

SELECTION OF ONE ASSOCIATE PROFESSOR FOR THE ACADEMIC RECRUITMENT FIELD 09/G2 “BIOENGINEERING” IN 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. 728 DATED 19/10/2023.

The Committee for the evaluation of Dr. Stefano Palagi, 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 the BioRobotics Institute, nominated by the Rector by decree No. 798 dated 15/11/2023, is composed of:

- Prof. Valeria Chiono, Professor “Settore Concorsuale 09/G2”, Politecnico di Torino;
- Prof. Dario Floreano, Professor at EPFL, Lausanne, Switzerland;
- Prof. Silvestro Micera, Professor “Settore Concorsuale 09/G2” at the Scuola Superiore Sant’Anna, as expert nominated by the Biorobotics Institute;
- Prof. Bradley Nelson, Professor at ETHZ, Zurich, Switzerland;
- Prof. Manuela Teresa Raimondi, Professor “Settore Concorsuale 09/G2”, Politecnico di Milano.

The Committee convened on December 14, 2023, at 2 pm, with all the professors connected via teleconference from their own offices 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 candidate (as per art. 6 bis of the Legislative Decree No 241/1990).

Prof. Micera was nominated as President and Prof. Chiono 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 HR 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 collegial assessment annex sub 2 attached to the minutes of which it is an integral part.

Then, after a full discussion, the Committee unanimously declared that Dr. Palagi:

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 HR Office in order for these proceedings to be verified, with a decree by the Rector.

The session closed at 3 pm.

Read, approved and signed,

The Committee

ATTACH 1

INDIVIDUAL ASSESSMENTS

Prof.ssa Valeria Chiono

Academic Qualifications: The candidate has adequate academic qualifications as he holds a PhD in Innovative Technologies and Bio-robotics, has international post-doc experience as a visiting scientist in two labs in Germany and Switzerland, he is currently Assistant Professor with fixed-term contract in Industrial Bioengineering (09/G2 - ING-IND/34) and has set up an independent research group, attracting competitive funding (ERC starting grant).

Research Experience: The candidate has carried out excellent research activity, as demonstrated by the coordination of an ERC Starting grant in the field of micro robotics since 2021. He has also been the scientific manager of a bio robotic lab, and a member of a research network project funded by a national "PNRR" program based on the EU's recovery fund. In the contract period, he has published six articles on high-quality international journals, relevant to the sector of Industrial Bioengineering. Their content showed high originality, novelty and rigorous methodology. Furthermore, he also published eight contributions to proceedings in international conferences. Additionally, Dr Palagi holds an excellent track record of publications in soft micro robotics prior the contract period, showing originality, novelty, very good citational impact and relevance to the sector of Industrial Bioengineering. He has also been invited speaker at two international conferences, demonstrating his international reputation.

Teaching and supervising ability: In the contract period, Dr. Palagi has carried out continuous teaching activity in courses for PhD and Master Students, relevant to the Industrial Bioengineering sector. He has also carried out adequate seminar activities in the sector of Industrial Bioengineering. Furthermore, he has mentored two visiting students, been the supervisor of four Master and five doctoral students. All these activities are relevant to the sector of Industrial Bioengineering.

Service to the Academic Community: He has adequate experience, demonstrated by participation to several committees for the admission of PhD and non-EU Master students and the final examination of PhD students.

Contributions to Public Engagement and Technology Transfer: He has been the inventor of two patents in the Industrial Bioengineering sector.

Final assessment: Overall, Dr Palagi's research activity, academic qualifications, teaching experience, supervising experience, service to the academic community, contribution to public engagement and technology transfer, are of excellent level and relevant to the sector of Industrial Bioengineering.

Prof. Dario Floreano

Academic Qualifications: the applicant has met all international qualifications typically required to access the position of tenured associate professorship, namely a PhD degree, experience as a postdoctoral fellow, appointment as assistant professor, successfully setting up an independent research group, and attracting competitive funding (ERC starting grant).

Research Experience: the applicant published top-quality articles in the field of soft matter, soft robotics, and soft actuators with applications in medical fields and science-driven robotics. As he acknowledged, the publication output has been irregular with some dips in recent years, that are also reflected by citations. However, these irregularities are well explained by change of universities that required some time for adjustment, a change of research emphasis, and the covid period that made things more complicated. All things considered, and especially in light of the ERC grant and demonstration of high-quality publications, it is likely that the applicant will resume publishing at levels that are internationally competitive.

Teaching and supervising ability: the applicant has taught several undergraduate courses, although some have been partly taught with other lecturers, and supervised some master projects. I do not know the expectations for an associate professor at his university, and thus cannot assess to what extent his teaching load is satisfactory. It seems that he has been co-tutoring only 4 PhD students with other professors during the past 6 years; I'm not sure if the co-tutoring is a requirement of his university, but I would recommend to increase the number PhD theses directly supervised by him.

Service to the Academic Community: the candidate has served in several selection committees at his university. However, I could not find evidence of international academic service in his CV (committees, journal editorial boards, associations, etc.).

Contributions to Public Engagement and Technology Transfer: The candidate holds a patent and his research direction has great potential for further technology transfer. The candidate has given presentations at international workshops, although I would have expected more visibility in terms of invited talks and keynotes at national and international events.

Final assessment: The candidate meets all the qualifications for associate professor, has attracted high-prestige competitive funding, and has shown to be capable of world-leading research. Although his research output has recently declined and international visibility has consequently suffered a bit in terms of citations and international presentation, there is convincing evidence for a new restart that builds on solid and demonstrated scientific competence. Overall, I'm in favour of promotion to the rank of tenured associate professor.

Prof. Silvestro Micera

Academic Qualifications: The candidate has an excellent academic background that is highly relevant to the discipline, with advanced degrees such as a Ph.D., national scientific qualification (for Associate Professor), and good publications in prestigious journals. He has been postdoc also in a very prestigious international research center.

Research Experience: The candidate is coordinating an interesting ERC starting project and he is involved in two Italian projects. He has shown a very good research activity throughout his career, with interesting contributions to his discipline. He has published original research in very good peer-reviewed journals (e.g., Science Robotics, Advanced Functional Materials).

Teaching and supervising ability: The candidate has conducted good teaching activities, at graduate level as well as for Ph.D. students. He supervised several Master and PhD students.

Service to the Academic Community: The candidate has participated in service activities to the academic community, including roles on academic committees, and peer review for international journals.

Contributions to Public Engagement and Technology Transfer: The candidate has made discrete contributions to scientific dissemination and the promotion of the discipline to a broader audience. He also holds two patents.

Final assessment: based on the evaluation of the above criteria, the overall judgment is excellent. His academic background, research experience, and teaching abilities make him an excellent candidate for promotion to associate professor.

Prof. Bradley Nelson

Academic Qualifications:

Prof. Palagi has bachelor's and master's degree in Biomedical Engineering from the University of Pisa and a PhD in Innovative Technologies – Bio-Robotics from Sant'Anna School of Advanced Studies. All degrees are with honours.

Research Experience:

The applicant spent a year as a Fellow after receiving his PhD at the Center for Micro-BioRobotics (Pisa, Italy) IIT. He then moved to Stuttgart, Germany as a postdoctoral researcher in Micro, Nano, and Molecular Systems at the Max Planck Institute for Intelligent Systems. After approximately four years he returned to Pisa in the Bioinspired Soft Robotics Lab at IIT. These are all top research institutes in Europe and the World. He has obtained a prestigious ERC Starting Grant.

Teaching and supervising ability:

The applicant has supervised a number of master's and PhD students in Germany and Italy. He has also taught four courses.

Service to the Academic Community:

The applicant participates in a number of committees for admissions and Ph.D. exams. He participates in his research community's top conferences. He is developing a strong international reputation through this.

Contributions to Public Engagement and Technology Transfer:

The applicant lists contributions of creating open datasets and open software. He is also a co-inventor on two patents.

Final assessment:

The applicant has developed a strong international reputation as a talented researcher. He is able to publish in top journals and obtain significant research funding. He focuses on education, research, and service to his research community. I am in favor of his promotion to Associate Professor.

Prof.ssa Manuela Teresa Raimondi

Academic Qualifications: As stated in his CV, the applicant has been awarded a PhD in innovative technologies and bio robotics in 2013. He has been a visiting scientist at two foreign labs in Germany and Switzerland. The applicant is currently enrolled as Assistant Professor with a fixed-term employment contract, pursuant to art. 24 paragraph 3 letter b) Law 240/2010, for the Academic Recruitment Field 09/G2 - "Bioengineering" - Academic Discipline ING-IND/34 "Industrial bioengineering" from 01/02/2021 to 31/01/2024.

Research Experience: as stated on his CV, within the contract period the applicant has been the Principal Investigator of an ERC Starting grant in the field of microrobots. He has also been the scientific manager of a biorobotic lab, and a member of research network project funded by a national "PNRR" program based on the EU's recovery fund. He was an invited speaker at two international conferences. The applicant has published six articles on international journals of good level in their sector, and eight proceedings of international conferences.

Teaching and supervising ability: as stated in his CV, within the contract period the applicant has taught several courses pertaining to the disciplinary sector of Industrial Bioengineering. The applicant has also taught several seminars within courses pertaining to the disciplinary sector of Industrial Bioengineering. The applicant has mentored two visiting students. He has been the supervisor of four Master students and five doctoral students. These activities concerned study programs pertaining to the disciplinary sector of Industrial Bioengineering.

Service to the Academic Community: as stated in his CV, within the contract period the applicant has participated in several committees for the admission and final exams of master students and doctoral students. These activities concerned study programs pertaining to the disciplinary sector of Industrial Bioengineering.

Contributions to Public Engagement and Technology Transfer: as stated on his CV, within the contract period the applicant has published several datasets on open repositories, and two software packages on open repositories. He has co-authored two patent applications in the sector of Industrial Bioengineering.

Final assessment: the applicant is a highly influential scientist, who has significantly contributed to establishing the research line known as "soft micro robotics". He holds an excellent track record of publications on this topic, prior to the contract period, among which a first name review on Nature Reviews Materials and a first-name contribution on Nature Materials. He maintained a research activity of very high quality during the contract period, during which he coordinates a very prestigious ERC Starting grant. Overall, his research activity, academic qualifications, teaching experience, supervising experience, service to the academic community, contributions to public engagement and technology transfer, are of excellent level and well centered on Industrial Bioengineering.

ATTACH 2

COLLEGIAL ASSESSMENTS

Academic Qualifications: The candidate has earned a PhD in Innovative Technologies and Biorobotics in 2013. Subsequently, he was visiting scientist in laboratories located in Germany and Switzerland. Currently, he holds the role of Assistant Professor on a fixed-term contract in Bioengineering (ING-IND/34), from February 1, 2021, to January 31, 2024.

Research Experience: the Candidate is currently leading an ERC Starting grant research project focused on microrobotics. He is leading a biorobotics laboratory at Sant'Anna School and participated in national research projects. He has been a keynote speaker at two global symposiums and published original studies in very good peer-reviewed journals (e.g., Science Robotics, Advanced Functional Materials).

Teaching and supervising ability: the Candidate has lectured extensively in the field of Bioengineering. He has delivered many seminars and has guided two visiting scholars, four master's candidates, and five doctoral candidates (also with other faculty members) through their studies in Bioengineering.

Service to the Academic Community: Within the timeframe of his contract, the Candidate has been involved in numerous academic committees, contributing to the assessment processes of master's and doctoral students in his field.

Contributions to Public Engagement and Technology Transfer: during the contract term, the candidate has made public datasets and two software tools, enhancing accessibility and technological exchange. He also filed two relevant patents.

Final assessment: the Candidate is recognized as a pivotal figure in the development of "soft microrobotics". He has a very good publication record in prominent journals. He has sustained exceptional research quality throughout his contract, underscored by his coordination of a prestigious ERC Starting grant. His comprehensive contributions across research, education, mentorship, academic service, public engagement, and technology dissemination are exemplary and deeply integrated within the realm of Bioengineering. We unanimously support the promotion to Associate Professor with tenure.