SELECTION OF ONE ASSOCIATE PROFESSORS FOR THE ACADEMIC RECRUITMENT FIELD 09/G2 "BIOENGINEERING" AT THE ACADEMIC CLASS OF EXPERIMENTAL AND APPLIED SCIENCES - BIOROBOTICS INSTITUTE, PURSUANT TO ART. 24, SUBSECTION 5, OF ITALIAN LAW 240/2010, ISSUED BY RECTOR DECREE NO. 145 DATED 13/03/2024.

The Committee for the evaluation of Dr. Alberto Mazzoni, tenure-track – probationary, assistant professor, in the third year of his temporary contract pursuant to Italian Law no. 240/2010, art. 24 paragraph 3 letter B, in order to promote him to Associate Professor in the Academic Recruitment Field 09/G2 "Bioengineering" at the Academic Class of Experimental and Applied Sciences and BioRobotics Institute, nominated by the Rector by decree No. 248 dated 07/05/2024 and modified by Rectoral Decree no. 294 dated May, 24, 2024, consists of:

- Prof. Fabrizio Esposito, Full Professor in the Academic Recruitment Field 09/G2 "Bioengineering" - Academic Discipline ING-INF/06 "Electronic and Informatics Bioengineering" at the University of Campania "Luigi Vanvitelli";
- Prof. Elena Moro, Professor of Neurology at the Grenoble Alpes University, (France);
- Prof. Jeanette Hellgren Kotaleski, Professor of Computer Science at the KTH Royal Institute of Technology, (Sweden);
- Prof. Sergio Martinoia, Full Professor in the Academic Recruitment Field 09/G2 "Bioengineering" - Academic Discipline ING-INF/06 "Electronic and Informatics Bioengineering" at the University of Genova, as a designated expert member by Institute of Biorobotics;
- Prof. Alessandra Laura Giulia Pedrocchi, Full Professor in the Academic Recruitment Field 09/G2 "Bioengineering" - Academic Discipline ING-INF/06 "Electronic and Informatics Bioengineering" at the Politecnico di Milano.

The Committee convened on July 2nd , 2024, at 5.30 p.m., via teleconference as authorized by the Rector.

Pursuant to art. 5 paragraph 2 of Legislative Decree no. 1172/1948, each member declared that they have no kinship or affinity up to the fourth grade with any of the other members and the candidate, that there are no reasons for abstention in relation to art. 51 of c.p.c. and that he is not in any situation, actual or potential, of conflict of interests with the candidates (as per art. 6 bis of the Legislative Decree No 241/1990).

Prof. Sergio Martinoia was nominated as President and Prof. Alessandra Laura Giulia Pedrocchi as

Secretary.

The Committee then reviewed the Call and especially its article 4 and agreed that the candidate shall be assessed according to the parameters established by Ministerial Decree 344/2011, in relation to the compliance of the scientific profile with the "general criteria of qualification for teaching and research required for access to professoral positions at the School" established by the School's Commission for Recruitment and set out in article 1 of the Call.

The members of the Committee stated that the Personnel Office of the School has provided them with an electronic copy of the documentation submitted by the candidate containing: application, curriculum, publications with a declaration in lieu of an affidavit certifying compliance with the original, and a list of all the documents accompanying the application and that they have examined it and made their individual assessments, which are reported in Annex 1 of these minutes.

The Committee then collectively examined the publications, curriculum and teaching activities of the candidate, confronted their individual assessments and reviewed the collegiate assessment Annex 2 attached to the minutes of which it is an integral part.

Then after a full discussion, on the basis of an unanimous vote, the Committee declared that Dr. Mazzoni:

is qualified to be appointed as associate professor.

Given the conclusion of the selection procedure for one position of Associate Professor in the Academic Recruitment 09/G2 "Bioengineering" at the Academic Class of Experimental and Applied Sciences and BioRobotics Institute pursuant to art. 24, subsection 5 of Italian law 240/2010, the President declared the work closed.

These minutes, and the attached declarations of the Committee's members connected via teleconference will be given to the Personnel Office in order for these proceedings to be verified, with a decree by the Rector.

The session closed at 6.10 p.m.

Read, approved and signed,

The Committee

ATTACH 1

INDIVIDUAL ASSESMENTS

FABRIZIO ESPOSITO

During the conventional 3-year tenure track period, Alberto Mazzoni has carried out several academic-level teaching activities focused on topics of excellent congruity with the field of expertise of the call profile and with excellent temporal continuity. In particular, the teaching activities amounted to far more than the minimum of 20h/year (usually identified as the standard for the tenure track position from the School) and pertained to lectures given for academic courses on “Information Theory and Neural modeling for Neuroengineering" within the PhD program in “Biorobotics” of The Biorobotics Institute of Sant’Anna School, "Neuromorphic Engineering" within the Master's Degree Program in Bionics Engineering of the University of Pisa, "Neural Prostheses" within the Master's Degree Program in Bionics Engineering of the University of Pisa and "Biorobotics and Complex Systems" within the Master's Degree Program in Physics of the University of Pisa. All courses obtained excellent ratings from the participants.
In the last three years, Alberto Mazzoni has attended Faculty Council meetings and PhD Boards and supervised seven PhD students, six Master theses in Bionics or Biomedical Engineering, eight Master theses in Physics and one degree thesis in Neuroscience.
At the time of the call, Alberto Mazzoni has published 92 papers on international peer-reviewed journals, 27 of which as senior author, and 12 of which as main author. He also contributed to 6 book chapters and 15 conference papers. The overall consistency of the researcher's scientific production was excellent. The temporal intensity and continuity were also excellent. The impact of the publications was largely above the medians for the position, the total number of citations reaching the quota of 2544 (source: Scopus), with an average number of citations per publication of 1.31 and an H-index of 24.
In terms of scientific research activity, Alberto Mazzoni has set up several national and international collaborations with outstanding institutions and research groups strongly active in the field of expertise of the call profile. Moreover, he has received funding for eight research projects in competitive national calls for up to (approximately) 1 million euros of total funding for his own research. In three projects, he was the local coordinator; in another project, he was responsible for the joint activity of two laboratories; in other projects he was task leader with direct fundings for his own laboratory. He has also been coordinator of three more research projects before the tenure track position. He has been invited speaker on three national and two international conferences.
Alberto Mazzoni has also selected 12 publications for in-depth evaluation by the Committee, as requested by the call. All articles appeared between 2008 and 2024 in high ranked international journals and the individual contribution was excellent in all publications given that Alberto Mazzoni appeared as either (co-)main or (co-)senior author of each publication. All publications appeared on a Q1 journal (according to current SJR rankings) and the topic was highly congruent either with the field of expertise of the call profile or with one of the interdisciplinary fields that is relevant for the call profile. Each article presents an original work, including at least one element of good innovation in the field and results are presented with good or excellent methodological rigour.
In terms of technology transfer, Alberto Mazzoni has co-authored two Italian and one US patents, setting up important collaborations with companies in the medical field. He has been also engaged

in several dissemination activities contributing to the spreading of scientific knowledge and awareness in the society and denoting a full maturity of the candidate‘s scientific profile.
In conclusion, the amount and quality of teaching, research, technology transfer and dissemination activities carried out by Alberto Mazzoni during the 3-year tenure track period are of significant merit, with original contributions of high quality. The overall rating of is therefore excellent.

ELENA MORO

I have carefully reviewed the CV of Dr. Alberto Mazzone.
He graduated in physics at the University of Pisa, Italy, and obtained a PhD in Neuroscience in Trieste (SISSA). After a postdoc period in Trieste, he has been appointed as tenure-track assistant professor at the Biorobotic Institute of the School of Advanced Studies Sant'Anna, Pisa, Italy, in 2021.
He is currently the PI of the Computational Neuroenginnering Laboratory of the Biorobotic Institute.
Concerning teaching and education, Dr. Mazzone has shown to be highly engaged, giving a 20h course per year to PhD students (with excellent students' evaluation), and several Master courses, each of them including more than 20 hours/year. He has supervised 12 Master theses, and 7 PhD theses.
Concerning his research activities, Dr Mazzone has been very productive. His research area has been addressing the pathophysiology of neurological disorders, especially those concerning the basal ganglia, through the analysis of neuronal activities.
He has been the PI of several multidisciplinary projects spanning from algorithms, animal model and clinical neuroengineering applications. He has collaborations with several non-clinical and clinical centers in Italy. Moreover, he is involved in international collaborative projects, supporting his international reputation. Indeed, he has been invited as a speaker to several national and international conferences.
In summary, Dr Alberto Mazzone has shown to have all the professional requirements needed to continue to be very successful in his academic career.

JEANETTE HELLGREN KOTALESKI

Alberto Mazzoni has an h-index (via google scholar) of 28 (as of 1 July 2024), with an increasing number of citations each year. For example, the number of citations were almost 600 during 2023, and already are up to 321 after the first half of 2024 (google scholar). Several publications appear in highly ranked journals, especially for his field that falls broadly within computational neuroscience.
Alberto's main interest currently evolves around using modeling and simulations to understand the brain in health and disease (for example related to motor systems such as the basal ganglia and neurodegenerative diseases related to those). He has also kept his general interests for simulating network dynamics of cortical networks, and conducts research here related to the diseased brain (e.g. migraine). Alberto is also collaborating closely with experimental and clinical research groups interested in DBS, neuroprosthetics, etc, and in those collaborations he is responsible for the data analysis and software development aspects, which sometimes even gives him last authorship on those joint publications highlighting that his contributions are significant also for these collaborative efforts.

During the last three years, Alberto attracted funding for approximately 1 million euros through both national and international grants. He is involved either as ‘local’ lab(s) coordinator or as task leader. In line with this, his lab has also grown from 4 to 12 members (currently including 3 postdocs, 6 PhD students, one technician, one postgraduate fellow). The lab is supervising on average 6 master thesis students and internship student work at any given time.
Alberto is actively involved in teaching courses at both the PhD and master levels, in addition to the actual supervision of the master and PhD theses work. Course evaluations suggest Alberto is a highly appreciated teacher. Over the last 3 years Alberto has furthermore been supervising 7 PhD students, including one that already graduated. He has also been a member of 4 PhD examination boards.
In summary, my evaluation is that Alberto is developing his research efforts as well as his international visibility in an excellent way, and thus deserves a promotion.

SERGIO MARTINOIA

Aberto Mazzoni has a record of 92 publications at the time of the application; 27 as senior author and 12 as first author. His H-index is currently 24 with 2655 citations (Scopus).
The candidate has published a total of 33 publications during the contract period with 14 publications as senior author and one article as first author. All publications are in the field of Bioengineering with a particular focus on Neuroengineering. The candidate’s contributions are relevant to the field and numerous papers have been published in well-recognized journals. The overall quality of the scientific production is excellent.
The coordination of scientific activities and the participation in research projects are both relevant and well documented. He is responsible for or participates in several research projects at the national and international levels. The participation and coordination of project is exemplary, and the candidate has achieved a very good international reputation evidenced by the invited talks and network of international collaborations. Alberto Mazzoni has also served as the primary supervisor for seven doctoral dissertations and nine master's theses already demonstrating very good mentoring capabilities (with Master and PhD thesis awards).
The candidate's teaching activities during the contract period are noteworthy, including courses for the Master in Bionic Engineering, Physics, and the PhD in Biorobotics. The evaluations reported are highly favorable, and the teaching activities are well-positioned within the field of bioengineering. Finally, the candidate is also active in the technology transfer and dissemination as evidenced by two Italian and one US patents and interesting collaborations with companies in the medical field. He has been engaged in numerous activities aimed at disseminating scientific knowledge which witnesses the maturity of the candidate‘s scientific profile.
In conclusion, the research, teaching and technology transfer-dissemination activities of Alberto Mazzoni during the contract period are of significant merit, with original contributions of high quality. The overall rating is excellent.

ALESSANDRA PEDROCCHI

Alberto Mazzoni has taught multiple class modules to both master's and PhD students in the field of Neural Engineering at the University of Pisa and the Sant’Anna School of Advanced Studies. He has supervised three master's theses in Bionic Engineering and six in the Master of Physics program at the University of Pisa. He has supervised one PhD student, Nicolò Meneghetti, who completed his PhD in June 2023, and he is currently supervising six PhD students.

Alberto Mazzoni has an impressive portfolio of grants, mostly as Principal Investigator, including a PRIN project, several international projects (Fresco Foundation, FET Proactive), and multiple contributions to PNRR funding to the Sant'Anna School of Advanced Studies (SSSA). Notably, he is the head of two new laboratories: BD-MDlab ("Brain and Spinal Cord Dysfunctions and Movement Disorders Laboratory"), located within the Careggi AOU, and NHP-3N ("Non-Human Primate Neurophysiology, Neuroethology, and Neuroanatomy"), between the Biorobotics Institute and the University of Parma. Additionally, he serves as the Infrastructure Manager for SSSA in the European Brain Research Infrastructures-Italy (EBRAINS-Italy). His project record demonstrates his exceptional ability to attract funds, manage them effectively, and build strong international and national collaborative networks. His international visibility is further confirmed by his elected participation on the Board of Directors of the Organization for Computational Neuroscience (OCNS) for the 2023-2025 term. He has also been a speaker at numerous events, including scientific conferences and outreach initiatives.

Over the past three years, his publication record has increased significantly. He has published 32 papers in peer-reviewed journals, with most showing prominent author contributions: 10 as last author, 4 as equally contributing last author, and one as first author. His citation trend has almost doubled from 2019 to 2023, and he holds an H-index of 24, which is considered very good.

Overall, during his three-year contract, Alberto Mazzoni has made significant contributions to teaching, dissemination activities, and scientific research. His work in Neural Engineering has provided prominent contributions to the Italian community and gained high international visibility. I undoubtedly consider Alberto Mazzoni deserving of promotion to Associate Professor.

ATTACH 2

COLLEGIATE ASSESMENTS

Alberto Mazzoni holds a degree in Physics from the University of Pisa and a PhD in Neuroscience from the International School of Advanced Studies (SISSA) in Trieste. He was a postdoctoral fellow at SISSA and subsequently at the Italian Institute of Technology. He holds a National Qualification for Associate Professor in Bioengineering (ASN 09/G2) from 2017. In 2021, he was appointed as a tenure-track assistant professor at the Biorobotic Institute of the School of Advanced Studies Sant'Anna (SSSA), Pisa. He is the principal investigator of the Computational Neuroengineering Laboratory at the Biorobotic Institute and serves as the scientific responsible for the SSSA of two joint laboratories with the Careggi Hospital and the University of Parma.
During the last three years, Alberto Mazzoni attracted funding for approximately 1 million euros through both national and international grants. In line with this, his lab has also grown from 4 to 12 members, comprising 3 postdocs, 6 PhD students, one technician, one postgraduate fellow. The lab is supervising on average 6 master thesis students and internship students work at any given time. His international visibility is further confirmed by his election to the Board of Directors of the Organization for Computational Neuroscience (OCNS) for the 2023-2025 term.
Over the past three years, his publication record has increased significantly. He has published 32 papers in peer-reviewed journals, with most showing prominent author contributions: 10 as last author, 4 as equally contributing last author, and one as first author. His citation trend has nearly doubled from 2019 to 2023, and he holds an H-index of 24 (Scopus) which is considered very good at the current stage of his academic career. Additionally, Alberto Mazzoni has selected 12 publications for in-depth evaluation by the Committee, as requested by the call. All articles were published between 2008 and 2024 in high-ranked international journals. The individual contribution was excellent in all publications given that Alberto Mazzoni appeared as either co-main or co-senior author of each publication. All publications appeared on a Q1 journal (according to current SJR rankings), and the topic was highly congruent either with the field of expertise of the call profile or with one of the interdisciplinary fields that is relevant for the call profile. Each article presents an original work, including at least one element of innovation in the field of bioengineering and results are presented with excellent methodological rigour.
The candidate's teaching activities during the contract period are noteworthy, including courses for the Master in Bionic Engineering, Physics, at the University of Pisa and the PhD in Biorobotics (School of Advanced Studies Sant'Anna, Pisa). The evaluations reported are highly favorable, and the teaching activities are well-positioned within the field of bioengineering. Finally, the candidate is also active in the technology transfer and dissemination as evidenced by two Italian and one US patents and interesting collaborations with companies in the medical field. He has been engaged in numerous activities aimed at disseminating scientific knowledge which witnesses the maturity of the candidate's scientific profile.
In conclusion, the productivity and quality of teaching, research and third mission activities carried out by Alberto Mazzoni during the 3-year tenure track period are excellent.

Therefore, the Committee unanimously considers Alberto Mazzoni deserving of promotion to Associate Professor.