



PUBLIC SELECTION ESTABLISHED WITH DIRECTOR'S DECREE NO. 2024_PRO_DMEC_1 OF 23/04/2024 PURSUANT TO THE NOTICE PUBLISHED IN THE OFFICIAL GAZETTE NO. 17/5/2024, n. 40 FOR 1 POSITION AS FULL PROFESSOR FOR THE COMPETITION SECTOR 09/E4 - MEASUREMENTS - SDS ING-IND/12 - MECHANICAL AND THERMAL MEASUREMENTS, PURSUANT TO ART. 18 - LAW 240/2010, AT THE POLITECNICO DI MILANO - DEPARTMENT OF MECHANICAL ENGINEERING (PROCEDURE CODE 2024_PRO_DMEC_1).

FINAL REPORT

The Selection Board, appointed with RD Index No. 7250 ref. No. 148057 of 18 June 2024, composed by the following Professors:

Prof. ZAPPA Emanuele - Politecnico di Milano;
Prof. MANSFIELD Neil - Nottingham Trent University;
Prof. TIMUSK Markus - Laurentian University,

met on July 29, 2024 at 2:30 pm, for the first teleconference meeting.
Each board member was connected from his/her workstation.

At the start of the session the members of the Selection Board named the Chairman and the Secretary of the Selection Board:

Zappa Emanuele, Full Professor at the Politecnico di Milano, Chairman;
Mansfield Neil, Full Professor at the Nottingham Trent University, Secretary.

Each member of the board declared not to have conjugal nor family relationship or other degree of kinship or affinity up to the fourth degree, not to be in same-sex civil union (as per art. 1 of Law No. 76 of 20.05.2016) and not to form a cohabiting couple (as per art. 1, paragraphs 37 et seq. of Law No. 76 of 20.05.2016) with the other members of this board and that there were no reasons for abstention pursuant to arts. 51 and 52 of the Civil Procedure Code.

The members of the Selection Board and the Secretary declared, pursuant to art. 35-bis of Legislative Decree 165/2001, not to have criminal convictions, even with non-definitive sentences, for offences provided for in Chapter I, Title II of the second book of the Criminal Code.

The Selection Board established the criteria and the parameters according to which the assessment was carried out, and set the minimum score below which the candidate shall not be included in the ranking of candidates.

On September 24, 2024 at 02:00 pm, the Selection Board met for the second teleconference meeting to inspect the list of applicants, who were:

- 1) Tarabini, Marco (Surname, Name)

Each member of the board declared not to have conjugal nor family relationship or other degree of kinship or affinity up to the fourth degree, not to be in same-sex civil union (as per art. 1 of Law No. 76 of 20.05.2016) and not to form a cohabiting couple (as per art. 1, paragraphs 37 et seq. of Law No. 76 of 20.05.2016) with the candidates and stated that there were no reasons for abstention pursuant to arts. 51 and 52 of the Civil Procedure Code.

Each member of the Selection Board also declared to not be co-author, with one or more candidates, in a percentage exceeding 50%, of the publications attached by them for evaluation purposes.

Pursuant to the examination and after adequate evaluation, the Selection Board assigned a score to each of the established criteria and a judgment to each publication submitted by the candidate; furthermore, the board evaluated the knowledge of the English language.

Therefore the board, considering the sum of the scores given, expressed a collective judgment in relation to the quantity and the quality of publications, evaluating the overall productivity of the applicant, also with regard to his/her period of activity.

The above-mentioned judgments are attached to this report and they are an integral part of it (Attachment No. 1 to this final report).

The Selection Board drew up, according to the majority of its members, a ranking of candidates selected to carry out the scientific/teaching functions for which the selection was called, in a number equal to a maximum of five times the number of positions available in the competition (Attachment No. 2 to this final report).

THE SELECTION BOARD


Prof. Emanuele Zappa (Chairman)

_____ *digitally signed* _____

Prof. Markus Timusk (Member)

_____  _____

Prof. Neil Mansfield (Secretary)

_____  _____



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ATTACHMENT No. 1 to the FINAL REPORT

CRITERIA	Quality of scientific and/or project production, assessed on the basis of criteria and parameters recognized by the international scientific community of reference	Teaching activity at the university level in Italy or abroad	Scientific responsibility for funded research projects	Results obtained in technology transfer in terms of participation in the creation of new enterprises (spin off), development, use and marketing of patents	Total
Tarabini Marco	36	27	24	5	92

CANDIDATE: Tarabini Marco

CURRICULUM:

The candidate is currently Associate Professor at Politecnico di Milano since 2018 and can be considered the reference researcher for the scientific activity in the field of Human Vibration Measurements at the Lecco Campus of Politecnico di Milano.

The candidate's overall scientific production, as documented in the CV submitted for this procedure, consists of 163 publications, over 1000 citations and an h-index of 19. These parameters are very significant in the scientific community of this call. The candidate's scientific activity is very good and fits very well with the scientific area Misura Meccaniche e Termiche. Scientific production has shown continuity and significant increase for at least 15 years. The teaching activity with ownership of the courses, the supplementary teaching and the are overall excellent and have been carried out continuously for at least 10 years. The research activities, both in the field of the human body vibrations and in that of measurements for industry, are very relevant. The institutional, management and service activities are considerable overall.

The candidate is very well respected internationally and maintains a strong international profile as reflected by his formal international collaborations and positions.

The candidate has demonstrated a high level of scholarly activity in two distinct areas: industrial machinery investigations and biomechanics, health, and safety. The candidate is also very active in technology transfer activities, as demonstrated by the high number of cooperations with companies and by the creation of a spin-off company.

SUBMITTED PUBLICATIONS:

No. of publications	Type/Title of Publication	Judgment
1	Journal paper/Algorithms for Vision-Based Quality Control of Circularly Symmetric Components	Very good
2	Journal paper/Numerical and Experimental Estimation of Measurement Uncertainty in Magnetic Field Mapping	Excellent
3	Journal paper/Optimized Design and Characterization of a Non-Linear 3D Misalignment Measurement System	Excellent
4	Journal paper/The Simultaneous Assessment of Time and Motion Response during Dual Tasks	Very good
5	Journal paper/Machine-Learning Based Determination of Gait Events from Foot-Mounted Inertial Units	Very good
6	Journal paper/Non-contact measurement of the temperature profile of PET preforms	Excellent
7	Journal paper/Setup for the Measurement of Apparent Mass Matrix of Standing Subjects	Excellent

8	Journal paper/Infrared thermometers for small wires drawing	Excellent
9	Journal paper/Measurement of the Heat Removed by Devices for Skin Tags Treatment	Excellent
10	Journal paper/Uncertainty-based combination of signal processing techniques for the identification of rotor imbalance	Excellent
11	Journal paper/Metrological Performances of a Plantar Pressure Measurement System	Excellent
12	Journal paper/The potential of micro-electro-mechanical accelerometers in human vibration measurements	Excellent
13	Journal paper/A Device for the Skin-Contact Thermal Resistance Measurement	Excellent
14	Journal paper/Prediction of data variability in hand-arm vibration measurements	Excellent
15	Journal paper/Use of design of experiments and Monte Carlo method for instruments optimal design	Excellent
16	Journal paper/Electrical and mechanical data fusion for hydraulic valve leakage diagnosis	Excellent

Overall collective judgement

QUALITY OF SCIENTIFIC AND/OR PROJECT PRODUCTION, ASSESSED ON THE BASIS OF CRITERIA AND PARAMETERS RECOGNIZED BY THE INTERNATIONAL SCIENTIFIC COMMUNITY OF REFERENCE:

The candidate's overall scientific production consists of 163 publications, over 1000 citations and an h-index of 19.

The candidate presented 16 papers, all of them are published on International Journals with high impact and diffusion in the scientific community in the field of mechanical and thermal measurements. In 7 out of 16 presented papers, the candidate is first author and in other 5 papers he is last author. The overall scientific production of the candidate is very good both for number of paper and for the quality of the venues.

DIDACTIC ACTIVITIES CARRIED OUT IN ITALIAN OR FOREIGN UNIVERSITIES OR BODIES:

The candidate lectured across 28 courses within the Master of Science programs in Mechanical Engineering, Automation Engineering, and Biomedical Engineering, since 2014. The teaching evaluation of the courses was always very positive, with an average mark of 3.4/4. He also served as laboratory assistant of different Measurement courses (1 or 2 per year) from 2004 to 2014, for courses in the Mechanical Engineers track. From 2020 to 2023, the candidate served as an Adjunct Professor at Laurentian University's School of Engineering in Ontario, Canada. The teaching activities are strictly related to the scientific field of this call.

SCIENTIFIC RESPONSIBILITY FOR FUNDED RESEARCH PROJECTS:

The candidate is very active in securing research funding as principal investigator. In the last 7 years he coordinated national and international research projects on instrumentation, measurements, technology transfer and human vibration. He shows a very good attitude to promote and lead research projects with small and medium enterprises and large companies, as well as to play a relevant role in public-funded researches.

RESULTS OBTAINED IN TECHNOLOGY TRANSFER IN TERMS OF PARTICIPATION IN THE CREATION OF NEW ENTERPRISES (SPIN OFF), DEVELOPMENT, USE AND MARKETING OF PATENTS:

The candidate is co-founder of a Spin-off Company (One-Off Innovation).

The candidate is co-inventor of seven patents, six of them were licensed to companies and became commercial products.

SCRUTINY OF THE DEGREE OF KNOWLEDGE OF THE ENGLISH LANGUAGE:

The candidate has published extensively in the English language and has an excellent level of fluency. He has presented at many international conferences in English and has contributed to teaching and research seminars in Canada and the UK.

THE SELECTION BOARD

Prof. Emanuele Zappa (Chairman)

_____ *digitally signed* _____

Prof. Markus Timusk (Member)

Markus Timusk

Prof. Neil Mansfield (Secretary)

Neil Mansfield



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ATTACHMENT No. 2 to the FINAL REPORT

MERIT RANKING

SURNAME AND NAME	Overall score
Tarabini Marco	92

Milan, September 24th, 2024

THE SELECTION BOARD

Prof. Emanuele Zappa (Chairman)

Prof. Markus Timusk (Member)

Prof. Neil Mansfield (Secretary)

_____ *digitally signed* _____

_____ *Markus Timusk* _____

_____ *Neil Mansfield* _____