Autorizzo il trattamento dei dati personali ai sensi del D.Lgs 196/2003 “Codice in materia di protezione dei dati personali"″ per la pubblicazione del presente documento sul sito web di Dipartimento e Ateneo in base al D.Lgs. 33/2013 “obblighi di pubblicità, trasparenza e diffusione di informazioni da parte delle pubbliche amministrazioni”.

Firmato
GIANLUCA BORGHINI

GIANLUCA BORGHINI
Curriculum Vitae

Place: Rome
Date: 24/09/2021

Part I – Education

Type	Year	Institution	Notes (Degree, Experience,)
ASN – SSD 05/D1	2021	Italian Ministry of University Education and Research	National scientific qualification as Associate Professor in Physiology
PhD	2016	Alma Mater Studiorum, Università di Bologna, Italy	Doctor of Philosophy in Bioengineering
Major	2011	Stato Maggiore dell’Aeronautica Italiana, Italy	Flight Safety Officer
Master Degree	2009	Alma Mater Studiorum, Università di Bologna, Italy	Master Degree in Electronic Engineering
Bachelor Degree	2006	Alma Mater Studiorum, Università di Bologna, Italy	Bachelor Degree in Electronic Engineering

Part II – Appointments

IIIA – Academic Appointments

Start	End	Institution	Position
01/07/2016	present	Dept. of Molecular Medicine, Sapienza University of Rome, Italy	Post-Doc Fellow in BIO/09
01/07/2014	30/06/2016	Dept. of Physiology and Pharmacology “Vittorio Erspamer”, Sapienza University of Rome, Italy	PhD Student
20/02/2013	30/06/2014	IRCCS Fondazione Santa Lucia, Italy - Dept. of Physiology and Pharmacology “Vittorio Erspamer”, Sapienza University of Rome, Italy	PhD Student

IIB – Other Appointments

Start	End	Institution	Position
19/02/2010	31/12/2012	IRCCS Fondazione Santa Lucia, Italy	Research Fellow with a grant on the project “BRAINSHIELD” (Piano Nazionale della Ricerca Militare E.F. 2009 – PNRM n.a2008.50)

08/09/2015	present	Brainsigns srl, Italy	R&D Project Manager and Team Leader of the Human Factors research group
2016	present	Dept. of Molecular Medicine, Sapienza University of Rome, Italy	Representative of the Post Doc Fellows of the Department

Part III – Teaching experience

Year	Role	Institution	Lecture/Course
2021	Teaching seminar	Sapienza University of Rome, Italy	Seminar at the MSc academic course *Human Factors* (CFU: 6, SSD: BIO/08) in Aerospace and Astronautic Engineering
2020	Teaching seminar	University "Federico II" of Naples, Italy	Seminar at the Master of 2 level of Aerospace Medicine (CFU: 60, SSD: BIO/16, BIO/09, MED/42, MED/44, MED/43, MED/26, MED/09) in Surgery and Medicine
2020	Teaching tutorial	Sapienza University of Rome, Italy	Tutorial activity in the MSc academic course *Information of the Life of Sciences* (CFU: 12, SSD: BIO/09, BIO/17) in Biomedical scientific communication
2019	Teaching seminar	Sport School of CONI, Rome, Italy	Seminar *Neuroscience and Sport: measuring the sport performance under stressful conditions*
2018	Teaching seminar	Sport School of CONI, Rome, Italy	Seminar *The Leadership: connecting, understanding, and achieving more*
2017	Teaching tutorial	Sapienza University of Rome, Italy	Tutorial activity in the MSc academic course *Electronical Engineering and clinic-telemedicine and robotic applications* (CFU: 9, SSD: BIO/09, MED/18, MED/50) in Medical Biotechnologies
2016 - 2017	Teaching tutorial	Sapienza University of Rome, Italy	Tutorial activity in the MSc academic course *Bioengineering, Electronic and Clinical Applications* (CFU: 6, SSD: BIO/09) in Medical Biotechnologies
2015 - 2018	Teaching tutorial	Sapienza University of Rome, Italy	Tutorial activity in the MSc academic course *Neuroeconomy and Neuromarketing* (CFU: 6, SSD: BIO/09) in Psychology of communication and marketing
2014 - 2017	Teaching tutorial	Sapienza University of Rome, Italy	Tutorial activity in the MSc academic course *Industrial Neuroscience* (CFU: 9, SSD: ING-

			INF/06) in Biomedical Engineering
2014	Teaching seminar	University of Murcia, Spain	Seminar at the event *Towards a global geopolitical reorganisation: military and socio-health perspectives*
2010 - present	Co-supervisor	Sapienza University of Rome, Italy	Co-supervisor of 2 PhD theses in Morphogenesis And Tissue Engineering, master theses in Medical Biotechnologies (1), Biomedical Engineering (6), and Aerospace Engineering (1), and bachelor theses in Biomedical Engineering (3),

Part IV - Society memberships, Awards and Honors

Year	Title
2020	Top 2% World Scientists
2019	Scientific Award "Italian Best Awards 2019", Chamber of Deputies, Rome, Italy
2016	Scientific Award "Massimo Grattarola" for the best PhD thesis, National Bioenginnering Group (Gruppo Nazionale di Bioingegneria – GNB), Brixen, Italy.
2016	Scientific Award "I Guidoniani" for the best research work in Aviation and Aerospace Medicine, Italian Air Force, Trieste, Italy.
2016	Scientific Advisory Board, Sapienza University of Rome, Italy
2014	Member of the Italian National Bioengineering Group (GNB), Italy
2013	Travel Award, Standing Steering Committee of the 1st IEEE EMBS international summer school on neural engineering (ISSNE'13), Shanghai, China.
2012	Scientific Award "I Guidoniani" for the best research work in Aviation and Aerospace Medicine, Italian Air Force, Bari, Italy.
2012 - 2020	Member of IEEE - Engineering in Medicine and Biology Society (EMBS)

Part V – Role in National and International projects

Year	Role	Project title	Funding Program
2021 - present	Research team member	FITDRIVE: Monitoring devices for overall FITness of Drivers (GA n. 953432)	H2020 - EU
2021 - present	Research team member	ARTIMATION: Transparent Artificial Intelligence And Automation To Air Traffic Management Systems (GA n. 894238)	SESAR - H2020
2020 - present	Research team member	MINDTOOTH: Wearable device to decode human mind by neurometrics for a new concept of smart interaction with the surrounding environment (GA n. 950998)	H2020 - EU
2019 - present	Project Manager	SAFEMODE: Strengthening synergies between Aviation and maritime in the area of human Factors towards achieving more Efficient and resilient MODE of transportation (GA n. 814961)	H2020 - EU
2019 -	Project	WORKINGAGE: Smart Working environments for all	H2020 - EU

present	Manager	Ages (GA n. 826232)	
2017 - present	Research team member	SIMUSAFE: SIMUlation of behavioural aspects for SAFEr transport (GA n. 723386)	H2020 - EU
2014 - 2016	Project Manager	STRESS: Human Performance Neurometrics Toolbox For Highly Automated Systems Design (GA n. 699381).	SESAR - H2020
2014 - 2016	Research team member	MOTO: The Embodied Remote Tower (GA n. 699379)	SESAR - H2020
2014 - 2016	Research team member	MINIMA: MItigating Negative Impacts of Monitoring high levels of Automation (GA n. 699282)	SESAR - H2020
2013 - 2015	Project Manager	NINA: Neurometric INdicators for ATM (GA n. 12-120610-C4)	SESAR - H2020
2013	Project Manager	BRAINTRAINED (CUP F87I12002500007)	FILAS
2010 - 2012	Project Manager	BRAINSHIELD (PNRM n.a2008.50)	PNRM E.F. 2009

Part VI – Editorial Activity

Year	Role	Description
2021-present	Associate Editor	Associate Editor for the special issue *Brain Sciences: Brain Plasticity, Cognitive Training and Mental States Assessment: Series II* on Brain Sciences
2021-present	Associate Editor	Associate Editor for the special issue *Non-invasive neuroergonomic approaches for understanding user and teams in everyday contexts* on *Frontiers in Neuroergonomics*
2021-present	Associate Editor	Associate Editor for *Frontiers in Neuroergonomics*
2020 - present	Editorial board member	Editorial board member for *Brain Sciences*
2020 - present	Guest Associate Editor	Guest Associate Editor for the special issue *Embodied Minds: From Cognition to Artificial Intelligence* on Sensors
2020-present	Guest Associate Editor	Guest Associate Editor for the special issue *Deep Learning in Biomedical Informatics and Healthcare* on Sensors
2019	Guest Associate Editor	Guest Associate Editor for the special issue *Brain Plasticity, Cognitive Training and Mental States Assessment* on Brain Sciences
2018	Guest Associate Editor	Guest Associate Editor for the special issue *Neurophysiological Measures for Human Factors Evaluation in Real World Settings on* Computational Intelligence and Neuroscience
2017 - 2018	Guest Associate Editor	Guest Associate Editor for the special issue *Psychophysiological Contributions to Traffic Safety* on Frontiers in Human Neuroscience
2017 - 2018	Guest Associate Editor	Guest Associate Editor for the special issue *Neuroergonomics: The Brain at Work in Everyday Settings* on Frontiers in Human Neuroscience
2016 - present	Associate Editor	Associate Editor for International Journal of Bioelectromagnetism (IJBEM)

2010 - present	Reviewer	Reviewer for peer-review and high-impact factor journals like Neuroscience & Biobehavioral Reviews, Scientific Reports, Nature, Brain Sciences, Social Cognitive and Affective Neuroscience, IEEE Transactions on Biomedical Engineering, IEEE Transactions on Neural Systems & Rehabilitation Engineering, Brain Topography, Neuroimage, Journal of Neuroscience Methods, Journal of Neural Engineering, Sensors, Frontiers in Human Neuroscience, Frontiers in Neuroscience. Specifically, currently 39 reviews with a review-to-publication-rate of 0.5:1 (Median = 0.3:1, source: Publons).

Part VII – Books

Year	Contribution	Title
2020	Book chapter	*Monitoring performance of professional and occupational operators.* Borghini G., Ronca V., Vozzi A., Aricò P., Di Flumeri G., Babiloni, F. Handbook of Clinical Neurology, 168, pp. 199–205
2020	Book chapter	*The evolution of passive Brain-Computer Interfaces: Enhancing the human-machine interaction.* Sciaraffa N., Aricò P., Borghini G., Di Flumeri G., Di Florio A., Babiloni F. Neurotechnology: Methods, advances and applications (Healthcare Technologies). The Institution of Engineering and Technology.
2018	Book chapter	*EEG-based mental workload assessment during real driving: A taxonomic tool for neuroergonomics in highly automated environments.* Di Flumeri, G., Borghini G., Aricò P., Sciaraffa N., Lanzi P., Pozzi S., Vignali V., Lantieri C., Bichicchi A., Simone A., Babiloni, F. Neuroergonomics: The Brain at Work and in Everyday Life, 2018, pp. 121–126
2017	Book	*Industrial Neuroscience in Aviation: Evaluation of Mental States in Aviation Personnel*. Borghini G. Aricò P, Di Flumeri G., Babiloni F. Springer. Borghini, Gianluca, Pietro Aricò, Gianluca Di Flumeri, and Fabio Babiloni. Springer, Vol. 18.
2016	Book chapter	*A passive brain–computer interface application for the mental workload assessment on professional air traffic controllers during realistic air traffic control tasks.* Aricò P., Borghini G., Di Flumeri G., Colosimo A., Pozzi S., Babiloni F. Progress in Brain Research, 2016, 228, pp. 295–328

Part VIII – Patents

Year	Title
2015	**EU patent n. EP3143933A1**. Aricò P, Borghini G, Di Flumeri G, Babiloni F. Method for estimating a mental state, in particular workload, and related apparatus.

Part IX – Organisation of scientific meetings

Year	Title
2020	Member of the Scientific Committee, 4th International Symposium on Human Mental Workload: Models and Applications (H-WORKLOAD 2020), Granada, Spain
2019	Local Organiser, Symposium: 3rd International Symposium on Human Mental Workload: Models and Applications (H-WORKLOAD 2019), Rome, Italy
2019	Local Organiser, Workshop: "Out of the Lab employment of Neurophysiological measures: clinical applications and beyond", Rome, Italy
2018 – 2021	Member of the Scientific Committee, Neuroergonomics Conference (Philadelphia, USA and Munich, Germany)

Part X – Participation to national and international conferences (speaker)

Year	Role	Conference	Speech Title
2020	Speaker	Oral presentation at the 42nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Montreal, Canada	Stress Assessment by Combining Neurophysiological Signals and Radio Communications of Air Traffic Controllers
2020	Speaker	Oral presentation at the 42nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Montreal, Canada	Assessment of Athletes' Attitude: Physiological Evaluation via Wearable Sensors during Grappling Competitions
2019	Invited speaker	Workshop *Out of the Lab employment of Neurophysiological measures: clinical applications and beyond*, Rome, Italy	Machine-Learning Approach and Data Fusion for the Stress Assessment
2018	Invited speaker	Workshop *Keeping the Human in the loop in the Digital ATM Era*, Toulouse, France.	Neurometrics for Human Performance assessment in ATM
2018	Invited speaker	Workshop *Human-intELligent machIne cOexiStence (HELIOS)*, Singapore, Singapore	Brain Computer Interfaces (BCI) for Industrial Applications of Cognitive Neuroscience
2017	Invited speaker	NVP (Dutch Society for Brain and Cognition) Symposium *Psychophysiology on the Road Towards Enhanced Traffic Safety*, Leiden, Netherlands.	Mechanisms of Performance Decreasing in Aviation
2016	Invited speaker	Neuroergonomics Conference *The Brain At Work and In Everyday Life*, Paris, France.	On the application of sensing technology in driving environments
2016	Invited speaker	Workshop *ART - Agency Research Team*, Toulouse, France**.**	NINA - Neurometrics INdicators in ATM
2016	Speaker	Poster presentation at the 38th Annual International Conference of the IEEE Engineering in Medicine and Biology	Neurophysiological Measures for Users' Training Objective Assessment During

		Society, Orlando, USA.	Simulated Robot-Assisted Laparoscopic Surgery
2015	Speaker	Poster presentation at the 37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Milan, Italy	Avionic Technology Testing By Using a Cognitive Neurometric Index: a Study with Professional Helicopter Pilots
2015	Speaker	Oral presentation at the *5th SESAR Innovation Days*, Bologna, Italy.	Skill, Rule and Knowledge – based behaviours detection during realistic ATM simulations by means of ATCOs' brain activity
2014	Speaker	Oral presentation at the *4th SESAR Innovation Days*, Madrid, Spain	Analysis of neurophysiological signals for the training and mental workload assessment of ATCOs
2014	Speaker	Oral presentation at the 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Chicago, USA	A neurophysiological training evaluation metric for Air Traffic Management

Part XI – National and international research collaborations

Start	End	Institution (coordinator)	Main research activity
2020	present	Dept. Human Factors, Italian Air Force, Italy Col. MD. Paola Verde	Neurophysiological assessment of pilots' mental workload and cooperation during simulated and real flights, and evaluation of potential effects of microgravity in terms of mental states impairment.
2017	present	Dept. Human Factors, ISAE-SUPAERO, France Prof. Frederic Dehais	Monitoring Pilot's cognitive fatigue in simulated and real flights using a hybrid fNIRS-EEG passive BCI. In addition, we do students exchange to allow them increasing knowledge and expertise gathering and sharing.
2016	2018	Dept. of Psychology, Sapienza University or Rome, Italy Prof. Viviana Betti	Evaluation of the sense of presence in Virtual Reality (VR) for the design and assessment of Remote Tower solutions to manage incoming air traffic on the airports.
2016	2017	Dept. Computer Science, University of Verona, Italy Prof. Gloria Menegaz	Comparison of robotic surgery simulators (e.g. Da Vinci) in terms of surgeons' mental workload demand to find out how optimise their design. Also, development of neurophysiological index for the assessment of novice surgeons' learning progress throughout the different training sessions.
2015	2017	Dept. Industrial Engineering, University of Bologna, Italy	Development and validation of a neurophysiological index for the assessment

		Prof. Francesca De Crescenzio	of air traffic controllers' vigilance level for mitigating Out-Of-the-Loop (OOL) phenomena by accordingly triggering adaptive automations during realistic ATC simulations.
2015	2019	Dept. Civil Eng. and Transports, University of Bologna, Italy Prof. Valeria Vignali Prof. Andrea Simone	Comparison of expert and novice car drivers in terms of mental workload demand when using the supporting driving technologies (cruise control, line keeping), and neurophysiological assessment of the impact and benefits of such technologies under low and high traffic conditions.
2013	present	Aeronautical Computer Interaction Lab (ACHIL), École Nationale de l'Aviation Civile (ENAC), Toulouse (France) Prof. Christophe Hurter Dr. Jean-Paul Imbert	Design and execution of several experimental protocols in the contexts of SESAR-H2020 EU projects for the assessment of air traffic controllers' mental states (mental workload, stress, attention, vigilance, cognitive control behaviour), training progress, and interaction when using highly-automated supporting automations.
2013	present	DeepBlue srl, Rome (Italy) Dr. Simone Pozzi	Neurophysiological and psychological characterisation of Human Factors in Aviation and Transportation domains for a real-time operator's mental states monitoring to mitigate risky situations under impaired conditions.
2013	present	Singapore Institute for Neurotechnology (SINAPSE) Institute, National University of Singapore, Singapore Prof. Nitish Thakor Prof. Anastasios Bezerianos	Design of experimental protocols, and development of methodologies for the evaluation of learning processes, cooperation between subjects engaged on multitasking task, and real-time mental workload assessment through the analysis of the users' neurophysiological signals. The neurophysiological indicators were then combined with the behavioural and subjective data to obtain a more accurate overview of the considered cognitive phenomenon (Triangulation).
2011	present	Cognitive & Intelligent Computing, Hangzhou Dianzi University, Hangzhou, China Prof. Wanzeng Kong	Setup of the lab and teaching\training of local scientists\students for recording and analysing the users' brain activity (EEG signals) to characterise and evaluate their mental workload and drowsiness levels during simulated driving experiments.
2010	2020	IRCCS Fondazione Santa Lucia, Neuroelectrical Imaging and Brain Computer Interface Lab, Rome, Italy Dr. Donatella Mattia	Employment of Brain Computer Interface (BCI) solutions in simulated flights and car driving for the assessment of mental workload and fatigue, and the development of a tool by which sending Morse code-based communication by the modulation of the

brain activity. Also, I did use the tDCS for evaluating its impact and benefits on the learning processes during simulated flights.

Part XII – Research Activities

Keywords	Brief Description
Neurophysiological characterisation Mental States evaluation Learning assessment Machine Learning Signals processing Human Machine Interaction (HMI) Brain Computer Interface (BCI) Microgravity	**Biomedical research.** Since 2010 Dr. Gianluca Borghini's research has been focusing on the assessment of human factors (HF), brain computer interface (BCI), and human-machine interaction (HMI) through the analysis and combination of different kinds of data like the neurophysiological (Electroencephalogram – EEG, Electrodermal activity –EDA, Electrocardiogram – ECG), behavioral (performance) and subjective data (self-reports). Dr. Borghini work mainly consists in the characterization of mental states like mental workload, stress, mental fatigue, selective attention, vigilance, and cognitive control behaviour, and the evaluation of training\learning processes through signals processing, machine-learning algorithms, and connectivity-based methods. Most of the studies have been conducted on professional personnel in controlled, simulated, and real contexts. Dr. Borghini research relies on excellent teamwork, integration of different expertise, and knowledge sharing-exchange with other national and international research teams. **Neurophysiological characterisation.** Standard machine-learning analysis consists in making blind features selections from a very large set of features to achieve high-classification accuracy (black-box approach). The final classifier model however may not be directly associated with the phenomenon investigated but likely with confounds due to other phenomena\mental states or with episodic events along with the experiment. Dr. Borghini research aims at avoiding this effect by initially identifying the cognitive and physiological processes underlying the phenomenon under investigation, then characterising those processes by specific set of neurophysiological features, and finally employing machine-learning algorithms on the final feature set in order to select the most significant ones and define the classification model. Dr. Borghini and his colleagues have a European patent (n. EP3143933A1) related to a method for the mental workload assessment based on this approach . **Human (brain) - machine interaction:** Dr. Borghini started his research in the field of Brain Computer interfaces (BCI) in 2010 when he developed and employed a method based on the pilots' brain activity for sending Morse code-communications without speaking them out. Successively the passive-BCI research has been applied on the design and evaluation of automated solutions and technology to support the users in case of impaired mental states. In particular, once the mental states considered were characterised and hence objectively measured through the analysis of the user's neurophysiological signals, it was possible to evaluate the impact of the technology proposed and finally identify the one(s) able to optimise the human-machine interaction, therefore ensure high efficiency and safety.

Part XIII – Summary of Scientific Achievements

Product type	Number	Data Base	Start	End
Papers [international]	32	Scopus	2010	2021
Conference papers indexed on medline	38	Scopus	2012	2021
Books [scientific]	1	Scopus	2017	2017
Book chapters	10 (7 belong to the same book)	Scopus	2016	2020
Patents	1	Scopus	2015	2015
Review	3	Scopus	2014	2018
Editorial	1	Scopus	2019	2019
Total documents	85	Scopus	2010	2021

Total Impact factor	104.1
Total Impact factor in the 2021*	117.9
Average Impact factor**	3.3
Average Impact factor 2021**	3.7
Total Citations	2080
Average Citations per Product***	24.5
Hirsch (H) index	27
Normalized H index****	2.5

* Total Impact factor calculated by considering the current journal's Impact factor
** Normalized H index averaged over 32 documents categorized as "article" in SCOPUS
*** Calculated by dividing the total citations by the total documents (85)
********H index divided by the academic seniority (time span from the first peer-review publication, hence 2010)

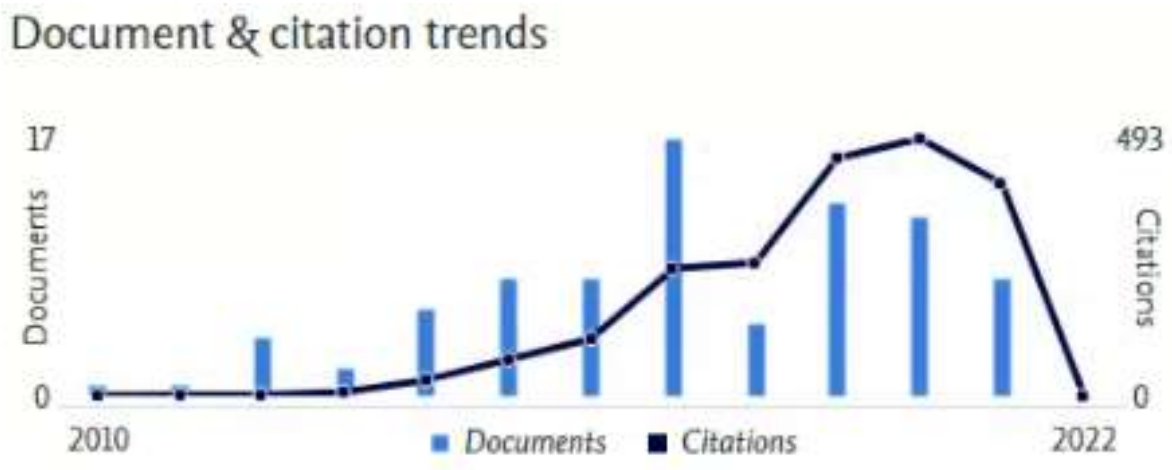

Figure 1. Number of documents (left vertical axis) and citations (right vertical axis) per year since 2010 (horizontal axis).

Part XIV– Publications (source: Scopus)

#	Year	Document Type	Authors	Title	Source
1	2021	Article	Marucci M., Di Flumeri G., **Borghini G.,** Sciaraffa N., Scandola M., Pavone E.F., Babiloni F., Betti V., Aricò P.	The impact of multisensory integration and perceptual load in virtual reality settings on performance, workload and presence	Scientific Reports
2	2021	Article	Vozzi A., Ronca V., Aricò P., **Borghini G.,** Sciaraffa N., Cherubino P., Trettel A., Babiloni F., Di Flumeri G.	The sample size matters: To what extent the participant reduction affects the outcomes of a neuroscientific research. a case-study in neuromarketing field	Sensors
3	2021	Article	Sciaraffa N., **Borghini G.,** Di Flumeri G., Cincotti F., Babiloni F., Aricò P.	Joint analysis of eye blinks and brain activity to investigate attentional demand during a visual search task	Brain Sciences
4	2021	Article	Zeng H., Li X., **Borghini G.**, Zhao Y., Aricò P., Di Flumeri G., Sciaraffa N., Zakaria W., Kong W., Babiloni F.	An eeg-based transfer learning method for cross-subject fatigue mental state prediction	Sensors
5	2021	Article	Giorgi A., Ronca V., Vozzi A., Sciaraffa N., Di Florio A., Tamborra L., Simonetti I., Aricò P., Di Flumeri G., Rossi D., **Borghini G**.	Wearable technologies for mental workload, stress, and emotional state assessment during working-like tasks: A comparison with laboratory technologies	Sensors
6	2021	Article	Ronca V., Giorgi A., Rossi D., Di Florio A., Di Flumeri G., Aricò P., Sciaraffa N., Vozzi A., Tamborra L., Simonetti I., **Borghini G**.	A video-based technique for heart rate and eye blinks rate estimation: A potential solution for telemonitoring and remote healthcare	Sensors
7	2021	Article	Mancini M., Cherubino P., Cartocci G., Martinez A., **Borghini G.,** Guastamacchia E., Flumeri G.D., Rossi D., Modica E., Menicocci S., Lupo V., Trettel A., Babiloni F.	Forefront users' experience evaluation by employing together virtual reality and electroencephalography: A case study on cognitive effects of scents	Brain Sciences
8	2021	Article	Sciaraffa N., Liu J., Aricò P., Di Flumeri G., Inguscio B.M.S., **Borghini G.**, Babiloni F.	Multivariate model for cooperation: Bridging social physiological compliance and hyperscanning	Social Cognitive and Affective Neuroscience
9	2020	Article	**Borghini G.,** Di Flumeri G., Aricò P., Sciaraffa N., Bonelli S., Ragosta M., Tomasello P., Drogoul F., Turhan U., Acikel B., Ozan A., Imbert J.P., Granger G., Benhacene R., Babiloni F.	A multimodal and signals fusion approach for assessing the impact of stressful events on Air Traffic Controllers	Scientific Reports

10	2020	Article	Islam M.R., Barua S., Ahmed M.U., Begum S., Aricò P., **Borghini G.,** Flumeri G.D.	A novel mutual information based feature set for drivers' mental workload evaluation using machine learning	Brain Sciences
11	2020	Conference Paper	**Borghini G.,** Arico P., Di Flumeri G., Sciaraffa N., Ronca V., Vozzi A., Babiloni F.	Assessment of Athletes' Attitude: Physiological Evaluation via Wearable Sensors during Grappling Competitions	Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS
12	2020	Conference Paper	**Borghini G.,** Bandini A., Orlandi S., Di Flumeri G., Arico P., Sciaraffa N., Ronca V., Bonelli S., Ragosta M., Tomasello P., Turhan U., Acikel B., Ozan A., Imbert J.P., Granger G., Benhacene R., Drogoul F., Babiloni F.	Stress Assessment by Combining Neurophysiological Signals and Radio Communications of Air Traffic Controllers	Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS
13	2020	Article	Sciaraffa N., Klados M.A., **Borghini G.,** Di Flumeri G., Babiloni F., Aricò P.	Double-step machine learning based procedure for HFOs detection and classification	Brain Sciences
14	2020	Conference Paper	Fugini M., Barenghi A., Comai S., Pelosi G., Tedesco R., van Gasteren M., Catalina C.A., Leal E.A., Durán R.L., de Almeida R.M.R., Grau A., Bueno Y., Mertens A., Rick V., Gunes H., Xu T., **Borghini G**., Ronca V., Sagha H.	WorkingAge: Providing occupational safety through pervasive sensing and data driven behavior modeling	30th European Safety and Reliability Conference, ESREL 2020 and 15th Probabilistic Safety Assessment and Management Conference, PSAM 2020
15	2020	Conference Paper	Ronca V., Rossi D., Di Florio A., Di Flumeri G., Aricò P., Sciaraffa N., Vozzi A., Babiloni F., **Borghini G.**	Contactless Physiological Assessment of Mental Workload During Teleworking-like Task	Communications in Computer and Information Science
16	2020	Conference Paper	Fugini M., Barenghi A., Comai S., Pelosi G., Tedesco R., van Gasteren M., Catalina C.A., Leal E.A., Durán R.L., de Almeida R.M.R., Grau A., Bueno Y., Mertens A., Rick V., Gunes H., Xu T., **Borghini G**., Ronca V., Sagha H.	Workingage: Providing occupational safety through pervasive sensing and data driven behavior modeling	Proceedings of the 30th European Safety and Reliability Conference and the 15th Probabilistic Safety Assessment and Management Conference
17	2020	Conference Paper	Resende de Almeida R.M., Grau Aberturas A., Bueno Aguado Y., Atzori	Decision Support Systems to Promote Health and Well-Being of People During Their	Lecture Notes in Computer Science (including

			M., Barenghi A., **Borghini G.,** Catalina Ortega C.A., Comai S., Losada Durán R., Fugini M., Gunes H., Musleh Lancis B., Pelosi G., Ronca V., Sbattella L., Tedesco R., Xu T.	Working Age: The Case of the WorkingAge EU Project	subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)
18	2020	Conference Paper	Reynal M., Aricò P., Imbert J.-P., Hurter C., **Borghini G.,** Di Flumeri G., Sciaraffa N., Di Florio A., Terenzi M., Ferreira A., Pozzi S., Betti V., Marucci M., Babiloni F.	Involving Hearing, Haptics and Kinesthetics into Non-visual Interaction Concepts for an Augmented Remote Tower Environment	Communications in Computer and Information Science
19	2020	Book Chapter	**Borghini G**., Ronca V., Vozzi A., Aricò P., Di Flumeri G., Babiloni F.	Monitoring performance of professional and occupational operators	Handbook of Clinical Neurology
20	2020	Article	Sebastiani M., Di Flumeri G., Aricò P., Sciaraffa N., Babiloni F., **Borghini G.**	Neurophysiological vigilance characterisation and assessment: Laboratory and realistic validations involving professional air traffic controllers	Brain Sciences
21	2019	Editorial	Band G.P.H., **Borghini G.,** Brookhuis K., Mehler B.	Editorial: Psychophysiological Contributions to Traffic Safety	Frontiers in Human Neuroscience
22	2019	Article	Aricò P., Reynal M., Di Flumeri G., **Borghini G.,** Sciaraffa N., Imbert J.-P., Hurter C., Terenzi M., Ferreira A., Pozzi S., Betti V., Marucci M., Telea A.C., Babiloni F.	How Neurophysiological Measures Can be Used to Enhance the Evaluation of Remote Tower Solutions	Frontiers in Human Neuroscience
23	2019	Article	Di Flumeri G., De Crescenzio F., Berberian B., Ohneiser O., Kramer J., Aricò P., **Borghini G**., Babiloni F., Bagassi S., Piastra S.	Brain–Computer Interface-Based Adaptive Automation to Prevent Out-Of-The-Loop Phenomenon in Air Traffic Controllers Dealing With Highly Automated Systems	Frontiers in Human Neuroscience
24	2019	Article	Reynal M., Imbert J.-P., Aricò P., Toupillier J., **Borghini G**., Hurter C.	Audio Focus: Interactive spatial sound coupled with haptics to improve sound source location in poor visibility	International Journal of Human Computer Studies
25	2019	Article	Cartocci G., Scorpecci A., **Borghini G.,** Maglione A.G., Inguscio B.M.S., Giannantonio S., Giorgi A., Malerba P., Rossi D., Modica E., Aricò P., Di Flumeri G., Marsella P., Babiloni F.	EEG rhythms lateralization patterns in children with unilateral hearing loss are different from the patterns of normal hearing controls during speech-in-noise listening	Hearing Research
26	2019	Conference Paper	Sciaraffa N., **Borghini G.,** Arico P., Di Flumeri G.,	Toward a cooperation index based on EEG-workload	Proceedings of the Annual

			Bonelli S., Drogoul F., Vozzi A., Ronca V., Bezerianos A., Thakor N.V., Babiloni F.	causality: Preliminary findings on aerospace-like tasks	International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS
27	2019	Article	Di Flumeri G., Aricò P., **Borghini G.,** Sciaraffa N., Di Florio A., Babiloni F.	The dry revolution: Evaluation of three different eeg dry electrode types in terms of signal spectral features, mental states classification and usability	Sensors (Switzerland)
28	2019	Article	**Borghini G**., Aricò P., Di Flumeri G., Sciaraffa N., Babiloni F.	Correlation and similarity between cerebral and non-cerebral electrical activity for user's states assessment	Sensors (Switzerland)
29	2019	Conference Paper	Dehais F., Duprès A., Di Flumeri G., Verdière K., **Borghini G**., Babiloni F., Roy R.	Monitoring Pilot's Cognitive Fatigue with Engagement Features in Simulated and Actual Flight Conditions Using an Hybrid fNIRS-EEG Passive BCI	Proceedings - 2018 IEEE International Conference on Systems, Man, and Cybernetics, SMC 2018
30	2019	Conference Paper	Acerra E., Pazzini M., Ghasemi N., Vignali V., Lantieri C., Simone A., Di Flumeri G., Aricò P., **Borghini G**., Sciaraffa N., Lanzi P., Babiloni F.	EEG-Based Mental Workload and Perception-Reaction Time of the Drivers While Using Adaptive Cruise Control	Communications in Computer and Information Science
31	2019	Conference Paper	Di Flumeri G., Aricò P., **Borghini G**., Sciaraffa N., Ronca V., Vozzi A., Storti S.F., Menegaz G., Fiorini P., Babiloni F.	EEG-Based Workload Index as a Taxonomic Tool to Evaluate the Similarity of Different Robot-Assisted Surgery Systems	Communications in Computer and Information Science
32	2019	Conference Paper	Sciaraffa N., Aricò P., **Borghini G**., Flumeri G.D., Florio A.D., Babiloni F.	On the Use of Machine Learning for EEG-Based Workload Assessment: Algorithms Comparison in a Realistic Task	Communications in Computer and Information Science
33	2019	Conference Paper	Reynal M., Arico P., Imbert J.-P., Hurter C., **Borghini G**., Flumeri G.D., Sciaraffa N., Florio A.D., Terenzi M., Ferreira A., Pozzi S., Betti V., Marucci M., Babiloni F.	Investigating multimodal augmentations contribution to remote control tower contexts for air traffic management	VISIGRAPP 2019 - Proceedings of the 14th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications
34	2018	Article	Di Flumeri G., **Borghini G**., Aricò P., Sciaraffa N., Lanzi P., Pozzi S., Vignali V., Lantieri C., Bichicchi A., Simone A., Babiloni F.	EEG-based mental workload neurometric to evaluate the impact of different traffic and road conditions in real driving settings	Frontiers in Human Neuroscience
35	2018	Conference	Arico P., Reynal M.,	Human-Machine Interaction	Proceedings of the

		Paper	Imbert J.-P., Hurter C., **Borghini G**., Di Flumeri G., Sciaraffa N., Di Florio A., Terenzi M., Ferreira A., Pozzi S., Betti V., Marucci M., Pavone E., Telea A.C., Babiloni F.	Assessment by Neurophysiological Measures: A Study on Professional Air Traffic Controllers	Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS
36	2018	Review	Arico P., **Borghini G.,** Di Flumeri G., Sciaraffa N., Babiloni F.	Passive BCI beyond the lab: Current trends and future directions	Physiological Measurement
37	2018	Book Chapter	Di Flumeri **G., Borghini** G., Aricò P., Sciaraffa N., Lanzi P., Pozzi S., Vignali V., Lantieri C., Bichicchi A., Simone A., Babiloni F.	EEG-based mental workload assessment during real driving: A taxonomic tool for neuroergonomics in highly automated environments	Neuroergonomics: The Brain at Work and in Everyday Life
38	2018	Conference Paper	Cartocci G., Maglione A.G., Rossi D., Modica E., **Borghini G**., Malerba P., Piccioni L.O., Babiloni F.	Alpha and theta EEG variations as indices of listening effort to be implemented in neurofeedback among cochlear implant users	Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)
39	2017	Article	**Borghini G**., Aricò P., DI Flumeri G., Cartocci G., Colosimo A., Bonelli S., Golfetti A., Imbert J.P., Granger G., Benhacene R., Pozzi S., Babiloni F.	EEG-Based Cognitive Control Behaviour Assessment: An Ecological study with Professional Air Traffic Controllers	Scientific Reports
40	2017	Conference Paper	Sciaraffa N., **Borghini G**., Arico P., Di Flumeri G., Toppi J., Colosimo A., Bezerianos A., Thakor N.V., Babiloni F.	How the workload impacts on cognitive cooperation: A pilot study	Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS
41	2017	Conference Paper	Di Flumeri G., Arico P., **Borghini G**., Sciaraffa N., Maglione A.G., Rossi D., Modica E., Trettel A., Babiloni F., Colosimo A., Herrero M.T.	EEG-based Approach-Withdrawal index for the pleasantness evaluation during taste experience in realistic settings	Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS
42	2017	Article	Sciaraffa N., **Borghini G**., Aricò P., Di Flumeri G., Colosimo A., Bezerianos A., Thakor N.V., Babiloni F.	Brain interaction during cooperation: Evaluating local properties of multiple-brain network	Brain Sciences
43	2017	Article	Aricó P., **Borghini G**., Di Flumeri G., Sciaraffa N., Colosimo A., Babiloni F.	Passive BCI in operational environments: Insights, recent advances, and future trends	IEEE Transactions on Biomedical Engineering
44	2017	Article	**Borghini G**., Aricò P., Di	A new perspective for the	Frontiers in

			Flumeri G., Sciaraffa N., Colosimo A., Herrero M.-T., Bezerianos A., Thakor N.V., Babiloni F.	training assessment: Machine learning-based neurometric for augmented user's evaluation	Neuroscience
45	2017	Article	Kong W., Zhou Z., Jiang B., Babiloni F., **Borghini G.**	Assessment of driving fatigue based on intra/inter-region phase synchronization	Neurocomputing
46	2017	Conference Paper	**Borghini G.**, Ragosta M., Aricò P., Bonelli S., Di Flumeri G., Sciaraffa N., Tomasello P., Mancini D., Colosimo A., Babiloni F.	Development of neurometrics for selective attention evaluation in ATM	SESAR Innovation Days
47	2017	Book Chapter	**Borghini G.**, Aricò P., Di Flumeri G., Babiloni F.	Applications	Biosystems and Biorobotics
48	2017	Editorial	**Borghini G.**, Aricò P., Di Flumeri G., Babiloni F.	Introduction	Biosystems and Biorobotics
49	2017	Book Chapter	**Borghini G.**, Aricò P., Di Flumeri G., Babiloni F.	General conclusions	Biosystems and Biorobotics
50	2017	Book Chapter	**Borghini G.**, Aricò P., Di Flumeri G., Babiloni F.	Simulators	Biosystems and Biorobotics
51	2017	Book Chapter	**Borghini G.**, Aricò P., Di Flumeri G., Babiloni F.	Preliminary concepts	Biosystems and Biorobotics
52	2017	Book Chapter	**Borghini G.**, Aricò P., Di Flumeri G., Babiloni F.	Cognitive processes	Biosystems and Biorobotics
53	2017	Book Chapter	**Borghini G.**, Aricò P., Di Flumeri G., Babiloni F.	Mental states in aviation	Biosystems and Biorobotics
54	2017	Book Chapter	**Borghini G.**, Aricò P., Di Flumeri G., Babiloni F.	Neurophysiological signals processing	Biosystems and Biorobotics
55	2017	Review	Aricò P., **Borghini G.**, Di Flumeri G., Bonelli S., Golfetti A., Graziani I., Pozzi S., Imbert J.-P., Granger G., Benhacene R., Schaefer D., Babiloni F.	Human Factors and Neurophysiological Metrics in Air Traffic Control: A Critical Review	IEEE Reviews in Biomedical Engineering
56	2016	Article	Aricò P., **Borghini G.**, Di Flumeri G., Colosimo A., Bonelli S., Golfetti A., Pozzi S., Imbert J.-P., Granger G., Benhacene R., Babiloni F.	Adaptive automation triggered by EEG-based mental workload index: A passive brain-computer interface application in realistic air traffic control environment	Frontiers in Human Neuroscience
57	2016	Conference Paper	Di Flumeri G., Arico P., **Borghini G.**, Colosimo A., Babiloni F.	A new regression-based method for the eye blinks artifacts correction in the EEG signal, without using any EOG channel	Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS
58	2016	Conference Paper	**Borghini G.**, Aricò P., Di Flumeri G., Colosimo A., Storti S.F., Menegaz G., Fiorini P., Babiloni F.	Neurophysiological measures for users' training objective assessment during simulated robot-assisted laparoscopic surgery	Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society,

					EMBS
59	2016	Article	Vecchiato G., **Borghini G.**, Aricò P., Graziani I., Maglione A.G., Cherubino P., Babiloni F.	Investigation of the effect of EEG-BCI on the simultaneous execution of flight simulation and attentional tasks	Medical and Biological Engineering and Computing
60	2016	Article	Cartocci G., Maglione A.G., Rossi D., Modica E., Malerba P., **Borghini G.**, Flumeri G.D., Aricò P., Babiloni F.	Applications in cochlear implants and avionic: Examples of how neurometric measurements of the human perception could help the choice of appropriate human-machine interaction solutions beyond behavioral data	PsychNology Journal
61	2016	Article	Toppi J., **Borghini G.**, Petti M., He E.J., De Giusti V., He B., Astolfi L., Babiloni F.	Investigating cooperative behavior in ecological settings: An EEG hyperscanning study	PLoS ONE
62	2016	Book Chapter	Aricò P., **Borghini G.**, Di Flumeri G., Colosimo A., Pozzi S., Babiloni F.	A passive brain–computer interface application for the mental workload assessment on professional air traffic controllers during realistic air traffic control tasks	Progress in Brain Research
63	2016	Article	**Borghini G.**, Aricò P., Graziani I., Salinari S., Sun Y., Taya F., Bezerianos A., Thakor N.V., Babiloni F.	Quantitative Assessment of the Training Improvement in a Motor-Cognitive Task by Using EEG, ECG and EOG Signals	Brain Topography
64	2015	Conference Paper	Cartocci G., Maglione A.G., Vecchiato G., Di Flumeri G., Colosimo A., Scorpecci A., Marsella P., Giannantonio S., Malerba P., **Borghini G.**, Arico P., Babiloni F.	Mental workload estimations in unilateral deafened children	Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS
65	2015	Conference Paper	Arico P., **Borghini G.**, Di Flumeri G., Colosimo A., Graziani I., Imbert J.-P., Granger G., Benhacene R., Terenzi M., Pozzi S., Babiloni F.	Reliability over time of EEG-based mental workload evaluation during Air Traffic Management (ATM) tasks	Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS
66	2015	Conference Paper	Bezerianos A., Sun Y., Chen Y., Woong K.F., Taya F., Arico P., **Borghini G.**, Babiloni F., Thakor N.	Cooperation driven coherence: Brains working hard together	Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS
67	2015	Conference Paper	**Borghini G.**, Aricò P., Di Flumeri G., Salinari S., Colosimo A., Bonelli S., Napoletano L., Ferreira	Avionic technology testing by using a cognitive neurometric index: A study with professional helicopter pilots	Proceedings of the Annual International Conference of the

			A., Babiloni F.		IEEE Engineering in Medicine and Biology Society, EMBS
68	2015	Article	Kong W., Lin W., Babiloni F., Hu S., **Borghini G**.	Investigating driver fatigue versus alertness using the granger causality network	Sensors (Switzerland)
69	2015	Conference Paper	**Borghini G**., Aricò P., Di Flumeri G., Graziani I., Colosimo A., Salinari S., Babiloni F., Imbert J.-P., Granger G., Benhacene R., Golfetti A., Bonelli S., Pozzi S.	Skill, rule and knowledge-based behaviors detection during realistic ATM Simulations by Means of ATCOs' Brain Activity	SESAR Innovation Days
70	2015	Conference Paper	di Flumeri G., **Borghini G**., Arico P., Colosimo A., Pozzi S., Bonelli S., Golfetti A., Kong W., Babiloni F.	On the Use of Cognitive Neurometric Indexes in Aeronautic and Air Traffic Management Environments	Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)
71	2015	Conference Paper	Taya F., Sun Y., **Borghini G**., Aricò P., Babiloni F., Bezerianos A., Thakor N.V.	Training-induced changes in information transfer efficiency of the brain network: A functional connectome approach	International IEEE/EMBS Conference on Neural Engineering, NER
72	2014	Conference Paper	Maglione A., **Borghini G**., Arico P., Borgia F., Graziani I., Colosimo A., Kong W., Vecchiato G., Babiloni F.	Evaluation of the workload and drowsiness during car driving by using high resolution EEG activity and neurophysiologic indices	2014 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC 2014
73	2014	Conference Paper	**Borghini G**., Aricò P., Ferri F., Graziani I., Pozzi S., Napoletano L., Imbert J.P., Granger G., Benhacene R., Babiloni F.	A neurophysiological training evaluation metric for Air Traffic Management	2014 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC 2014
74	2014	Conference Paper	Arico P., **Borghini G**., Graziani I., Taya F., Sun Y., Bezerianos A., Thakor N.V., Cincotti F., Babiloni F.	Towards a multimodal bioelectrical framework for the online mental workload evaluation	2014 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC 2014
75	2014	Conference Paper	Babiloni F., Cherubino P., Graziani I., Trettel A., Bagordo G.M., Cundari C., **Borghini G**., Arico P., Maglione A.G., Vecchiato G.	The great beauty: A neuroaesthetic study by neuroelectric imaging during the observation of the real Michelangelo's Moses sculpture	2014 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC 2014
76	2014	Conference	**Borghini G**., Aricò P.,	Analysis of	SIDs 2014 -

		Paper	Graziani I., Salinari S., Babiloni F., Imbert J.P., Granger G., Benhacene R., Napoletano L., Terenzi M., Pozzi S.	neurophysiological signals for the training and mental workload assessment of ATCos	Proceedings of the SESAR Innovation Days
77	2014	Review	**Borghini G**., Astolfi L., Vecchiato G., Mattia D., Babiloni F.	Measuring neurophysiological signals in aircraft pilots and car drivers for the assessment of mental workload, fatigue and drowsiness	Neuroscience and Biobehavioral Reviews
78	2013	Conference Paper	Babiloni F., Cherubino P., Graziani I., Trettel A., Infarinato F., Picconi D., **Borghini G**., Maglione A.G., Mattia D., Vecchiato G.	Neuroelectric brain imaging during a real visit of a fine arts gallery: A neuroaesthetic study of XVII century Dutch painters	Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS
79	2013	Conference Paper	**Borghini G**., Arico P., Astolfi L., Toppi J., Cincotti F., Mattia D., Cherubino P., Vecchiato G., Maglione A.G., Graziani I., Babiloni F.	Frontal EEG theta changes assess the training improvements of novices in flight simulation tasks	Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS
80	2012	Conference Paper	**Borghini G**., Vecchiato G., Toppi J., Astolfi L., Maglione A., Isabella R., Caltagirone C., Kong W., Wei D., Zhou Z., Polidori L., Vitiello S., Babiloni F.	Assessment of mental fatigue during car driving by using high resolution EEG activity and neurophysiologic indices	Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS
81	2012	Conference Paper	Astolfi L., Toppi J., **Borghini G**., Vecchiato G., He E.J., Roy A., Cincotti F., Salinari S., Mattia D., He B., Babiloni F.	Cortical activity and functional hyperconnectivity by simultaneous EEG recordings from interacting couples of professional pilots	Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS
82	2012	Article	Vecchiato G., Toppi J., Astolfi L., Cincotti F., De Vico Fallani F., Maglione A.G., **Borghini G**., Cherubino P., Mattia D., Babiloni F.	The added value of the electrical neuroimaging for the evaluation of marketing stimuli	Bulletin of the Polish Academy of Sciences: Technical Sciences
83	2012	Conference Paper	De Vico Fallani F., Toppi J., Di Lanzo C., Vecchiato G., Astolfi L., Borghini G., Mattia D., Cincotti F., Babiloni F.	Redundancy in functional brain connectivity from eeg recordings	International Journal of Bifurcation and Chaos
84	2011	Conference Paper	Astolfi L., Toppi J., **Borghini G**., Vecchiato G., Isabella R., De Vico	Study of the functional hyperconnectivity between couples of pilots during flight	Proceedings of the Annual International

			Fallani F., Cincotti F., Salinari S., Mattia D., He B., Caltagirone C., Babiloni F.	simulation: An EEG hyperscanning study	Conference of the IEEE Engineering in Medicine and Biology Society, EMBS
85	2010	Article	Fallani F.D.V., Costa L.D.F., Rodriguez F.A., Astolfi L., Vecchiato G., Toppi J., **Borghini G**., Cincotti F., Mattia D., Salinari S., Isabella R., Babiloni F.	A graph-theoretical approach in brain functional networks. Possible implications in EEG studies	Nonlinear Biomedical Physics

Part XV – Remaining publications (source: Google Scholar)

#	Year	Document Type	Authors	Title	Publication
86	2020	Conference Paper	Fugini, Mariagrazia; Barenghi, Alessandro; Comai, Sara; Pelosi, Gerardo; Tedesco, Roberto; van Gasteren, Marteyn; Catalina, Carlos Alberto; Arribas Leal, E; Losada Durán, R; Rosa de Almeida; Grau, Adriana; Aguada, Yolanda; Mertens, Alexander; Rick, Vera; Gunes, Hatice; Xu, Tian; **Borghini, Gianluca;** Ronca Vincenzo; Sagha, Hesam	WorkingAge: providing occupational safety through pervasive sensing and data driven behavior modeling	30th European Safety and Reliability Conference (ESREL 2020)
87	2020	Conference Paper	Hurter, Christophe; **Borghini, Gianluca**; Di Flumeri, Gianluca; Sciaraffa, Nicolina; Di Florio, Antonio; Terenzi, Michela; Ferreira, Ana; Pozzi, Simone; Betti, Viviana; Marucci, Matteo;	Involving Hearing, Haptics and Kinesthetics into Non-visual Interaction Concepts for an Augmented Remote Tower Environment	Computer Vision, Imaging and Computer Graphics Theory and Applications: 14th International Joint Conference, VISIGRAPP 2019, Prague, Czech Republic, February 25–27, 2019, Revised Selected Papers
88	2020	Book chapter	Sciaraffa, Nicolina; Arico, Pietro; **Borghini, Gianluca**; Di Flumeri, Gianluca; Di Florio, Antonio; Babiloni, Fabio;	The evolution of passive brain–computer interfaces: enhancing the human–machine interaction	Neurotechnology: Methods, advances and applications
89	2020	Conference Paper	de Almeida, Rosa Maria Resende; Aberturas,	Decision Support Systems to Promote Health and	International Conference on

			Adriana Grau; Aguado, Yolanda Bueno; Atzori, Maurizio; Barenghi, Alessandro; **Borghini, Gianluca;** Ortega, Carlos Alberto Catalina; Comai, Sara; Durán, Raquel Losada; Fugini, Mariagrazia;	Well-Being of People During Their Working Age: The Case of the WorkingAge EU Project	Embedded Computer Systems
90	2020	Conference Paper	Ronca, Vincenzo; Rossi, Dario; Di Florio, Antonello; Di Flumeri, Gianluca; Aricò, Pietro; Sciaraffa, Nicolina; Vozzi, Alessia; Babiloni, Fabio; **Borghini, Gianluca**;	Contactless Physiological Assessment of Mental Workload During Teleworking-like Task	International Symposium on Human Mental Workload: Models and Applications
91	2019	Conference Paper	Reynal, Maxime; Aricò, Pietro; Imbert, Jean-Paul; Hurter, Christophe; **Borghini, Gianluca**; Di Flumeri, Gianluca; Sciaraffa, Nicolina; Di Florio, Antonio; Terenzi, Michela; Ferreira, Ana;	Investigating multimodal augmentations contribution to remote control tower contexts for air traffic management	HUCAPP 2019, 14th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications
92	2019	Conference Paper	Di Flumeri, Gianluca; **Borghini, Gianluca**; Aricò, Pietro; Sciaraffa, Nicolina; Lanzi, Paola; Pozzi, Simone; Vignali, Valeria; Lantieri, Claudio; Bichicchi, Arianna; Simone, Andrea;	EEG-based mental workload assessment during real driving: A taxonomic tool for neuroergonomics in highly automated environments	Neuroergonomics
93	2019	Article	Reynal, Maxime; Imbert, Jean-Paul; Aricò, Pietro; Toupillier, Jérôme; **Borghini, Gianluca**; Hurter, Christophe;	Audio Focus: Interactive spatial sound coupled with haptics to improve sound source location in poor visibility	International Journal of Human-Computer Studies
94	2019	Conference Paper	Sciaraffa, Nicolina; Aricò, Pietro; **Borghini, Gianluca;** Di Flumeri, Gianluca; Di Florio, Antonio; Babiloni, Fabio;	On the use of machine learning for EEG-based Workload assessment: algorithms comparison in a realistic task	International Symposium on Human Mental Workload: Models and Applications
95	2019	Conference Paper	Di Flumeri, Gianluca; Aricò, Pietro; **Borghini, Gianluca;** Sciaraffa, Nicolina; Ronca, Vincenzo; Vozzi, Alessia; Storti, Silvia Francesca; Menegaz, Gloria; Fiorini, Paolo; Babiloni, Fabio;	EEG-based workload index as a taxonomic tool to evaluate the similarity of different robot-assisted surgery systems	International Symposium on Human Mental Workload: Models and Applications

96	2019	Conference Paper	Acerra, Ennia; Pazzini, Margherita; Ghasemi, Navid; Vignali, Valeria; Lantieri, Claudio; Simone, Andrea; Di Flumeri, Gianluca; Aricò, Pietro; **Borghini, Gianluca;** Sciaraffa, Nicolina;	EEG-based mental workload and perception-reaction time of the drivers while using adaptive cruise control	International Symposium on Human Mental Workload: Models and Applications
97	2019	Conference Paper	Rick, Vera Barbara; Czerniak, Julia N; Mertens, Alexander; Ronca, Vincenzo; Vozzi, Alessia; Aricò, Pietro; Di Flumeri, Gianluca; Sciaraffa, Nicolina; Ortega, Carlos Alberto Catalina; van Gasteren, Marteyn; Cobo, Maite; Nitsch, Verena; Babolini, Fabio; **Borghini, Gianluca**	WorkingAge: Smart Working Environments for AllAges	International Symposium on Human Mental Workload: Models and Applications
98	2019	Conference Paper	Cartocci, Giulia; **Borghini, Gianluca**; Scorpecci, Alessandro; MS, Bianca; Inguscio, Andrea Giorgi; Giannantonio, Sara; Sciaraffa, Nicolina; Vozzi, Alessia; Ronca, Vincenzo; Marsella, Pasquale;	Neurophysiological characterization of normal hearing and unilateral hearing loss children: a comparison among EEG-based indices for information processing and decision-making levels	International Symposium on Human Mental Workload: Models and Applications
99	2018	Article	Ohneiser, Oliver; De Crescenzio, Francesca; Di Flumeri, Gianluca; Kraemer, Jan; Berberian, Bruno; Bagassi, Sara; Sciaraffa, Nicolina; Aricò, Pietro; **Borghini, Gianluca**; Babiloni, Fabio;	Experimental simulation set-up for validating out-of-the-loop mitigation when monitoring high levels of automation in air traffic control	International Journal of Aerospace and Mechanical Engineering
100	2017	Conference Paper	Cartocci, Giulia; Maglione, Anton Giulio; Rossi, Dario; Modica, Enrica; **Borghini, Gianluca**; Malerba, Paolo; Piccioni, Lucia Oriella; Babiloni, Fabio;	Alpha and theta EEG variations as indices of listening effort to be implemented in neurofeedback among cochlear implant users	International Workshop on Symbiotic Interaction
101	2017	Conference Paper	De Crescenzio, Francesca; Di Flumeri, Gianluca; Ohneiser, Oliver; Kraemer, Jan; Berberian, Bruno; Bagassi, Sara; Sciaraffa, Nicolina; Aricò, Pietro; **Borghini, Gianluca**;	Preliminary findings on how to mitigate negative impacts of monitoring high levels of automation	Seventh SESAR Innovation Days

			Babiloni, Fabio;		
102	2016	Article	Modica, Enrica; Rossi, Dario; Cherubino, Patrizia; Trettel, Arianna; Picconi, Daniela; Maglione, Anton Giulio; Bagordoa, GianMaria; **Borghini, Gianluca;** Aricò, Pietro; Colosimo, Alfredo; Vecchiato, Giovanni; Babiloni, Francesca; Babiloni, Fabio;	Cerebral perception and appreciation of real paintings and sculptures by neuroelectric imaging	International Journal of Bioelectromagnetism
103	2015	Article	Aricò, Pietro**; Borghini, Gianluca;** Graziani, Ilenia; Imbert, Jean-Paul; Granger, Géraud; Benhacene, Raılane; Pozzi, Simone; Napoletano, Linda; Di Flumeri, Gianluca; Colosimo, Alfredo;	Air-traffic-controllers (ATCO): neurophysiological analysis of training and workload	Ital. J. Aerosp. Med
104	2015	Conference Paper	Di Flumeri, Gianluca; **Borghini, Gianluca**; Aricò, Pietro; Colosimo, Alfredo; Pozzi, Simone; Bonelli, Stefano; Golfetti, Alessia; Kong, Wanzeng; Babiloni, Fabio;	On the use of cognitive neurometric indexes in aeronautic and air traffic management environments	International Workshop on Symbiotic Interaction
105	2015	Conference Paper	**Borghini, Gianluca**; Aricò, P; Di Flumeri, G; Graziani, I; Colosimo, A; Salinari, S; Babiloni, F; Granger, G; Imbert, JP; Benhacene, R;	Skill, Rule and Knowledge-based Behaviors Detection during Realistic ATM Simulations by Means of ATCOs' Brain Activity	Fifth SESAR Innovation Days
106	2015	Patent	Aricò, P; **Borghini, G;** Di Flumeri, G; Babiloni, F;	Metodo per stimare uno stato mentale, in particolare un carico di lavoro, e relativo apparato (A Method for the estimation of mental state, in particular of the mental workload and its device)	P1108IT00
107	2014	Conference Paper	**Borghini, Gianluca;** Aricò, Pietro; Graziani, Ilenia; Salinari, Serenella; Babiloni, Fabio; Imbert, Jean-Paul; Granger, Géraud; Benhacene, Railane; Napoletano, Linda; Terenzi, Michela;	Analysis of neurophysiological signals for the training and mental workload assessment of ATCos	Proceedings of the SESAR
108	2013	Conference Paper	**Borghini, Gianluca;** Aricò, Pietro; Babiloni,	NINA: Neurometrics Indicators for ATM	SID 2013, 3rd SESAR Innovation

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109	2013	Article	Aricò, P; **Borghini, G**; Graziani, I; Bianchini, F; Cincotti, F; Babiloni, F;	A brain computer interface system for the online evaluation of ATCs' workload	Ital. J. Aerosp. Med
110	2012	Article	Kong, W; Zhou, Z; Zhou, L; Dai, Y; **Borghini, G**; Babiloni, F;	Estimation for driver fatigue with phase locking value	International Journal of Bioelectromagnetism
111	2012	Article	**Borghini, Gianluca**; Vecchiato, Giovanni; Ponzo, Viviana; Koch, Giacomo; Isabella, Roberto;	Improving flight simulation performance by using tDCS stimulation	International Journal of Bioelectromagnetism
112	2011	Article	**Borghini, G;** Isabella, R; Vecchiato, G; Toppi, J; Astolfi, L; Caltagirone, C; Babiloni, F;	Brainshield: HREEG study of perceived pilot mental workload	Italian journal of aerospace medicine