segnali Bioelettrici (modulo Elaborazione delle informazioni, ING-INF-06, 1 CFU), Laurea in Tecniche Diagnostiche in Neurofisiopatologia (L/SNT3)

## **Short Courses in PhD programs**

2018/2019	Advances in Bioengineering – "Statistical analysis of biomedical data" (2.5 CFU), PhD program in <i>Control engineering, Bioengineering and Operations Research</i>
2016/2017	Advances in Bioengineering – "Statistical processing of biomedical signals" (2.5 CFU) PhD program in <i>Control engineering, Bioengineering and Operations Research</i>
2014/2015	Great Ideas in ICT – "Direct interfaces between the human brain and an artificial artefact" (0.5 CFU), PhD School in information and communication science and technology

# **Supervision of students**

2015 –	Supervisor of 5 PhD Students (Sapienza University of Rome)
2008 -2014	Co-supervisor of 4 PhD students (Tor Vergata University of Rome, University of Genova, University of Bologna)
2012 –	Thesis supervisor of >30 MSc students (Sapienza University of Rome, nearly all enrolled in the Biomedical Engineering MSc program)
2003 -2011	Co-tutor of >20 BSc students.

# Part V - Society memberships, Awards and Honors

## **Habilitation to professorship**

National Scientific Habilitation as Full Professor (ASN2012, valid from 14/02/2014 to 14/02/2020)

## **Editorial activity**

2011 -	IEEE Transactions on Biomedical Engineering, Associate Editor
2012	

## Activity as expert

2017	Opponent in PhD final examination committee, Graz University of Technology, Austria		
2015 & 2012 & 2009	7 6 7		
2012	Opponent in PhD final examination committee, École Polytechnique Fédérale de Lausanne, Switzerland		
2010 - 2011	Member of the Advisory Board, FP7 Coordination and Support Action "Future BNCI"		
2010 & 2005	Co-chair of 2 "BCI Technology" panels (meetings at the World Meeting on Brain-Computer Interfaces Albany, NY, 2005; Asilomar, CA, 2010).		
2006	Invited as expert in Brain-Computer Interfaces, Information Society and Media Directorate General of the European Commission (in preparation of Call 2 of the FP7 Workprogramme)		

#### **Student awards**

2001	Open finalist, EMBS Student Paper Competition, 23rd Conference of the IEEE
	Engineering in Medicine and Biology Society, Istanbul, 2001

## **Conference organization**

2016	Industrial Panel co-chair, BIOSTEC 2016, Rome, Italy, February 22, 2016
2013	Program committee member, MEDICON 2013, Sevilla, Spain, September 25-28, 2013
2013	Program/steering committee member, World BCI Meeting 2013, Asilomar, CA, June 3-7, 2013
2010	Co-chair of the "BCI Technology" panel (International Meeting on Brain-Computer Interfaces, Asilomar, CA, 2010).
2010	Program committee member, TOBI Workshop 2010, Graz, Austria, February 3-4, 2010

2009	Scientific program committee member, 7th International Symposium on Noninvasive Functional Source Imaging of the Brain and Heart & 7th International Conference on Bioelectromagnetism, Rome, Italy, May 29-31, 2009.		
2007	Organizer, Third Workshop of the BCI2000 Project, Rome, Italy, December 5-6, 2007.		
2007	Organization committee member, Workshop of the Neuromath COST Action, Rome, Italy, December 4-5, 2007.		
2006	Organization committee member, First Workshop of the MAIA Project, Rome, Italy, November 9-10, 2006.		
2006	Session Chairman, "Third International BCI Workshop" tenuto a Graz, Austria, September 22-23, 2006.		
2005, 2010	Co-chair of the "BCI Technology" panel (meetings at the World Meeting on Brain-Computer Interfaces Albany, NY, 2005; Asilomar, CA, 2010).		
2001	Session Chairman, "Multimodal Integration" al "23rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society", Istanbul, Turkey, October 25-28 2001.		

## Invited talks/lectures

2019 (Oct.)	9th IEEE Brain-Machine Interfaces Workshop - IEEE Systems, Man, and Cybernetics Society Annual Conference "BCIs for neurorehabilitation ( <i>tentative</i> )" ( <i>keynote speaker</i> )		
2016	Conference of the Italian Group of Bioengineering, Naples June 20-22, 2016 (invited speaker)		
2015	Post-graduate course ("Master di II livello) "Digital life and Smart Living", Scuola Superiore Sant'Anna, Pisa, October 23, 2014. ( <i>lecture</i> )		
2014	Post-graduate course ("Master di II livello) "Smart Solutions – Smart Communities", Scuola Superiore Sant'Anna, Pisa, October 23, 2014. (lecture)		
2014	Neurotechnix 2014, Rome, October 26, 2014 (keynote speaker)		
2014	New Frontiers in Neurotechnology, Naples, September 12, 2014		
2012	Europython 2012, Florence, July 2-8 2012		
2012	Biomedica 2012, Liege, Belgium, 18-19 April, 2012		
2009	European Society for Cognitive and Affective Neuroscience (ESCAN) Kick-off meeting, Amsterdam, The Netherlands, December 10-12, 2009.		
2009	Workshop on "Brain-Machine Interfaces for Space Applications", Noordwijk, The Netherlands, November 30, 2009.		
2009	International Conference on Spatial Cognition, Rome, September 14-19, 2009		
2008	Brain Computer Interface Workshop @ International Conference on Simulation, Modeling and Programming for Autonomous Robots (SIMPAR 2008), Venice, 4 November 2008		
2007	Workshop of the Neuromath COST Action, Rome, Italy, December 4-5, 2007.		
2007	The NEUROBOTICS Summer School 2007, Brain-Machine Interfaces, Volterra, Italy. Sept. 16-21, 2007 ( <i>lecture</i> ).		

BCI meets HCI, PASCAL Workshop, Martigny, Switzerland, April 16-17, 2007.

## Membership in academic research centers

2018 -	Founding member of the interdepartmental research center: STITCH - Sapienza
	information-based Technology InnovaTion Center for Health

2014 – Member of the inter-university center for research on cognitive processing in natural and artificial systems ("Centro interuniversitario di ricercar sull'elaborazione cognitive nei sistemi naturali e artificiali – ECONA").

# **Part VI - Funding Information**

# **Principal Investigator**

Year	Title	Program	Role	Grant value
2019 – 2022	The PROMOTOER: a Brain Computer Interface –based intervention that promotes upper limb functional motor recovery [] in subacute stroke patients	Ministero della Salute, Ricerca Finalizzata 2018	Unit leader	53'000 EUR
2018 – 2021	"Disorders of Consciousness (DoC): enhancing the transfer of knowledge and professional skills on evidence- based interventions and validated technology for a better management of patients - DoCMA	H2020-MSCA- RISE-2017	Unit leader	126'000 EUR
2016 – 2018	"MIME-BCI: Mindfulness Meditation training supported by Brain-Computer Interfaces"	Progetti di Ateneo (multidisciplinare)	PI	30'000 EUR
2015 – 2017	"APOSTROPHES - Assisting Post Stroke Rehabilitation through real time Physiological Signal analysis"	Progetti di Ateneo	PI	15'000 EUR
2014 – 2016	STELE	Progetto FILAS	PI	89'000 EUR
2014	Collaudo attrezzatura di ricerca - nell'ambito Progetto PON "Polo di Innovazione Cyberbrain"	Ricerca c/terzi, Fondazione Neurone Onlus	PI	8'000 EUR
2011 – 2015	"Augmented BNCI Communication" (ABC)	FP7- ICT-2011.5.5 (STREP)	Unit leader	189'000 EUR
2012 – 2013	"Model of Neural Circuits Subtending Attention"	Progetti di Ateneo (FARI)	PI	6'500 EUR
2010 – 2013	"Brain-computer interface devices to support individual autonomy in locked-in individuals" (BRINDISYS)	Fondazione ARiSLA – Call 2009	Coordinator	129'000 EUR (unit) 336'000 EUR (consortium)
2010 – 2013	"BNCI-driven robotic physical therapies in stroke rehabilitation of Gait disorders" (BETTER)	FP7-ICT-2009.7.2 (STREP)	Unit leader	254'000 EUR
2008 – 2011	"Smart homes for all; an embedded middleware platform for pervasive and immersive environments for-all" (SM4ALL)	FP7- ICT-2007.3.7 (STREP)	Unit leader	194'000 EUR
2006 – 2007	"General Purpose Brain-Computer Interface System" (BCI2000)	NIH-NIBIB (SBIR), United States of America	Foreign contractor	~20'000 EUR
2001 – 2002	"Non invasive estimation of human cortical activity during cognitive tasks using High Resolution EEG"	Progetti di Ateneo, (Giovane Ricercatore)	Unit leader	10'000'000 LIT

## **Co-Principal Investigator**

(i.e. leader of the bioengineering aspects of clinical projects, both in the proposal and the implementation phases)

2015 – 2017	BrainHack - Bringing the arts and sciences of brain and neural computer interface together	H2020-FETOPEN- 2015-CSA	Co-PI	75'000 EUR
2013 – 2015	BNCI Horizon 2020 – The Future of Brain/Neural Computer Interaction: Horizon 2020	FP7-ICT-2013-10 (CSA)	Co-PI	81'000 EUR
2012 – 2015	"Brain Computer Interface-driven rehabilitation after stroke: an add-on intervention for hand motor recovery"	Italian Ministry of Health (ricerca finalizzata)	Co-PI	150.000 EUR
2008 – 2013	"Tools for brain-computer interaction" (TOBI)	FP7-ICT-2007.7.2 (IP)	Co-PI	~1 MLN EUR
2004 – 2007	"Non Invasive Brain Interaction with Robots - Mental Augmentation through Determination of Intended Action" (MAIA)	FP6-IST-FET (STREP)	Co-PI	~300'000 EUR
2004 – 2006	"Assistive System for Patient's Increase of Communication, ambient control and mobility in absence of muscular Effort" (ASPICE)	Fondazione Telethon-ULDM	Co-PI	70'000 EUR

## Investigator

2010 – 2013	FP7- ICT-2009.7.2 (STREP)	"Deployment of Brain-Computer Interfaces for the Detection of Consciousness in Non- Responsive Patients" (DECODER)
2006 – 2009	Ministero degli affari Affari Esteri (Progetto Italia-Cina)	" Brain Computer Interfaces by using high and low resolution EEG"
2001 – 2002	CNR (Agenzia 2000)	"Impiego delle interfacce uomo-computer per la disabilità e per la riabilitazione motoria".
2001 – 2003	Ministero della Sanità (Progetti Finalizzati)	Prognosi del recupero funzionale motorio post stroke: studio neurofisiologico anatomocorrelato".
1999 – 2002	Fondazione Telethon,	"Quantitative EEG/MEG Analysis for Objective Assessment of Alzheimer Disease: from Diagnosis to Treatment Evaluation".
1999 – 2002	European Commission, FP4- ESPRIT-LTR	"Adaptive Brain Interfaces" (ABI)

### Part VII – Research Activities

Keywords
Brain-Computer
Interface
Augmented
Communication
Neuromotor
rehabilitation
High-resolution
EEG
EEG inverse
problem

#### **Brief Description**

Dr. Cincotti's scientific activity is generally framed in the methodological and applicative research on processing of neurophysiological signals, with main interest in EEG-based Brain-Computer Interfaces (BCIs).

As PI, he produced scientific advancements in:

- Neuroelectrical (EEG) signal analysis, with focus on estimation of cortical sources, also in combination with other imaging techniques (MEG, fMRI).
- Real time processing of electrophysiological data, for use in monitoring and neurofeedback systems.
- Development and clinical assessment (effectiveness, usability, neuropsychological functions, motor function) of assistive technologies and rehabilitation tools based on Brain-Computer Interfaces

As research team member, he contributed to advancements in:

- EEG biomarkers of dementia
- EEG-based estimation of brain connectivity
- Electrophysiology of the motor cortex in healthy subjects and patients with acquired neurological deficits.

#### 1. Brain Computer Interfaces

### 1.a Methodological development

Since 1998 (ABI Project), he contributed to the definition of algorithms for spatial filtering, feature extraction and classification, aimed at identifying in real time voluntary modulation of EEG rhythms. In the context of a following European project (MAIA), he developed methodologies to estimate cortical activations in real time. He also proposed the use of vibrotactile interfaces as sensory feedback during operation of BCIs.

More recent contributions include definition and validation of algorithms for asynchronous BCIs [6], and elucidation of the influence of jitter on the performance of ERP-based BCIs [7].

#### 1.b Augmentative and alternative communication

Since 2004 (project ASPICE) he promoted the use of BCIs outside laboratory settings, designing user interfaces and assistive technologies to control robotic and domotic applications. In 2010-2013 he was coordinator of the first project in Europe (BRINDISYS) in which a BCI-based assistive system was validated at home with persons with ALS [14]. Specific focus has been given to non-functional aspects of BCIs, such as usability [2,5], workload evaluation [13] and underlying attentional processing [1,8].

In the context of a EU-funded project (SM4All), he proposed and evaluated the use of BCIs to control domotic environments [15]. Considering the possible deterioration of oculomotor control in end-users and its impact on ERP-based BCIs (see [10] for a review), he proposed and evaluated strategies to operate a BCI which is independent of gazing abilities [9,11,12]. He proposed and evaluated the merger of EEG and EMG signals to provide persons with motor deficits with a (hybrid) BCI assistive technology [3].

#### 1.c Application to neuromotor rehabilitation

Since 2008 he was PI or co-PI of projects in which the use of real time signal processing of biosignals is used to promote neuromotor rehabilitation: post-stroke motor rehabilitation of the upper limb (project TOBI); post stroke robotic rehabilitation of gait (project BETTER); health monitoring of persons with Dyskinetic Cerebral Palsy (project ABC).

A randomized controlled clinical trial carried on in the context of the TOBI EU project has proven the effectiveness of BCI in post-stroke motor rehabilitation (see [4]); the system, whose technical development was led by Dr. Cincotti, is now routinely used in the rehabilitation ward, and follow-up studies are ongoing.

#### 1.d Engineering support to BCI research

He contributed as Foreign Contractor to the BCI2000 project, the most popular software platform for the implementation of experimental setups with BCIs. Moreover, in the context of the TOBI Integrated Project, he promoted a shared architecture for interoperability of BCI modules.

#### 2. Electrical Neuroimaging

#### 2.a Methodological advancement

He proposed method for the estimation of neuroelectrical sources from non-invasive measures. His specific contributions deal with the integration of high-resolution EEG, MEG and functional MRI to improve spatial and temporal definition of cortical sources. The proposed methods have been validated through simulations and on experimental data acquired during motor tasks.

#### 2.b Applications to the clinical context

Fostering application of estimated neuroelectrical sources to clinical neurosciences, he proposed the use of algorithms applicable to data acquired from equipment easily available in a clinical context.

## Part VIII - Bibliometric indices

Product type	Number	Data Base	Start	End
Papers [international]				
- Journal	117	Scopus		
- Conference	96	Scopus		
- Review	4	Scopus		
- Editorial	3	Scopus		
Books [scientific]				
- Chapters	10	Scopus		
Patents				
- National	1	(pending)		

Total Impact factor	>350
Total Citations	7006
Average Citations per Product	30.46
Hirsch (H) index	50
Normalized H index*	2.38

<sup>\*</sup>H index divided by the academic seniority.

Impact Factor from <a href="https://iris.uniroma1.it">https://iris.uniroma1.it</a>. Citations count and H-index from <a href="https://www.scopus.com">https://www.scopus.com</a>. Retrieved on 7 August 2019

Scopus author profile: 7003991802

ORCID profile: <u>0000-0003-1898-6480</u>

Researcher ID profile: C-3664-2008
Google Scholar profile: CVFXFOUAAAAJ

## **Part IX- Selected Publications**

- Riccio, A., Schettini, F., Simione, L., Pizzimenti, A., Inghilleri, M., Olivetti-Belardinelli, M., ..., Cincotti, F. (2018). On the Relationship Between Attention Processing and P300-Based Brain Computer Interface Control in Amyotrophic Lateral Sclerosis. Frontiers in Human Neuroscience, 12. DOI: 10.3389/fnhum.2018.00165
   IF(2018) = 2.870, citations: 1
- Schettini, F., Riccio, A., Simione, L., Liberati, G., Caruso, M., Frasca, V., ..., Cincotti, F. (2015). Assistive device with conventional, alternative, and brain-computer interface inputs to enhance interaction with the environment for people with amyotrophic lateral sclerosis: A feasibility and usability study. *Archives of Physical Medicine and Rehabilitation*, 96(3), S46–S53. DOI: 10.1016/j.apmr.2014.05.027
  IF(2015)=3.045, citations: 23
- 3. Riccio, A., Holz, E. M., Aricò, P., Leotta, F., Aloise, F., Desideri, L., ..., & Cincotti, F. (2015). Hybrid P300-based brain-computer interface to improve usability for people with severe motor disability: Electromyographic signals for error correction during a spelling task. *Archives of Physical Medicine and Rehabilitation*, 96(3), S54–S61. DOI: 10.1016/j.apmr.2014.05.029 IF(2015)=3.045, citations: 20
- 4. Pichiorri, F., Morone, G., Petti, M., Toppi, J., Pisotta, I., ..., **Cincotti**, F, & Mattia, D. (2015). Brain-computer interface boosts motor imagery practice during stroke recovery. *Annals of Neurology*, 77(5), 851–865. DOI: 10.1002/ana.24390 IF(2015)=9.638, citations: 143
- 5. Liberati, G., Pizzimenti, A., Simione, L., Riccio, A., Schettini, F., Inghilleri, M., ..., & **Cincotti**, F. (2015). Developing brain-computer interfaces from a user-centered perspective: Assessing the needs of persons with amyotrophic lateral sclerosis, caregivers, and professionals. *Applied Ergonomics*, 50, 139–146. DOI: 10.1016/j.apergo.2015.03.012 IF(2015)=1.713, citations: 14
- Schettini, F., Aloise, F., Aricò, P., Salinari, S., Mattia, D., & Cincotti, F. (2014). Self-calibration algorithm in an asynchronous P300-based brain-computer interface. *Journal of Neural Engineering*, 11(3). DOI: 10.1088/1741-2560/11/3/035004
   IF(2014)=3.295, citations: 11
- 7. Aricò, P., Aloise, F., Schettini, F., Salinari, S., Mattia, D., & **Cincotti**, F. (2014). Influence of P300 latency jitter on event related potential-based brain-computer interface performance. *Journal of Neural Engineering*, 11(3). DOI: 10.1088/1741-2560/11/3/035008
  IF(2014)=3.295, citations: 22
- 8. Riccio, A., Simione, L., Schettini, F., Pizzimenti, A., Inghilleri, M., Belardinelli, M. O., ..., & **Cincotti**, F. (2013). Attention and P300-based BCI performance in people with amyotrophic lateral sclerosis. *Frontiers in Human Neuroscience*, (NOV). DOI: 10.3389/fnhum.2013.00732 IF(2013) = 2.895, citations: 43
- 9. Aloise, F., Aricò, P., Schettini, F., Salinari, S., Mattia, D., & **Cincotti**, F. (2013). Asynchronous gaze-independent event-related potential-based brain-computer interface. *Artificial Intelligence in Medicine*, *59*(2), 61–69. DOI: <u>10.1016/j.artmed.2013.07.006</u>
  IF(2013) = 1.356, citations: 17
- 10. Riccio, A., Mattia, D., Simione, L., Olivetti, M., & **Cincotti**, F. (2012). Eye-gaze independent EEG-based brain-computer interfaces for communication. *Journal of Neural Engineering*, *9*(4). DOI: 10.1088/1741-2560/9/4/045001 IF(2012)=3.282, citations: 82 (review)

11. Aloise, F., Schettini, F., Aricò, P., Salinari, S., Babiloni, F., & **Cincotti**, F. (2012). A comparison of classification techniques for a gaze-independent P300-based brain-computer interface. *Journal of Neural Engineering*, 9(4). DOI: 10.1088/1741-2560/9/4/045012 IF(2012)=3.282, citations: 27

- 12. Aloise, F., Aricò, P., Schettini, F., Riccio, A., Salinari, S., Mattia, D., ..., & Cincotti, F. (2012). A covert attention P300-based brain-computer interface: Geospell. *Ergonomics*, *55*(5), 538–551. DOI: 10.1080/00140139.2012.661084

  IF(2012) =1.674, citations: 38
- 13. Riccio, A., Leotta, F., Bianchi, L., Aloise, F., Zickler, C., Hoogerwerf, E.-J., ..., & Cincotti, F. (2011). Workload measurement in a communication application operated through a P300-based brain-computer interface. *Journal of Neural Engineering*, 8(2). DOI: 10.1088/1741-2560/8/2/025028

  IF(2011)=3.837, citations: 53
- 14. Aloise, F., Schettini, F., Aricò, P., Leotta, F., Salinari, S., Mattia, D., ..., & Cincotti, F. (2011). P300-based brain-computer interface for environmental control: An asynchronous approach. *Journal of Neural Engineering*, 8(2). DOI: 10.1088/1741-2560/8/2/025025

  IF(2011) = 3.837, citations: 64
- 15. Aloise, F., Schettini, F., Aricò, P., Salinari, S., Guger, C., Rinsma, J., ..., & Cincotti, F. (2011). Asynchronous P300-based brain-computer interface to control a virtual environment: Initial tests on end users. *Clinical EEG and Neuroscience*, 42(4), 219–224. DOI: 10.1177/155005941104200406
  IF(2011) =1.725, citations: 32
- 16. Millán, J. D. R., Rupp, R., Müller-Putz, G. R., Murray-Smith, R., .... **Cincotti**, F, ..., & Mattia, D. (2010). Combining brain-computer interfaces and assistive technologies: State-of-the-art and challenges. *Frontiers in Neuroscience*, 4(SEP). DOI: 10.3389/fnins.2010.00161

  IF(2014\*) = 3.656, citations: 457 (review)

Impact Factor from <a href="https://jcr.clarivate.com">https://jcr.clarivate.com</a>. Citations count from <a href="https://www.scopus.com">https://www.scopus.com</a>. Retrieved on 7 August 2019 (\*) IF not available before 2014 for this journal

Rome, 7 August 2019