



# Antonio Pio Afragola

## WORK EXPERIENCE

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**Sapienza University of Rome - Supervisor: Prof. Claudio Babiloni**

**City:** Rome | **Country:** Italy | **Name of unit or department:** Department of Physiology and Pharmacology, Sapienza University of Rome - IRCCS San Raffaele

[ 10/2024 – 09/2025 ] **Research Assistant**

Engaged in clinical neuroscience research focused on pathological and non-pathological aging. Activities include EEG data preprocessing and analysis (resting-state and vigilance conditions), investigating visuo-motor, attentional, and executive functions. Contributing to EEG acquisitions, data analysis and interpretation, and coordination within interdisciplinary research teams.

*Project: "Assessment of brain functions in Lewy Body disease patients using telemonitoring DIGITAL markers as inputs to artificial intelligence (LBDigital)"*

*Funded by: PRIN 2022 – Prot. 2022YXEP5T (CUP B53D23019150006)*

*Supervisor: Prof. Claudio Babiloni*

## EDUCATION AND TRAINING

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[ 09/2017 – 09/2021 ] **Bachelor's Degree in Psychology and Social Processes**

**Sapienza University of Rome - Faculty of Medicine and Psychology**

**City:** Rome | **Country:** Italy | **Final grade:** 98/110 | **Thesis:** The Role of attention on time perception

[ 09/2021 – 11/2023 ] **Master's Degree in Cognitive Neuroscience**

**Sapienza University of Rome - Faculty of Medicine and Psychology**

**City:** Rome | **Country:** Italy | **Final grade:** 110/110 with honors | **Thesis:** Joint action tasks modulate cross-modal integration

[ 09/2022 – 11/2023 ] **Thesis in Social Neuroscience - Supervisor: Prof. Matteo Candidi**

**Sapienza University of Rome - IRCCS Santa Lucia Foundation**

**City:** Rome | **Country:** Italy |

Completed a Master's thesis on multisensory integration, joint action, and peripersonal space at the AgliotiLab of Social and Cognitive Neuroscience under the supervision of Professor Matteo Candidi. Gained experience in kinematic data collection and analysis, E-Prime programming, use of electrical stimulators, and behavioral data analysis.

[ 03/2023 – 11/2023 ] **Data science and Neuroscience research Internship**

**Sapienza University of Rome - IRCCS Santa Lucia Foundation**

**City:** Rome | **Country:** Italy |

During my curricular internship at the Aglioti Lab of Social and Cognitive Neuroscience, I gained hands-on experience assisting with EEG, TMS, and tDCS experiments, deepening my understanding of neurophysiological research methods.

[ 01/2024 – 01/2025 ] **Data science and Neuroscience research post-grad Internship**

**Sapienza University of Rome - IRCCS Santa Lucia Foundation**

**City:** Rome | **Country:** Italy |

Continuation of work with neuroimaging and neuromodulation techniques mentioned above, gaining familiarity with physiological methods such as EEG and ECG, as well as skills in MATLAB programming, kinematic data extraction and analysis, and thermal imaging data processing.

## LANGUAGE SKILLS

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**Mother tongue(s):** English , Italian

## PUBLICATIONS

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### **Periodic And Aperiodic Electroencephalographic Rhythms During Vigilance Transitions In Alzheimer's Disease Mild Cognitive Impairment**

(Carpi M., Henao Isaza V., Noce G., Salamone E. M., Del Percio C., Lopez S., Carducci F., Lizio R., De Bartolo M., Jakhar D., Afragola A., Rossi C., Barjami L., Soricelli A., Salvatore M., Giubilei F., Güntekin B., Yener G., Massa F., Arnaldi D., Famà F., Pardini M., Ferri R., Lanuzza B., Stocchi F., Vacca L., Coletti C., Marizzoni M., Taylor J. P., Hanoğlu L., Yırıkoğulları H., Frisoni G. B., Cuoco S., Cappiello A., Barone P., Bonanni L., D'Anselmo A., Biundo R., Cauzzo S., Fiorenzato E., Antonini A., D'Antonio F., Bruno G., Infarinato F., Marziali S., De Pandis M. F., Babiloni C. (2025))

*Submitted for review*

### **On-line Interpersonal Motor Interactions Modulate Visuo-Tactile Cross-Modal Congruency Mechanisms**

(Cuomo G., Afragola A., Pesci U., Era V., Candidi M. (2025))

*In preparation*

## CONFERENCES AND SEMINARS

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[ 09/11/2023 – 11/11/2023 ] **XXXI National SIPF Conference** Siena

[ 18/09/2025 – 20/09/2025 ] **XX National SINDem Conference** Rome

## POSTER PRESENTATIONS

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### **Interpersonal Motor interactions Remap Visuo-Tactile Integration**

(Cuomo, G., Afragola A., Karci, G., Era, V., Candidi, M. (2023))

*Joint Action Meeting (Budapest, Hungary)*

### **Joint Action Tasks Modulate Visuo-Tactile Integration**

(Afragola A., Cuomo, G., Karci, G., Era, V., Candidi, M. (2023))

*XXXI National SIPF Conference (Siena, Italy)*

### **Complementary Human-Avatar Joint Actions Re-Map Visuo-Tactile Integration and Abolish Visuo-Tactile Interference Effects**

(Cuomo, G., Afragola A., Pesci U., Era, V., Candidi, M. (2024))

*ESCAN Conference (Ghent, Belgium)*

### **Periodic and aperiodic electroencephalographic components during the transition from quiet wakefulness to light sleep in Alzheimer's disease patients with mild cognitive impairment**

(Afragola A., De Bartolo M., Del Percio C., Lizio R., Lopez S., Henao Isaza V., Salamone E., Carducci F., Noce G., Barone P., Cappiello A., Di Filippo F., Riemmai D., Costanzo G., Barone A., Antonini A., Cauzzo S., Fiorenzato E., Vianello F., Stocchi F., Coletti C., Infarinato F., Romano P., Babiloni C., Carpi M. (2025))

*XX National SINDem Conference (Rome, Italy)*

### **Acceptability and usability of home elemonitoring SmartMe&You videogames to monitor cognitive functions in Alzheimer's and Parkinson's disease patients**

(A. Cappiello, M. De Bartolo, S. Lopez, A. Afragola, M. Carpi, V. Henao Isaza, F. Carducci, R. Lizio, G. Noce, A. Barone, F. Di Filippo, G. De Biasi, C. Ginulfi, P. Barone, A. Antonini, S. Cauzzo, E. Fiorenzato, F. Vianello, F. Stocchi, C. Coletti, F. Infarinato, G. M. Russo, L. Angeloni, A. Rosati, A. Baldas, V. Diana, D. Passalacqua, S. Tommassini, C. Babiloni, C. Del Percio (2025))

*XX National SINDem Conference (Rome, Italy)*

**Resting state electroencephalographic markers are associated with the performance of the home telemonitoring Smartme&You program in healthy and mild cognitive impairment participants**

(R. Lizio, C. Babiloni, S. Lopez, A. Afragola, M. Carpi, V. Henao Isaza, F. Carducci, G. Noce, P. Barone, A. Cappiello, F. Di Filippo, D. Riemmai, G. Costanzo, A. Barone, A. Antonini, S. Cauzzo, E. Fiorenzato, F. Vianello, F. Stocchi, C. Coletti, F. Infarinato, G. M. Russo, L. Angeloni, A. Rosati, A. Baldas, V. Diana, D. Passalacqua, S. Tomassini, M. De Bartolo, C. Del Percio (2025))

*XX National SINDem Conference (Rome, Italy)*

**Association between sleepiness, sleep quality, and resting-state electroencephalographic markers in Alzheimer's and Parkinson's diseases**

(M. De Bartolo, M. Carpi, C. Babiloni, R. Lizio, S. Lopez, A. Afragola, V. Henao Isaza, F. Carducci, G. Noce, P. Barone, A. Cappiello, F. Di Filippo, D. Riemmai, G. Costanzo, A. Barone, A. Antonini, S. Cauzzo, E. Fiorenzato, F. Vianello, F. Stocchi, C. Coletti, F. Infarinato, G. M. Russo, L. Angeloni, A. Rosati, A. Baldas, V. Diana, D. Passalacqua, S. Tommassini, C. Del Percio (2025))

*XX National SINDem Conference (Rome, Italy)*

**SmartMe&You home telemonitoring unveils lower heart rate changes in 24 hours associated with global cognitive status in patients with Alzheimer's and Parkinson's diseases**

(V. Henao Isaza, M. De Bartolo, M. Carpi, R. Lizio, C. Del Percio, S. Lopez, B. Bolukbas, A. Afragola, F. Carducci, G. Noce, P. Barone, A. Cappiello, F. Di Filippo, D. Riemmai, G. Costanzo, A. Barone, A. Antonini, S. Cauzzo, F. Vianello, F. Stocchi, C. Coletti, F. Infarinato, G. M. Russo, C. Ranallo, M. Bonaccorsi, L. Angeloni, A. Rosati, A. Baldas, V. Diana, D. Passalacqua, S. Tommassini, E. Fiorenzato, C. Babiloni (2025))

*XX National SINDem Conference (Rome, Italy)*

**Smartme&You home telemonitoring unveils lower daily steps associated with cognitive performance in unsupervised serious videogames in patients with Alzheimer's and Parkinson's diseases**

(M. Carpi, M. De Bartolo, R. Lizio, C. Del Percio, S. Lopez, A. Afragola, V. Henao Isaza, F. Carducci, G. Noce, P. Barone, A. Cappiello, F. Di Filippo, D. Riemmai, G. Costanzo, A. Barone, A. Antonini, S. Cauzzo, F. Vianello, F. Stocchi, C. Coletti, F. Infarinato, G. M. Russo, L. Angeloni, A. Rosati, A. Baldas, V. Diana, D. Passalacqua, S. Tommassini, C. Babiloni, E. Fiorenzato (2025))

*XX National SINDem Conference (Rome, Italy)*

**Artificial intelligence tools using MRI markers predict cognitive functions in patients with parkinson's disease and cognitive decline**

(S. Lopez, E. Fiorenzato, M. De Bartolo, A. Afragola, M. Carpi, V. Henao Isaza, R. Lizio, G. Noce, A. Barone, F. Di Filippo, G. De Biasi, A. Cappiello, C. Ginulfi, D. Riemma, G. Costanzo, P. Barone, A. Antonini, S. Cauzzo, F. Vianello, F. Stocchi, C. Coletti, F. Infarinato, G. Russo, L. Angeloni, A. Rosati, A. Baldas, V. Diana, D. Passalacqua, S. Tommassini, C. Babiloni, C. Del Percio, F. Carducci (2025))

*XX National SINDem Conference (Rome, Italy)*

**Periodic and aperiodic electroencephalographic components during the transition from quiet wakefulness to light sleep in Alzheimer's disease patients with mild cognitive impairment**

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*LV SIN Congress 2025 (Padova, Italy)*

### **Acceptability and usability of home elemonitoring SmartMe&You videogames to monitor cognitive functions in Alzheimer's and Parkinson's disease patients**

(A. Cappiello, M. De Bartolo, S. Lopez, A. Afragola, M. Carpi, V. Henao Isaza, F. Carducci, R. Lizio, G. Noce, A. Barone, F. Di Filippo, G. De Biasi, C. Ginulfi, P. Barone, A. Antonini, S. Cauzzo, E. Fiorenzato, F. Vianello, F. Stocchi, C. Coletti, F. Infarinato, G. M. Russo, L. Angeloni, A. Rosati, A. Baldas, V. Diana, D. Passalaqua, S. Tommassini, C. Babiloni, C. Del Percio (2025))

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(V. Henao Isaza, M. De Bartolo, M. Carpi, R. Lizio, C. Del Percio, S. Lopez, B. Bolukbas, A. Afragola, L. Barjami, F. Fiorentino, F. Carducci, G. Noce, P. Barone, A. Cappiello, F. Di Filippo, D. Riemmai, G. Costanzo, A. Barone, A. Antonini, S. Cauzzo, F. Vianello, F. Stocchi, C. Coletti, F. Infarinato, G. M. Russo, C. Ranallo, M. Bonaccorsi, L. Angeloni, A. Rosati, A. Baldas, V. Diana, D. Passalaqua, S. Tommassini, E. Fiorenzato, C. Babiloni (2025))

*LV SIN Congress 2025 (Padova, Italy)*

### **SmartMe&You Home Platform for Multimodal Monitoring: Integrating Motor Activity, Serious Games, and Resting EEG in Older Adults with Cognitive Impairment Due to Alzheimer's and Parkinson's Diseases**

(M. De Bartolo, M. Carpi, R. Lizio, C. Del Percio, S. Lopez, A. Afragola, V. Henao Isaza, F. Carducci, G. Noce, F. Fiorentino, L. Barjami, P. Barone, A. Cappiello, F. Di Filippo, D. Riemmai, G. Costanzo, A. Barone, A. Antonini, S. Cauzzo, F. Vianello, F. Stocchi, C. Coletti, F. Infarinato, G. M. Russo, L. Angeloni, A. Rosati, A. Baldas, V. Diana, D. Passalaqua, S. Tommassini, C. Babiloni, E. Fiorenzato (2025))

*LV SIN Congress 2025 (Padova, Italy)*

### **Resting-state cortical networks are differently affected by neurodegeneration in patients with cognitive deficits related to Parkinson's disease**

(S. Lopez, E. Fiorenzato, M. De Bartolo, A. Afragola, M. Carpi, V. Henao Isaza, R. Lizio, G. Noce, A. Barone, F. Di Filippo, G. De Biasi, A. Cappiello, C. Ginulfi, D. Riemma, G. Costanzo, P. Barone, A. Antonini, S. Cauzzo, F. Vianello, F. Stocchi, C. Coletti, F. Infarinato, P. Romano, G. Russo, L. Angeloni, A. Rosati, A. Baldas, V. Diana, D. Passalaqua, S. Tommassini, C. Babiloni, C. Del Percio, F. Carducci (2025))

*LV SIN Congress 2025 (Padova, Italy)*

## REFERENCES

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### **Professor Claudio Babiloni**

Full Professor, Department of Physiology and Pharmacology  
Sapienza, University of Rome  
Piazzale Aldo Moro 5 - 00185 - Rome (italy)

**claudio.babiloni@uniroma1.it**

### **Professor Claudio Del Percio**

Associate Professor, Department of Physiology and Pharmacology  
Sapienza, University of Rome  
Piazzale Aldo Moro 5 - 00185 - Rome (italy)

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### **Professor Matteo Candidi**

Associate Professor, Department of Psychology  
Sapienza, University of Rome  
Via dei Marsi 78 - 00185 - Roma (Italy)

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### **Dr. Giovanna Cuomo**

Post-Doctoral Fellow, AgliotLab of Cognitive and Social Neuroscience  
Department of Psychology  
Sapienza, University of Rome  
Via dei Marsi, 78 - 00185 - Roma (Italy)

**giovanna.cuomo@uniroma1.it**

## SOFTWARE SKILLS

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### **Comfortable using:**

- Tibco Statistica, Jamovi (Data analysis)
- Smart Capture, Tracker, Analyzer (Kinematics)
- Virtual Dub/ Audacity (Video Editing/ Audio Editing)
- E-Prime
- Basic Matlab, R
- Windows OS and Microsoft Office
- g.RECORDER, Brain Vision Recorder
- EEGLAB, Loreta
- Chat GPT