CORRIGENDUM to the notice of selection for awarding a research fellowship at the within the scope of the research program called **Modelling and control of the space debris population and satellite constellations** - **Procedure Code 2017/ASSEGNI_DAER09** published in the Official Register of the Politecnico di Milano with number 3389 on 05/09/2017.

> **CONSIDERING** the notice of selection of the Department of Aerospace Science and Technology for awarding n°1 grant for temporary research , for a period of 24 months within the scope of the research program called: "**Modelling and control of the space debris population and satellite constellations "** Procedure Code 2017/ASSEGNI_DAER09";

CONSIDERING that for a clerical mistake at art. 3 of the Italian version of the notice of selection applicants are required to hold a Phd Degree.

THEREFORE the notice of selection deadline, the date of the selection interview and the expected date for the start of the activities are postponed and articles 5, 6, 9, 10 and the attachment to the notice of selection are modified as follows:

Article 5
Application submission terms and deadlines

The application to the selection must be signed, dated and completed as shown in the sample form available on the web site of the Politecnico di Milano. It must be addressed to the Director General of Politecnico di Milano, P.zza L. da Vinci, 32 – 20133 Milano, and submitted **no later than 24/10/2017,** *under penalty of exclusion. Should that date be an Italian public holiday, the deadline will be the first working day after it.*

Applications will be considered submitted on time if they are submitted in one of the ways described below:

- **by hand,** *no later than the deadline listed above, to the "SPPA- Servizio Posta, Protocollo e Archivio" (Post Office, Electronic Recording and Archive Service) of Politecnico di Milano - Piazza Leonardo da Vinci, 32 - Milano - Mondays to Fridays, from 9.30 to 12.30 and from 13.30 to 16.00. The application shall be delivered in a close envelope/package. On the envelope/package applicants must include the details of the call as listed below: "Admission Application – Temporary Research Fellowships – Procedure Code 2017/ASSEGNI_DAER09–* **deadline 24/10/2017**;

- **via registered letter with advice of receipt/courier,** *no later than the deadline. The envelope must be addressed to Director General of Politecnico di Milano, P.zza L. da Vinci, 32 – 20133 Milano (for this purpose, the date of the postmark will be considered as proof). On the envelope applicants must write the details of the call as listed below: "Admission Application – Temporary Research Fellowships – Procedure Code 2017/ASSEGNI_DAER09 –* **deadline 24/10/2017**;

- *via* **Certified E-mail Address (PEC)** [6] *no later than the deadline, sent to the pecateneo@cert.polimi.it PEC address. Applicants must use their own certified e- mail address (PEC). Submission is only permitted by other certified e-mail addresses (PEC); submissions made from an uncertified e-mail address will be disregarded. The subject line of the certified e-mail must contain information on the call for applications as listed*

below: ""Admission Application – Temporary Research Fellowships – Procedure Code 2017/ASSEGNI_DAER09 – **deadline 24/10/2017**.

The application and accompanying documentation must be submitted in a non-editable, portable, static format (preferably .pdf). They should not contain macros or executable code, and should not exceed 35 MB in size.

Applicants whose applications are submitted after the deadline will be automatically excluded from the selection process.

Article 6
Participation fee

Applicants must pay, within the deadline of the call, the participation fee of €25.82 or they will be excluded from the selection process. The fee is non-refundable, regardless of the reason applicants are unable to participate. Payment must be remitted to "Agenzia 21" of Banca Popolare di Sondrio, Via Bonardi 4 - 20133 Milano, bank details:
IBAN: IT34T0569601620000001600X69 SWIFT:
POSOIT22
Politecnico di Milano - Piazza Leonardo da Vinci 32 - 20133 Milano, reference: " Temporary Research Fellowships – Procedure Code 2017/ASSEGNI_DAER09 – **deadline 24/10/2017**"

Article 9
Selection procedure

The Selection Committee selects the applicants by assigning up to 100 points, through the assessment of the applicants' academic qualifications and curriculum vitae and through an interview, held with the procedure established by the Committee, aimed at assessing the applicant's aptitude for research, according to the criteria listed below:

- possession of additional qualifications (other than the ones required for the participation in the selection) regarding topics relevant to the research programme, 10 points;
- tight relevance of the Master degree and/or PhD theses with the research programme of the fellowship, 20 points;
- no more than 5 publications/scientific products regarding topics relevant to the research programme, 15 points;
- participation in research activities that are relevant to the research programme, 5 points;
- interview aimed at assessing the applicant's aptitude for research, 50 points.

The interview is passed with a minimum score of 35 points (corresponding to 7/10 of the interview score).
In the case of equal scores, PhD holders will be given priority. Next, in case of tie, the younger applicant will prevail.

Article 10
Selection interview

*The **interview,** aiming at assessing the applicant's aptitude for research, will be held **on 7/11/2017 at 16:00 at the Department of Aerospace Science and Technology, address: 34 via La Masa, Milan, Italy.***

To be admitted to the interview, applicants must have a valid identification document, i.e. an identity card, passport or driving licence. Failure to attend the interview at the established time and venue or arrive late (regardless of the cause and even in case of force majeure) will be considered as a withdrawal from the participation in the selection. This call for applications is notice of convocation for applicants.

*Applicants who live or are resident outside Italy or who live or are resident more than 600 km from the selection venue, **will be interviewed on 7/11/2017 at 16:00 using long- distance audio and video systems**, on condition that their identity can be checked, and afterwards confirmed at the time the contract is entered. Applicants who wish to be interviewed that way must state so when submitting their application.*

Failure to connect for the long-distance interview at the established time or in case of late connection (regardless of the reason and even in case of force majeure) will be considered as a withdrawal from the participation in the selection. This call for applications is notice of convocation for applicants.

ANNEX TO THE CALL FOR APPLICATIONS FOR THE AWARD OF TEMPORARY RESEARCH FELLOWSHIPS FOR RESEARCH ACTIVITIES Department of Aerospace Science and Technology Procedure Code 2017/ASSEGNI_DAER09 (issued pursuant to the "Regulations for the award of temporary research fellowships for research activities in independently funded research programmes" issued with Rectoral Decree no. 667/AG (28 February 2011), as modified with R.D. no. 3398/AG 29 July 2016.

*TITLE OF THE RESEARCH **Modelling and control of the space debris population and satellite constellations***

SCIENTIFIC SUPERVISOR OF THE RESEARCH: Prof.ssa Camila Colombo

PRESUMED DATE FOR STARTING ACTIVITIES 1 december 2017

STARTING PROCESS AND EXECUTION OF THE RESEARCH PROGRAMME (please provide a list of scheduled phases and a time schedule)

The researcher will work in an active, interdisciplinary and international research group composed by academic staff, postdoc researchers and PhD students. The successful candidate will participate to the meetings, workshops of the ERC research project COMPASS. Funding for participation to conferences and workshop are available within the group. The position can be extended. For further information on the research topic and the position you can contact COMPASS-EUERC@polimi.it.

ACTIVITIES THE TEMPORARY RESEARCH FELLOW WILL PERFORM, POSSIBLE OBBLIGATIONS AND TERMS

The space surrounding our planet is densely populated by an increasing number of man-made space debris. On the other side, the active population of spacecraft is going to increase due to the planned deployment of large constellations of small satellites for enhanced services on ground.

The long-term evolution of space debris and large constellations will be studied and controlled: parallel programming, density-based method, and high order expansion techniques will be used for fast and accurate estimation of the evolution of the population of space objects, the prediction of the collision risk, and in-orbit fragmentation detection.

In the framework of end-of-life disposal design, perturbation-guided manoeuvring will be extended to the end-of-life design for Earth centred orbits and Libration Point Orbits. In this case, particular emphasis will be given to resonant encounters with the Earth and robustness of the disposal strategy for planetary protection analysis.

We aim at building a general catalogue of families of frozen orbits for debris disposal/collection or stable orbits for remote sensing and telecoms missions. Orbit perturbations have also an effect on the requirements of orbit collision avoidance manoeuvres of active spacecraft, formation flight and close proximity manoeuvring to target a defunct satellite. Feedback control strategies that enhance orbit perturbations will be devised, similarly to what is currently done for spacecraft in geostationary orbit, and will be extended to other orbital regions.

Signature of the Head of the Department
Prof. Giuseppe Sala
Signed Giuseppe Sala