SETI 2017
EIT Raw Materials Summer School
September 5-11, 2017
Department of Industrial Engineering
University of Trento - Italy

Contamination Lab Trento
Piazza Fiera 4, Trento

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Dear participants of the EIT Raw Materials Summer School SETI “hands-in Summer school on critical raw materials: Innovation and entrepreneurship”, we consider that this Students’ Program will help you in understanding why this could be a relevant investment for your career as an engineer.

This summer school is organized by the EIT Raw Materials in cooperation with the University of Trento (UNITN, Italy), Hub Innovazione Trentino (HIT, Italy) KU Leuven (Belgium), National Technical University of Athens (NTUA, Greece) and University of Bordeaux (France). SETI 2017 aims at bringing students together for one week, to work in team on industrial challenges and innovative business ideas in an increasingly relevant thematic area, such as the replacement of critical raw materials for a more efficient energy generation, saving and sustainability.

**Venue**

Contamination Lab (CLab) Trento, Piazza Fiera, 6 Trento, Italy

**When**

From Tuesday 5th until Monday 11th of September 2017. In the evening of the 4th, a Gamified introduction to the school will be organized in the meeting room of NH Hotel for those already in town and willing to take a further challenge.

**Where**

Contamination lab creative room, co-working space and break-out session room.
On Behalf of the local Organizing Team

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SETI 2017 Summer School is organized thanks to the substantial support of the following partners:

**SETI Consortium Partners**

- University of Trento - Italy
- HUB INNOVAZIONE TRENTO
- University of Leuven
- University of Athens
- Université de Bordeaux

**Industrial Partners**

- SOLID POWER
- Frenotecnica S.r.l.
SETI 2017 Summer School is part of the innovation and entrepreneurship (I&E) education component of the EIT Raw Materials. The principal objectives of the SETI can be summarized as follows:

- demonstrate the importance of the use of suitable raw materials in the field of energy generation and saving and sustainability;
- identify the market needs and business opportunities in the area;
- identify the technology and its level of readiness, teach the students how to transform the gained knowledge into concrete business proposals and coach them how to present the pitches to companies or investors.

Frenotecnica (www.frenotecnica.it) and SOLIDpower (www.solidpower.it), the main industrial partners of the school, will launch Challenges to the participants. During the week, teams will work on different solutions that will be presented to the company during the Demo Day.
How SETI Summer School is organized

In the morning, the participants will be exposed to tutorials and frontal lessons on technical topics related to innovative cutting-edge technologies. In the afternoon students will enjoy tutorials and teamwork on Innovation and Entrepreneurship finalized in doing business with such technologies. What makes this summer school unique is that every lesson and tutorial will be immediately put into practice.

- During the first day, the Challenges will be proposed by the industrial partners to the participants (Industrial challenges for young innovators).
- Every student will be stimulated and encouraged to generate some ideas related to the Challenges. Students with a seminal idea will present it to the rest of the class: the best ones will emerge in the idea trading session. Once ideas are settled, students will gather in teams based of their preferences for one idea or another. Mentors will closely follow the team-forming process, supporting it if and when needed.
- From that moment onwards, teams will develop, with the support of technology experts and business mentors, their ideas into a business. Students will be exposed to principles of marketing, idea validation, competitor analysis/Unique Selling Proposition (USP) and business modelling related to technology ventures.
- Finally, all teams will be prepared on how to present their business idea to a company or to an investor. We will start with a brief introduction on public speaking, a tutorial on project presentation, a session of pitch clinics, all applied to your own project.
- The last day of the Summer School will be the Demo Day, an official presentation of all projects solutions to the industrial partners, industry experts, academics and investors that will identify the best one.

During the weekend students will complement some teamwork and mentoring with social events, relaxation and team challenges. All events will be held in the beautiful scenario of the Dolomites. In the Clab Trento ecosystem there will also be the opportunity to meet startuppers who are now in business thanks on their own innovative ideas.
Objective & Learning Methods of the Summer School

SETI summer school is mainly focused to Master students already possessing higher technical capabilities and or are interested in business in the field of raw materials and sustainability, but might lack the experience. The school will bring students together for a week to work in groups on a business development process in the context of a societal relevant thematic area. In addition, it has to foster a community of students among various universities and create interaction with companies and start-ups.

SETI Summer School is valued 2 ECTS

Objectives

The aim of the school is to provide students with an introduction to entrepreneurial thinking and behavior, business and innovation processes, technology ventures marketing, and business model generation techniques. The principal objectives of SETI are:

• to demonstrate the importance of choosing appropriate raw materials (e.g. replacing critical ones) in the broad field of energy generation, saving and sustainability;
• to point out the market needs and business opportunities in the area;
• to teach the students how to transform the gained knowledge into innovative business ideas and turn these ideas into concrete business proposals;
• and to coach students on how to present their pitches to companies and /or investors.
Intended Learning outcomes

After completing the SETI summer school course students would have the ability to:

• Perform a concept creation and business proposal formulation process in the context of one of the use case thematic area.
• Identify/assess the impact of material technologies and innovations in the use case thematic area, for its markets and stakeholders (competitors, alliances, networks) and the business opportunities they create.
• Understand user-centricity, business modelling, business life cycles, global market trends, industry value chains, market segments, IPR issues, financial and risk-related issues, and recognizing their relative importance for product/service and business development.
• Transform new ideas and business innovations into viable business solutions.
• Apply personal presentation and communications skills.
• Apply decision-making and leadership competencies.
• Reflect upon ethical, societal, scientific and sustainability considerations when developing new products/technologies and business models.
Learning Methods

The summer-school contains focus-lectures of academics and practitioners, project work, usability tests, customer validation work, field visits and socializing events. Focus is put on: business project work, team building, (personal) networking, cultural exchange, knowledge on interaction between ethics and society and creating global awareness of societal and business trends. During the week, students are confronted with involved stakeholders to consider the technological and economical sustainability and relevance of their ideas. The applied approach is based on the following pillars:

- multidisciplinarity with attention to specific components on key issues related to innovative sustainable materials and technologies and entrepreneurship
- balanced combination of lectures with practical tutorials, mentoring, study visits, and teamwork
- social events to identify project ideas.

Throughout the summer school, students will work in teams of 4-6 participants to craft and develop into project-ideas the solutions they have identified to address the technical problems presented to them. A selection of initial use cases is planned to be provided in cooperation with companies involved in the Summer School.
Follow up opportunities for the best selected projects

The jury would offer to high potential teams and projects:

- Additional mentoring in the HIT co-working
- Opportunity to present a project in one of the future EIT Raw Materials events.
The main activity for the students is to work on the industrial challenge and a business plan/proposal. The short duration of the school will allow for morning technical sessions followed by afternoon I&E activities:

On day zero, an unofficial gamified introduction of the school will be organised in the Meeting Room of NH Hotel Trento.
Daily Schedule

Morning lectures from 09:00-13:00; Afternoon lectures/teamwork from 14:00-18:00

07:45 Breakfast
08:35-09:00 walk to CLab Trento, Summer School premises
10:50-11:10 Coffee break
13:00-14:00 Lunch
15:50-16:10 Tea break
20:30 Dinner

Day 0 - Monday, September 4, Unofficial Gamified Introduction (Meeting Room, NH Hotel Trento)

19:00-20:30 Vittorino Filippas: Welcome and Gamified Introduction to the SETI Summer School

Day 1 - Tuesday, September 5

09:00-10:50 Matteo Leoni, Massimo Pellizzari & Vittorino Filippas: Welcome, introduction to SETI Summer School and Rules of the Game
10:50-11:10 Coffee break
11:10-13:00 Massimo Pellizzari: An introduction to technical design: a sustainable approach to materials and process selection
13:00-14:00 Lunch
14:00-15:50 Frenotecnica and SOLIDPower: Introduction of Challenges
15:50-16:10 Tea break
16:10-17:00 Vittorino Filippas: Customer and Solution, Unique Selling Point, Minimum Viable Product
17:00-18:00 Vittorino Filippas: How to pitch a seminal Idea in one minute (Elevator Pitch)
Day 2 - Wednesday, September 6

09:00-10:50 Matthew Suchomel (Université de Bordeaux): *Materials Chemistry for Energy Applications*
10:50-11:10 Coffee break
11:10-13:00 Margus Kullerkupp (EIT - Climate KIC, CEO of SOL Nativas, Estonia): *Whole System Demand*
13:00-14:00 Lunch
14:00-15:50 Vittorino Filippas: *Students will pitch their individual ideas/projects*
15:50-16:10 Tea break
16:10-17:00 Vittorino Filippas, Gert Guri, Milena Bigatto: *Hands-On: Idea Trading and Idea Refinement, Team Creation*
17:00 Team building activity

Day 3 - Thursday, September 7

09:00-09:50 M. Federici, M. Leonardi: *Eco-friendly braking systems: present knowledge and future perspectives?*
09:50-10:50 Stefano Modena: *Materials, energy and innovation*
10:50-11.10 Coffee break
11:10-13:00 Frenotecnica and SOLIDPower: Technical mentoring. Challenges revisited. Idea and USP validation
13:00-14:00 Lunch
14:00-15:00 Vittorino Filippas: *Market, competitors*
15:00-17:00 Vittorino Filippas, Gert Guri, Milena Bigatto: Teamwork and mentoring (with Tea break 15:50-16.10)
17:00-18:00 Vittorino Filippas: *Business Model, Technology Economics and Financials: costs, investments and cash flow*
Day 4 - Friday, September 8

09:00-10:50 Claudio Nidasio (Support for Scientific Research and Technology Transfer, UniTrento): Technology Transfer best practices
10:50-11.10 Coffee break
11:10-13:00 Katerina Adam (NTUA): Assessment of Sustainability Performance in the Raw Materials Sector
13:00-14.00 Lunch
14:00-15:50 Vittorino Filippas, Gert Guri, Milena Bigatto: Teamwork & Mentoring
15:50-16.10 Tea break
16:10-17:00 Vittorino Filippas: Pitching tutorial
17:00-18:00 Vittorino Filippas and Gert Guri: Teamwork & Mentoring

Day 5 - Saturday, September 9

09:00-10:50 Frenotecnica and SOLIDPower: Technical mentoring to all teams
10:50-11:10 Coffee break
11:10-13:00 Vittorino Filippas and Gert Guri: Teamwork and mentoring
13:00-14:00 Lunch
14:00-17:00 Vittorino Filippas and Gert Guri: Teamwork and mentoring (with Tea break 15:50-16.10)
17:00-18:00 Vittorino Filippas, Gert Guri: Pitch clinics and slide deck optimization
SETI Program of the week

**Day 6 - Sunday, September 10**

Teamwork and free time for students
18:00 Visit of the Castello del Buonconsiglio and Mentoring dinner at the Castle

**Day 7 - Monday, September 11**

09.00-13:00 **Demo Day**: Project presentation to the jury formed by customer companies, professionals and academics
13:00-14.00 Lunch
14.00 **Award Ceremony**: Diplomas and declaration of the three best projects
14.30 **Closing ceremony**

CLab will still be open after the Closing Ceremony for Social Activities and networking.
At the end of the Summer School, the students will be evaluated on the base of the business proposal as presented in front of a jury (independent company representatives, business consultants, entrepreneurs, complemented with EIT Raw Materials members, the local I&E coordinator, and representative(s) of the summer school business coaches/mentors).

The business panel will only judge the quality and feasibility of the business proposal (“will it fly?”). The panel will not be influenced by the effort the students have put in their project or plan.

The students are also invited to present a short written report, within two weeks after the summer school, to document the project work, the motivations for taking certain directions and decisions, and the team process, including their own contribution.

Students must attend all classes. In case of extraordinary circumstances students shall ask permission to coaches to leave the class.
Travel to Trento
Travel to Trento

By Plane

Trento is connected with the main airports by the A22 Brennero Motorway and by the railway: 90 Km from Catullo Airport (Verona), about 200 km from Venice (Marco Polo) and Bergamo (Orio al Serio) airports, 245 km from Linate Airport (Milan), 265 from Malpensa Airport (Milan).

A shuttle service to reach the centre of Milan is guaranteed for travellers arriving in Malpensa (Malpensa Airport) and Linate (Linate Airport). Buses leave every 20-30 minutes 24 hours a day.

For those arriving in Verona (Valerio Catullo airport) there is a shuttle bus service to Verona railway station every day, leaving every 20 minutes from 6.30 in the morning until 11.35 p.m.

For those arriving in Bergamo (Orio al Serio airport) there is a shuttle bus service to Bergamo railway station, leaving every 15 minutes from 6.05 a.m. to 00.15 a.m.; to Milano Centrale railway station leaving every 20 minutes from 04.30 a.m. to 01.00 a.m.

For those arriving in Venice (Marco Polo Airport) there are buses to Venezia-Santa Lucia and Mestre-Venezia railways stations.

By Train

If you reach Trento by train, check the timetable on “Ferrovie dello Stato” website (www.trenitalia.com).

Trento railway station is in Piazza Dante - ph. +39 0461 891411 - 166 105050.

Please note that you always have to change train in Verona (to go to Trento the direction is Brennero/Monaco) and that there are no train connections after 11.00 p.m. until 05.00 a.m.

Note that the train ticket has to always be obliterated in Italy.
Travel to Trento

By car or by coach

You can reach Trento by car on the Brennero main road; on the A22 Brennero motorway (A22-exit for “Trento nord” if you are coming from north or "Trento sud", if you are coming from south); on the Valsugana highway for those arriving from Venice or on the main road of the Gardesana occidentale (main road 45) for those arriving from Brescia.

Transport in and outside Trento

To move in and outside Trento you can use the taxi service or public buses and coaches (Trentino Trasporti).

Taxi

At the Railway Station
ph. +39 0461-930002 or 0461 1560007.
Students that come from abroad will be hosted in NH Hotel in Trento. The venue where the school is located, CLab Trento, is within walking distance. Different arrangements can be made for students needing them.

Located a 5-minute walk from the MUSE, Trento Museum of Science, this modern hotel is housed in an elegant building, 2.5 km from Castello del Buonconsiglio, home to an art gallery.

The spacious rooms and suites, featuring large windows and contemporary décor, offer free Wi-Fi, a flat-screen TV and some also have a terrace overlooking the Alps.

Lunches will be served by a top catering company at the Clab. Breakfast and dinner, for students staying there, will be served at the hotel.

Address: via Adalberto Libera, 38121 Trento, ph. 0461 366111
Location and contact information

How to get to the Hotel

[Map showing directions from Trento FS to Via Adalberto Libera]
Location and contact information

By urban Bus n. 12

10:45  Trento FS
      Piazza Dante, 38121 Trento TN

10:45  Piazza Dante "Stazione Fs"

12  Romagnano Piazza Condini
    - 5 min (3 fermate) · ID fermata: 20125p · ⚪️
    10:47  Rosmini S.Maria Maggiore
    10:49  Rosmini "Cimitero" / Muse

Servizio gestito da Trentino trasporti esercizio S.p.A.

10:50  Giusti Pascoli

A piedi
✓ Circa 7 min, 600 m

10:57  Via Adalberto Libera
      38121 Trento TN
Location and contact information

By urban Bus n. 12
Location and contact information

By urban Bus n. 14

10:35 📍 Trento FS
   Piazza Dante, 38121 Trento TN

10:35 📍 Piazza Dante "Stazione Fs"

10:37 🌞 Belvedere
   5 min (3 fermate) · ID fermata: 20125p · ⬅️
   Rosmini S.Maria Maggiore

10:39 🌞 Rosmini "Cimitero" / Muse
   Servizio gestito da Trentino trasporti esercizio S.p.A.

10:40 📍 Giusti Pascoli

10:40 ⚠️ A piedi
   Circa 7 min , 600 m

10:47 📍 Via Adalberto Libera
   38121 Trento TN
Location and contact information

By urban Bus n. 14
Location and contact information

By urban Bus n. 2

14:49  Trento FS
Piazza Dante, 38121 Trento TN

14:49  Piazza Dante "Stazione Fs"

➡️  Piazzale Divisioni Alpine
5 min (3 fermate) · ID fermata: 20125p · ⚼

14:51  Rosmini S.Maria Maggiore

14:53  Rosmini "Cimitero" / Muse

Servizio gestito da Trentino trasporti esercizio S.p.A.

14:54  Giusti Pascoli

A piedi
เช่น 7 min, 600 m

15:01  Via Adalberto Libera
38121 Trento TN
By urban Bus n. 2
Location and contact information

Venue of the Summer School

The Summer School will take place at Contamination Lab (CLab). CLab Trento (Contamination Lab Trento) is a physical and digital creative and stimulating space where new things take shape, designed to help students, the city and the territory turn their ideas into reality. The best part of it is that you will be actors in this environment - not just spectators.

Address: Contamination Lab (CLab) Trento, Piazza Fiera, 6 Trento, Italy
Where: Contamination lab creative room, co-working space and breakout session room.

For further information please use the following contact: seti2017@unitn.it
How to get to CLab (Piazza Fiera)
Other important information

What to check

- Your passport/identity document is valid throughout your whole stay in Trento;
- You have a health insurance coverage valid for Italy for the whole period of your stay

Health Insurance

Students willing to study in Italy need to be covered by an health insurance. There are different types of health insurance policies according to the student’s citizenship (EU or non-EU student). UNITN provides a general (not medical) insurance coverage to its students, only in the case of hospitalization due to accidents occurred during academic activities. It also provides coverage for injuries suffered by the students, for which UNITN is responsible. The insurance also covers damages that students may cause to other people, things or animals at the UNITN.

Useful numbers

| Emergency Medical Services | 118 |
| Casualty                  | 0039.0461.903206 |
| Paediatric casualty       | 0039.0461.903528 |
| GP Out of hours service   | 0039.0461.915809 |
| Police                    | 113 |
| Carabinieri               | 112 |
| Fire services             | 115 |
| Mountain and cave rescue  | 0039.0461.233166 |
| Town Police               | 0039.0461.916111 |
| Police Headquarters       | 0039.0461.899511 |
| A.C.I. Cars Breakdown Service | 803116 |
| Traffic information       | 199 505040 |
| Brenner Motorway Information line | 800 279940 |
| Radio Taxi                | 0039.0461.930002 |
| Trentino Trasporti        | 0039.0461.983627 |