



UNIVERSITÀ
DI PAVIA



Smithsonian Environmental
Research Center

**First International Summer School
“Monitoring marine alien species in ports
with the SERC protocol”**



September 23-27, 2019

University of Pavia (UNIPV, Italy) - Department of Earth and Environmental Sciences

Objectives: National, International Directives and Regulations (e.g. the European MSFD) require the establishment of baseline monitoring programmes to assess the presence and abundance of alien species in areas considered at high risk of invasions, such as ports.

Port baseline monitoring requires specific professional skills for sampling, identifying and quantifying the different marine invertebrate taxa that typically compose the 'fouling' communities of ports.

This summer school will instruct participants to monitor ports using a method that has been conceived and successfully applied for over 25 years in the United States by the Smithsonian Environmental Research Center (SERC, USA). Moreover, experts of different taxonomic groups will provide lectures and laboratory activities to instruct participants on the identification of the most common fouling species of port habitats, with a focus on cryptogenic and alien invertebrate species. Attendees will be able to have their hands in the water during a field trip in the Gulf of La Spezia (Ligurian Sea) to collect samples that will be subsequently analysed in the lab.

Who can attend: This summer school is addressed to professionals, public/private employees, researchers, master/PhD students with a marine biology background and/or involved in marine bioinvasion monitoring.

Where: The International Summer School will be organized by the University of Pavia, one of the oldest Universities in Italy (over 600 years old) and will be held in the Department of Earth and Environmental Sciences, in the beautiful building of the Botanical Garden, which is located in the historic medieval centre of the town.

You can reach Pavia by train from Milan (info and tickets available on www.trenitalia.com or www.trenord.it).

Full address: Via Sant'Epifanio 14, Pavia, Italy (<https://goo.gl/maps/WdH4uxh6EJF2>)



Accommodation options: Besides the hotels and apartments located in the town, the University of Pavia has the most extensive Colleges and Residence Hall system in Italy, where it is possible to apply for a room. Please consult this website: <http://welcomepoint.unipv.it/unipv-services/accomodation/>

Summer School details:

- Maximum number of admitted participants: 24 (the summer school will be activated only if a minimum number of 6 participants will be reached)
- Participation fee: 250 €
- From 1 to 3 free of charge places will be available, depending on the total number of registrations. The selection will consider CV, motivation letter and age of the applicant.
- The summer school provides the assignment of 4 ECTS.

Language of the school: English

Deadlines:

- Submission of the application: August 26th, 2019
- Communication to participants (Admission to the Summer School and assignment of free of charge places): September 2nd, 2019
- Payment of participation fee: September 9th, 2019

Participation fee includes:

- Participant's kit: course material & gadgets
- Coffee breaks for 4 days
- Light lunches for 4 days
- 1-day field trip to the Gulf of La Spezia (Ligurian Sea), including a visit to Porto Venere, a UNESCO World Heritage Site (lunch excluded).
- Certificate of attendance.

Detailed Program:

- Monday 23rd September:
 - 08:30-9:30: Registrations and welcome
 - 09:30 – 11:00: Lecture "Introduction on marine alien species in the Mediterranean Sea"
 - 11:00 – 11:15: Coffee break
 - 11.15 – 13:00: Lectures "Methods to sampling fouling communities" and "Description of the SERC protocol"
 - 13:00 – 14:00: Lunch
 - 14:00 – 16:00: Lecture "Fouling species in port habitats"
 - 16:00 – 16:15: Coffee break
 - 16:15 – 18:00: Laboratory training: familiarising with the most common fouling taxa in port habitats
- Tuesday 24th September:
 - Morning: Field trip to La Spezia, with collection of samples from the port
 - Afternoon: Visit to Porto Venere
- Wednesday 25th September:
 - 9:00 – 11:00: Lecture "Taxonomic identification of polychaetes"
 - 11:00 – 11:15: Coffee break
 - 11.15 – 13:00: Laboratory activity on polychaetes
 - 13:00 – 14:00: Lunch
 - 14:00 – 16:00: Lecture "Taxonomic identification of bryozoans"

16:00 – 16:15: Coffee break
16:15 – 18:00: Laboratory activity on bryozoans

-Thursday 26th September:

9:00 – 11:00: Lecture “Taxonomic identification of ascidians”
11:00 – 11:15: Coffee break
11.15 – 13:00: Laboratory activity on ascidians
13:00 – 14:00: Lunch
14:00 – 16:00: Lecture “Taxonomic identification of crustaceans”
16:00 – 16:15: Coffee break
16:15 – 18:00: Laboratory activity on crustaceans

-Friday 27th September

9:00 – 11:00: Laboratory activity, analysis of the samples collected: elaboration of a species list
11:00 – 11:15: Coffee break
11.15 – 13:00: Laboratory activity, analysis of the samples collected: assessment of the percentage cover of each species (Point count method)
13:00 – 14:00: Lunch
14:00 – 16:00: Laboratory activity, data elaboration
16:00 – 16:15: Coffee break
16:15 – 18:00: Conclusion and distribution of certificates
18:00 – 00:00 (Optional): Participation to the *European Researchers’ Night*: the largest science outreach event in Europe (<http://www.sharper-night.it/sharper-pavia/>)

For further information about SERC and UNIPV projects please visit:

-SERC website: Large-scale survey of fouling:

<https://serc.si.edu/research/projects/large-scale-surveys-fouling-zooplankton-and-soft-sediment-benthic-habitats>

-YouTube (English subtitles available):

<https://www.youtube.com/watch?v=Wb9p1cwxIJw>

-Crowdfunding project “A brick against alien species” website:

<https://universitiamo.eu/en/campaigns/un-mattone-contro-le-specie-aliene/>

-Facebook page: Aquatic Ecology Lab-Pavia: <https://www.facebook.com/ecolabPV/>

-Instagram: @abrickagainstalienspecies: <https://www.instagram.com/abrickagainstalienspecies/>

- Botanical Garden of Pavia:

<https://www.facebook.com/ortobotanicopv/videos/2287538184791438/>

-Pavia: <https://www.youtube.com/watch?v=Rdb1F11kv1Q>



Application: The registration form is available at the link:

<https://docs.google.com/forms/d/e/1FAIpQLSeqpAke2eby9zHmSGbncdTRs3-tZtp1t1O8Lckk2aj5dcHC4Q/viewform>

In addition, a CV and motivation letter of the applicant shall be sent by email to ecolab.unipv@gmail.com.

Applications without CV and a motivation letter will not be considered eligible.

Local organising committee: Jasmine Ferrario, Maria Lourie, Agnese Marchini, Anna Occhipinti, Gianpaolo Sacchi, Marco Tamburini (UNIPV).

Lecturers



Jasmine Ferrario (UNIPV)

ResearchGate: https://www.researchgate.net/profile/Jasmine_Ferrario



Erica Keppel (SERC)

ResearchGate: https://www.researchgate.net/profile/Erica_Keppel



Agnese Marchini (UNIPV)

ResearchGate: https://www.researchgate.net/profile/Agnese_Marchini



Anna Occhipinti (UNIPV)

ResearchGate: https://www.researchgate.net/profile/Anna_Occhipinti



Michele Repetto (Temple University, USA)

ResearchGate: https://www.researchgate.net/profile/Michele_Repetto