



UNIVERSITÀ DEGLI STUDI
DI TRENTO
Dipartimento di Fisica



CONFINDUSTRIA TRENTO

contamination
lab Trento



IPSP2018

Industrial Problem Solving with Physics

16 – 21 July 2018

**CALL FOR APPLICATION
FOR YOUNG RESEARCHERS AND
MASTER'S DEGREE STUDENTS**



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INTRODUCTION

“Industrial Problem Solving with Physics” (IPSP) is a one-week event organized by the Department of Physics, the Physics Doctoral School and the Research Support and Knowledge Transfer Division of the University of Trento, in cooperation with Confindustria Trento and Trentino Sviluppo – Polo Meccatronica and with the involvement of Contamination Lab Trento. The main goal of IPSP is to give to young and talented researchers the opportunity to use their knowledge and skills to tackle relevant industrial problems.

The event aims also in boosting the connection between the Department of Physics and the world of industry. The students and researchers who will take part in the event will be asked to work in teams, hosted by the infrastructures of the Physics Department, to face new problems and challenges oriented towards the industry, which eventually go beyond their theoretical and experimental research activities.

The event will take place from 16th to 21st of July 2018 at the Physics Department of the University of Trento.

ART. 1 – CALL FOR APPLICATION

The purpose of this Call for Application is to select **thirty (30) young researchers, i.e. PhD students and graduates, master students, research fellows and scholarship holders**, to take part in the event **IPSP 2018** from 16th to 21st of July 2018.

ART. 2 – DESCRIPTION OF THE EVENT

The event will span the whole week from the 16th to the 21st of July, and will be held both in Italian and English as needed. The activities will take place as scheduled:

- ☞ **16th July, morning:** the selected companies will present the problems to the participants, who will be divided in teams, one for each problem. During this stage each team will be followed by a person from the company, who will be involved in the problem and will serve as reference and technical assistance for the discussion;
- ☞ **16th July, afternoon; 17th July, whole day; 18th July, morning:** the teams will work autonomously on the problem, using the facilities of the Physics Department if needed and the assistance of the Research Support and Knowledge Transfer Division;
- ☞ **18th July, afternoon:** the groups will have a meeting with a spokesman from the company and a member of the Scientific Committee to discuss the ideas developed during the work session and their action towards a resolution of the problem;
- ☞ **19th and 20th July, whole day:** the groups will keep working to complete their researches and the solutions;



- **21st July, morning:** each group will present their results to the company and to the Evaluation Committee, who will award the group whose solution is considered the most worthy and appropriate. Then there will be the closing ceremony.

The award will be either a cash prize offered by the company that proposed the problem or a two-day visit to the company.

In the following weeks: each team will write a final report on the week's activities that will be published after the event is concluded.

It should be remarked that the meetings of the 16th, 18th and 21st July will be held in Italian, while the rest of the activities will be held in Italian or English as needed. The final report will be also written in English.

ART. 3 – ELIGIBILITY REQUIREMENTS

This Call is addressed to **PhD students and graduates, master students, research fellows and scholarship holders, younger than 35 by the 20th June 2018**, belonging to one of the following categories:

- **PhD students and doctors from the degree programs in:**

- Physics
- Information and Communication Technology
- Environmental Engineering
- Civil, Environmental and Mechanical Engineering
- Civil and Mechanical Structural Systems Engineering
- Materials, Mechatronics and Systems Engineering
- Mathematics
- Biomolecular Science

- **Master students and graduates from the University of Trento** from the following master courses (Laurea Magistrale/Specialistica or equivalent degrees):

- Quantitative and Computational Biology (LM8)
- Cellular and Molecular Biotechnology (LM9)
- Physics (LM17)
- Computer Science (LM18)
- Materials and Production Engineering (LM22)
- Civil Engineering (LM23)
- Information and Communications Engineering (LM27)
- Energy Engineering (LM30)
- Mechatronics Engineering (LM33)
- Environmental and Land Engineering (LM35)
- Mathematics (LM40)



⇒ **Master students and graduates from other Italian Universities** from courses belonging to the following degrees (classi di laurea):

- LM-4 - Architettura e ingegneria edile-architettura
- LM-8 - Biotecnologie industriali
- LM-9 - Biotecnologie mediche, veterinarie e farmaceutiche
- LM-17 - Fisica
- LM-18 - Informatica
- LM-20 - Ingegneria aerospaziale e astronautica
- LM-21 - Ingegneria biomedica
- LM-22 - Ingegneria chimica
- LM-23 - Ingegneria civile
- LM-24 - Ingegneria dei sistemi edilizi
- LM-25 - Ingegneria dell'automazione
- LM-26 - Ingegneria della sicurezza
- LM-27 - Ingegneria delle telecomunicazioni
- LM-28 - Ingegneria elettrica
- LM-29 - Ingegneria elettronica
- LM-30 - Ingegneria energetica e nucleare
- LM-31 - Ingegneria gestionale
- LM-32 - Ingegneria informatica
- LM-33 - Ingegneria meccanica
- LM-34 - Ingegneria navale
- LM-35 - Ingegneria per l'ambiente e il territorio
- LM-40 - Matematica
- LM-44 - Modellistica matematico-fisica per l'ingegneria
- LM-53 - Scienza e ingegneria dei materiali
- LM-54 - Scienze chimiche
- LM-58 - Scienze dell'universo
- LM-71 - Scienze e tecnologie della chimica industriale

Students enrolled in the last two years of the following degrees are also allowed to participate:

- LM-4 C.U. - Architettura e ingegneria edile-architettura (quinquennale)

⇒ **Master students and graduates from non-Italian Universities**, from a degree equivalent to one of those listed above.

ART. 4 – ONLINE APPLICATION

In order to apply, the candidate has to fill out the **online application form** available at <http://webapps.unitn.it/Apply/en/Web/Home/convegni>, (Italian version at



<http://webapps.unitn.it/Apply/it/Web/Home/convegni>), filling each of the requested fields. The deadline for the application submission is **the 27th of June 2018 at 1:00 p.m.** Applications submitted **after the deadline has expired**, as well as incomplete or not finalized applications, **will be automatically excluded** from the evaluation process.

The candidate will provide **personal information** about his/her **academic career**, and will be asked to upload **the following documents**:

- the **curriculum vitae**
(in Europass format: <https://europass.cedefop.europa.eu/editors/en/cv/compose>)
- the **academic record** (curriculum studiorum), reporting exams and marks
- a **cover letter**, in which you express
 - your full-time commitment to the event
 - your expertise in applied research
 - your attitude to teamwork
 - your willingness to write a final report on the week's activities.

All applicants are also required to confirm their willingness to sign a **Non-Disclosure Agreement (NDA)**. This is mandatory for participating in the event.

Non-EU citizens are required to provide a copy of either the Residence Permit for EU countries or the Passport (including Schengen visa details, if required).

If the number of applications received by the deadline is judged not to be sufficient, **the Scientific Committee can extend the deadline** for the submission of the applications. **Details** of the extension **will be published on the event's official website** <http://event.unitn.it/en/ipsp2018>.

For further information, you can download all the relevant documents (the full text of this Call, instructions for the application, link to the online Application form, etc.) from the official website <http://event.unitn.it/en/ipsp2018>.

ART. 5 – EVALUATION OF THE APPLICATIONS

The Scientific Committee is in charge of evaluating the applications and establishing a rank for the young researchers' selection.

The names of the successful candidates will be published on the official website (<http://event.unitn.it/en/ipsp2018>) **by the 28th of June 2018**. Those candidates will be notified by email within the same day.

The evaluation of the applications, at the incontestable discretion of the Scientific Committee, **will be based on**:

- skills in applied technical research



- ⇒ suitability to the role of a young researcher and coherence towards the aims of IPSP
- ⇒ education – studies in physics will be taken into particular account
- ⇒ motivation and full-time commitment to the event.
- ⇒ willingness to the realization of a final report in the weeks following the event.

Teams: after the selection is concluded, the Scientific Committee will assign each young researcher to one of the selected industrial problems, on the basis of his/her personal attitudes reported in the cover letter. In this way a team for each problem will be built up. Any change in the teams composition must be asked for within the first day of the event (16th July). It is not guaranteed however that the request will be satisfied.

ART. 6 – FINAL ACCEPTANCE

To complete the subscription, the selected candidates will have to pay **an admission fee of €20,00 by 3rd July 2018**. Further instruction will be sent to the candidates via e-mail, and will be reported on the official website (<http://event.unitn.it/en/ipsp2018>) as well.

The admission fee includes:

- ⇒ the participant kit
- ⇒ stationery
- ⇒ work materials
- ⇒ meals and snacks during the event
- ⇒ open access to the Physics Department facilities and to the University Wi-Fi network.

ART. 7 – OFF-SITE CANDIDATES

Candidates coming from a **University or research centre sited in a different location from that of the event¹** and **whose residence is sited in a different location from that of the event can apply for accommodation for the whole duration of the event (from the night of Sunday 15th July to the night of Friday 20th July)** in one of the University's structures or other private lodging. Candidates with the above requirements can ask for the accommodation in the online application form. The lodgings will be assigned following the order of the ranking list between the candidates who have sent the request. **The exact number of the available lodgings will be declared later, based on the resources at**

¹ The "location of the event" encompasses all the municipality of Trento and the neighbouring territory, within a radius of 40 km.



disposal of the organization.

ART. 8 – INELIGIBILITY OR WITHDRAWAL

Any candidate whose application is failing to comply with the rules established in the ART. 3, ART. 4, ART. 5 e ART. 6 will be **automatically declared ineligible**.

The successful candidates can **decline their position within three (3) days** from the date of publication of the admission list, **by sending an e-mail to ipsp2018@unitn.it by 29th June 2018**. Vacant positions will be progressively offered to other eligible applicants following the order of the ranking list. **In case of withdrawal the admission fee will not be reimbursed.**

ART. 9 – CONDITIONS ON THE MINIMUM NUMBER OF PARTICIPANTS

In case the minimum number of 3 participating companies and the minimum number of 24 eligible young students and researchers are not reached within the final deadline, the Evaluation Committee retains the right to cancel the event.

ART. 10 - RULES ON INTELLECTUAL PROPERTY

In the first day of the event (16th July), during the initial registration, **all participants will be asked to sign a Non-Disclosure Agreement (NDA)**. As stated in ART. 4, **your willingness to sign the agreement is mandatory to participate in the event**.

Regarding the **intellectual property on the inventions** developed during the event, further arrangements will be made between the inventors, the involved companies and the Research Support and Knowledge Transfer Division of the University of Trento.

ART. 11 - FOR FURTHER INFORMATION

All the relevant documents about the Application for young students and researchers (the full text of this Call, instructions for the application, etc.) are available on the website <http://event.unitn.it/en/ipsp2018>, which is the official communication channel of this initiative. It will be always possible to ask the Scientific Committee for further information at the email address ipsp2018@unitn.it

ART. 12 - D.LGS 196/2003 - PRIVACY PROTECTION

The candidates are acknowledged that all personal details provided within the application will be used in compliance with the Italian legislative Decree 196/2003.