



**PUBLIC SELECTION ESTABLISHED WITH DIRECTOR'S DECREE NO. 2022\_PRA\_DICA\_3 OF 26/10/2022 PURSUANT TO THE NOTICE PUBLISHED IN THE OFFICIAL GAZETTE NO. 22/11/2022, n. 92 FOR 1 POSITION AS ASSOCIATE PROFESSOR FOR THE COMPETITION SECTOR 08/B3 - STRUCTURAL ENGINEERING - SDS ICAR/09 - STRUCTURAL ENGINEERING, PURSUANT TO ART. 18 - LAW 240/2010, AT THE POLITECNICO DI MILANO - DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING (PROCEDURE CODE 2022\_PRA\_DICA\_3).**

## FINAL REPORT

The Selection Board, appointed with RD Index No. 13927 ref. No. 309698 of 23 December 2022, composed by the following Professors:

Prof. DI PRISCO Marco - Politecnico di Milano;  
Prof. CORRES PEIRETTI Hugo Eduardo - Universidad Politécnica de Madrid;  
Prof. HENDRIKS Max - TU Delft,

met on February 8<sup>th</sup> at 8:00, for the first teleconference meeting.  
Each board member was connected from his workstation.

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

Marco di Prisco, Full Professor at the Politecnico di Milano, Chairman;  
Max Hendriks, Full Professor at the Technical University di DELFT, 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 February 22<sup>nd</sup> at 11:00, the Selection Board met for the second teleconference to inspect the list of applicants, who were:

- 1) Calvi Paolo Martino
- 2) Morandi Paolo

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.

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 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).

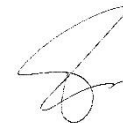
The Selection Board drew up, according to the majority of its members, a ranking of all the candidates selected to carry out the scientific/teaching functions for which the selection was called. (Attachment No. 2 to this final report).

#### THE SELECTION BOARD

*Prof. Marco di Prisco* (Chairman)

*Prof. Hugo Corres Peiretti* (Member)

*Prof. Max Hendriks* (Secretary)



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**ATTACHMENT No. 1 to the FINAL REPORT**

<b>CRITERIA</b>	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	<b>Total</b>
Calvi Paolo Martino	51	25	12	0	88
Morandi Paolo	57	10	8	1	76

**CANDIDATE: Surname and Name**

**CURRICULUM:**

**Calvi Paolo Martino** is an Associate Professor at the Department of Civil and Environmental Engineering, University of Washington in Seattle since 2021. He was born in Oakland (California) in 1985; he studied at University of Pavia and in 2010 he took his MSc in Civil Engineering. In 2015 he took the PhD in Civil Engineering at University of Toronto, Toronto, Canada with a thesis on the shear behaviour with Professor Michael P. Collins as main supervisor.

He has achieved the National Academic Qualification as Associate Professor in Structural Engineering since September 2018. He was Assistant Professor at the Department of Civil and Environmental Engineering, Sept. 2015 – Sept. 2021 at the University of Washington in Seattle.

He was Teaching Assistant at the Department of Civil and Environmental Engineering, from Sept. 2010 to December 2014 at University of Toronto, Canada. He won 4 grants and two paper awards by IABSE and PCI.

His main research is in the field of shear of R/C structures and seismic behavior of structures. He worked as member of ACI Committees in the fields of shear and seismic design. He was also member of the Scientific Committees for International Conference (IABSE, WCEE). He worked also as provided expert in Giuseppe Meazza "San Siro" Stadium (Milan, Italy), Morandi Bridge (Italy) and for Studio Calvi s.r.l. (Pavia, Italy).

**SUBMITTED PUBLICATIONS:**

<b>No. of publications</b>	<b>Type/Title of Publication</b>	<b>Judgment</b>
1	RV1: Estimating floor spectra in multiple degree of freedom systems (2014), Earthquake and Structures, 7 (1), pp. 17-38.	5
2	RV1: Reversed cyclic experiments on shear stress transfer across cracks in reinforced concrete elements, (2016) ACI Structural Journal, 113 (4), pp. 851-859.	4
3	RV1: Pure mechanics crack model for shear stress transfer in cracked reinforced concrete, (2017) ACI Structural Journal, 114 (2), pp. 545-554.	4
4	RV1: Model for assessment of cracked reinforced concrete membrane elements subjected to shear and axial loads, (2018) ACI Structural Journal, 115 (2), pp. 501-509.	4
5	CV1: Numerical implementation and investigation of variable friction sliding base isolators, (2018) 11th National Conference on Earthquake Engineering 2018, NCEE 2018: Integrating Science, Engineering, and Policy,	2

6	RV1: Response of Recycled Coarse Aggregate Concrete Subjected to Pure Shear, (2020) Journal of Structural Engineering (United States), 146 (5), art. no. 04020075, .	3
7	RV1: Earthquake-Induced Floor Accelerations in Base-Rocking Wall Buildings, (2021) Journal of Earthquake Engineering, 25 (5), pp. 941-969.	4
8	RV1: Experimental evaluation of extra-stroke displacement capacity for Curved Surface Slider devices, (2021) Soil Dynamics and Earthquake Engineering, 146, art. no. 106752,	5
9	RV1: Improving seismic performance using adaptive variable friction systems, (2021) Soil Dynamics and Earthquake Engineering, 140, art. no. 106442.	4
10	RV1: Longitudinal Joints between Deck Bulb Tee Girders Made with Nonproprietary Ultra-High-Performance Concrete, (2021) Journal of Bridge Engineering, 26 (12), art. no. 04021092.	3
11	RV1: Experimental behavior of interior and exterior steel-concrete composite NPS® beam-column joints, (2022) Engineering Structures, 251, art. no. 113589,	3
12	RV1: Towards improved floor spectra estimates for seismic design, (2013) Earthquake and Structures, 4 (1), pp. 109-132.	5

#### 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:

Paolo Martino Calvi is author/co-author of 36 journal papers and 25 International Conference papers mainly in the field of shear behavior of concrete structures and seismic engineering RC structures.

**SCOPUS: h-index 14 and (no auto-citations) 13**, evaluated on the basis of 34 journal papers and 12 Conference paper and 1 book chapter.

**GOOGLE SCHOLAR: 1173 citations, H-index 16**, evaluated on the basis of 70 articles

The global scientific production was evaluated with a score of 5 over 8 points, that were added to the points assigned to the 12 papers submitted by the candidate, respecting the maximum of 60 points as specified in the criteria declared in the first minute.

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

The candidate presents a very well documented didactic activity since 2015 on Mechanics of Materials, Structural Dynamics, Earthquake Engineering and Seismic design. He has been supervisor of 4 PhD students and 15 MSc students for the final thesis and member of 16 PhD degree Committees.

SCIENTIFIC RESPONSIBILITY FOR FUNDED RESEARCH PROJECTS: He worked to many private and US national research contracts where he assumed always the role of Principal Investigator and responsible or co-responsible since 2015. His main activity was focused on the assessment of seismic performance of precast and R/C structures, advanced materials like UHPFRC and multiaxial behavior of FRC, shear friction performance, retrofitting effectiveness, damage assessment.

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

Only a significant activity as provider expert is declared.

SCRUTINY OF THE DEGREE OF KNOWLEDGE OF THE ENGLISH LANGUAGE:

He is a native English speaker.

#### CANDIDATE: Morandi Paolo

CURRICULUM:

**Morandi Paolo** is a PhD Senior Researcher in Seismic Engineering at EUCENTRE in Pavia. He was born in Lodi in 1976; he studied at University of Pavia and in 2001 he took his BSc in Civil Engineering. In 2003 he took the Master in Seismic Engineering (MSc) at I.U.S.S. – Istituto Universitario di Studi Superiori Rose School – European School for Advanced Study in Reduction of Seismic Risk., where he took in 2006 also the PhD in in Seismic Engineering. He has achieved the National Academic Qualification as Associate Professor in Structural Engineering since 20/09/2018. In 2006 He became a post-doc research fellow at University of Pavia and scientific consultant at EUCENTRE and in 2018 he became a Senior researcher at EUCENTRE, where he still works in the same role. After the BSc he had a brief experience as structural Engineer in UK. His main research is in the field of seismic behavior of masonry structures. He worked as member of TC250/SC6 and SC8 to write the in-progress Eurocodes EC6 and EC8. He was also member of the Scientific Board and of the Advisory Council of the Croatian Conference in Earthquake Engineering and he has participated to many International Technical and Scientific Committees.

## SUBMITTED PUBLICATIONS:

No. of publications	Type/Title of Publication	Judgment
1	RV1: In-plane/out-of-plane interaction of strong masonry infills: From cyclic tests to out-of-plane verifications, (2022) Earthquake Engineering and Structural Dynamics, 51 (3), pp. 648-672.	4
2	RV1: On the reliability of the equivalent frame models: the case study of the permanently monitored Pizzoli's town hall, (2022) Bulletin of Earthquake Engineering, 20 (4), pp. 2187-2217.	4
3	RV1: A novel approach for the evaluation of the economical losses due to seismic actions on RC buildings with masonry infills, (2021) Soil Dynamics and Earthquake Engineering, 145, art. no. 106722.	4
4	RV1: Out-of-plane Response of an Innovative Masonry Infill with Sliding Joints from Shaking Table Tests, (2022) Journal of Earthquake Engineering, 26 (4), pp. 1789-1823.	5
5	RV1: Development of a dataset on the in-plane experimental response of URM piers with bricks and blocks, (2018) Construction and Building Materials, 190, pp. 593-611.	5
6	RV1: Innovative solution for seismic-resistant masonry infills with sliding joints: in-plane experimental performance, (2018) Engineering Structures, 176, pp. 719-733.	5
7	RV1: Local effects on RC frames induced by AAC masonry infills through FEM simulation of in-plane tests, (2018) Bulletin of Earthquake Engineering, 16 (9), pp. 4053-4080.	5
8	RV1: Performance-based interpretation of in-plane cyclic tests on RC frames with strong masonry infills, (2018) Engineering Structures, 156, pp. 503-521.	5
9	RV1: Prediction of inter-storey drifts for regular RC structures with masonry infills based on bare frame modelling, (2018) Bulletin of Earthquake Engineering, 16 (1), pp. 397-425.	4
10	RV1: Performance of masonry buildings during the Emilia 2012 earthquake, (2014) Bulletin of Earthquake Engineering, 12 (5), pp. 2255-2273.	5
11	RV1: Damage control for clay masonry infills in the design of RC frame structures, (2012) Journal of Earthquake Engineering, 16 (SUPPL. 1), pp. 1-35.	4
12	RV1: Latest findings on the behaviour factor q for the seismic design of URM buildings, (2022) Bulletin of Earthquake Engineering, 20 (11), pp. 5797-5848.	3

**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:

Paolo Morandi is author/co-author of about 120 papers on national and international journals and conference proceedings mainly in the field of seismic engineering and of masonry and RC structures.

**SCOPUS: h-index 11 and (no auto-citations) 9**, evaluated on the basis of 20 journal papers, 18 Conference paper and 1 Data paper.

**GOOGLE SCHOLAR: 2064 citations, H-index 22**, evaluated on the basis of 114 articles

The global scientific production was evaluated with a score of 4 over 8 points, that were added to the points assigned to the 12 papers submitted by the candidate, respecting the maximum of 60 points as specified in the criteria declared in the first minute.

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

Teaching assistant at IUSS of Pavia in the PhD course "Masonry Structures" and "Structural Engineering" since 2004, he has been lecturer and reviewer at University of Pavia cooperating mainly with prof. Guido Magenes and prof. Michael Griffith.

SCIENTIFIC RESPONSIBILITY FOR FUNDED RESEARCH PROJECTS: He worked to many private research contracts where he assumed often the role of Principal Investigator and responsible. In 2020-2022 he declares to have obtained, through his personal contribution, funding for scientific research projects for a total amount of about 1 million euro. His main activity was focused on the assessment of seismic vulnerability of masonry and R/C buildings.

RESULTS OBTAINED IN TECHNOLOGY TRANSFER IN TERMS OF PARTICIPATION IN THE CREATION OF NEW ENTERPRISES (SPIN OFF), DEVELOPMENT, USE AND MARKETING OF PATENTS: He declares to be a Co-inventor of the grant "Antiseismic Masonry Infill" recognized by the European Patent Office (Patent EP3040497 B1)

SCRUTINY OF THE DEGREE OF KNOWLEDGE OF THE ENGLISH LANGUAGE:

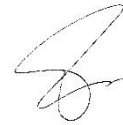
He declares an excellent Reading and writing ability and excellent oral expression skills, confirmed by the English quality of the documents and of the paper text.

#### THE SELECTION BOARD

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## ATTACHMENT No. 2 to the FINAL REPORT

### MERIT RANKING

*(Nota Bene: only candidates who have passed the minimum score, ranked in descending order)*

SURNAME AND NAME	Overall score
CALVI PAOLO MARTINO	88
MORANDI PAOLO	76

Milan, February 22<sup>nd</sup> 2023

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