Attachment n. 4

Name of PhD Program	Advanced-Systems Engineering
Cycle	37th
Sector	ING-INF/01, ING-INF/04, ING-INF/05, FIS/03, INF/01
Duration	3 years
Faculty	Faculty of Science and Tecnology
Webpage	PhD in Advanced-Systems Engineering / Free University of Bozen-Bolzano (unibz.it)
Coordinator	Prof. Karl Dietrich von Ellenrieder
***Innovation* Topics**	//
***Green* Topics**	1. Development of a low-cost and low-power sensors platform for monitoring the crop stress conditions on field for precision agriculture. SNSI Thematic Area: Health, nutrition, quality of life, SNSI Development Trajectory: Development of precision farming and the agriculture of the future (Supervisor Prof. Luisa Petti/co-Supervisor Prof. Antonio Liotta/Companies: Tessa, Fondazione Bruno Kessler) 2. Green and sustainable thin-film electronics. SNSI Thematic Area: Digital Agenda, Smart Communities, Intelligent Mobility Systems (Supervisor Dr. Giuseppe Cantarella/co-Supervisor Prof. Niko Münzenrieder/Company: Kerr Srl) 3. Green resilience of smart Cyber Physical Systems. SNSI Thematic Area: Digital Agenda, Smart Communities, Intelligent Mobility Systems (Supervisor Prof. Romain Pierre Julien Robbes/ co-Supervisor Prof. Barbara Russo/ Company: Systems Srl) 4. Performance Management Through Skill and Activity-Based Shop Floor Management. SNSI Thematic Area: Smart and sustainable industry, energy and environment (Supervisor Prof. Antonella De Angeli/ co-Supervisor Prof. Angelika Peer/ Company GKN Sinter Metals Spa) 5. Computer Vision and Deep Learning for Visual Inspection. SNSI Thematic Area: Industria intelligente e sostenibile, energia e ambiente, SNSI Development Trajectory: Innovative high-efficiency production processes for industrial sustainability (Supervisor Prof. Oswald Lanz/co-Supervisor Prof. Karl Dietrich von Ellenrieder/ Company: Covision Lab KGmbH)
Study places	5
Selection process	**Admission Requirements - Evaluation criteria for examinations/qualifications** Degrees from the former Italian university system: all

Master (laurea specialistica/magistrale): all

Foreign degrees
Applicants who have a foreign degree must have a university level education of at least five years (or equivalent) and hold the prerequisites listed below.

Other
The requisites for admission to doctoral programmes are related to an appropriate educational, and/or scientific background, and/or have worked in the Ph.D. program research fields. Qualifications in engineering and computer science are preferable.

Admission to the program is based on the assessment of applicants through:
- their CV and academic qualifications;
- a cover letter explaining the student's motivation for applying;
- a technical interview.

During the interview, each candidate's knowledge of the English language will be also assessed.

The call for applications includes a list of research projects to be performed by the selected candidates. Each applicant must indicate one, and only one, of the these projects for which he/she would like to be considered.

The candidates' profile will be evaluated based on prior academic and research performance (e.g. transcript grades/marks and the quality of publications). In addition, the selection commission will consider how well each candidate's academic and research background seems to have prepared him/her for performing the work required to complete his/her selected research project.

A separate ranking, consisting only of suitable candidates, will be developed for each project. The Selection Commission will formulate the ranking list using a comparative evaluation.

The application process consists of three stages:

1. Each application is first reviewed for administrative completeness and eligibility.

2. Those complete applications that fulfill the basic admission requirements are then evaluated by the ASE PhD Program Evaluation Committee, which shall consider the applicant's CV, cover letter, qualifications (including any publications), and the alignment between the candidate's profile/interests and his/her selected

	research project. The Evaluation Committee shall then create a list of applicants to be admitted to the 3rd stage of the selection process.
	3. Each candidate will be interviewed to assess his/her basic/fundamental technical knowledge in one or more of the research areas related to the selected project, as well as her/his ability to orally communicate in English. The interview may be conducted via live video conference, if necessary. The Evaluation Committee shall rank the applicants via a comparative assessment. Scores will be assigned using the following system of points: - up to 10 points for the applicant's CV, cover letter and qualifications, - up to 10 points for how well-suited the candidate's background makes him/her to work on his/her selected project, - up to 20 points for the interview. The final score is the sum of the points awarded for the 3 categories described above, with a max of 40. The final score shall be used to define the ranked list of candidates, and to determine which candidates will be offered a research scholarship. The lowest score to be admitted in the rank-list is 20/40.
Documents to upload	**Applicants should submit the following documents:** - A personal statement, written in English (max. 2 pages). In this document, the candidate should indicate the title of the research project they are interested in applying for (only one project should be selected). The candidate can also explain why they think UniBZ and this Ph.D. program is the correct choice for their graduate-level training and research activities. - A curriculum vitae (CV) (in English and preferably following the EU format, which can be downloaded here https://europass.cedefop.europa.eu/en/documents/curriculum-vitae). - A Master's degree certificate or equivalent with final mark (if applicable) and the transcripts of exams taken with their marks (transcript of records). The certification of Italian university titles MUST be substituted by a self-declaration or by the Diploma Supplement; **for admission, the (exams) average grade of a master's degree (or equivalent) must be greater than or equal to 24/30.** For foreign degrees, the mark (overall grade point average) will be converted to an equivalent one out of 30 points. - Declaration of the PhD candidate PON (see application portal) **Other documents to be included by applicants, when available:** - Up to a maximum of 2 reference letters, written in Italian, German or English provided by a university lecturer or a researcher from a research institute, describing the work carried out and its quality. In lieu of letters, the names and institutional

	contact information of up to 2 professional references can be provided.
	- A list of publications (published, being published, or submitted for publication) and the digital copy of at most 3 selected publications from the past 5 years (note that most weight is given to articles indexed in Scopus and/or on the Web of Science).
Date, place, type and language of interview	Date: 22 November 2021 Place: Videoconference – Microsoft TEAMS, or in person in Bolzano Type of Selection: via CV, transcripts, and an interview/discussion of each candidate's scientific background (oral exam) Language of the interview: English