

Foundations of Trustworthy AI – Integrating Reasoning, Learning and Optimization

TAILOR

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Report for Summer School, first edition D9.7

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1.0	2021-10-15	-	Martina Bacaro

Document Review		
Reviewer	Partner ID / Acronym	Date of report approval
Koen van der Blom	7, ULEI	November 10, 2021
Fosca Giannotti	2, CNR	November 3, 2021

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Summary of the report

The deliverable should report the activities carried out for the first TAILOR Summer School, originally scheduled for M08, then postponed in M13.

Introduction to the Deliverable

The target audience for the Summer School was composed of Ph.D students and postdocs in the research areas related to TAILOR project (i.e., Computer Science, Computer Engineering, AI, etc.). There was no restriction about affiliation: the attendees could have come both from within or outside the TAILOR project.

In addition to the target audience, professors, independent researchers, research fellows, master students, school teachers and some freelancers took part in the summer school. The countries with the largest turnout are France, Sweden, Italy, India, Germany, the Netherlands and the United Kingdom. All data about participants and their affiliation are available to all members of the TAILOR project in a shared file uploaded in TAILOR Google Drive - TAILOR Shared Materials Folder (see the section **Data** for more information).

Organisation

The following people have been involved in the Deliverable:

Partner ID / Acronym	Name	Role	other
UNIBO	Michela Milano	WP leader	X
UNIBO	Martina Bacaro	PhD student	X

Summer school objective

TAILOR is committed, through WP9 (Network Collaboration), to organise summer schools that are attractive to the best young talent in the network and beyond. The network, in fact, needs regular events for knowledge exchange, training future talents, sustaining a shared vision, etc. In particular, Summer Schools are an important and established instrument: three of them are planned to be organized: Bologna (M08), Barcelona (M20) and Lancaster (M32). These are intended to be community events, covering the entire TAILOR research remit. This report focuses on the first summer school in Bologna, that, due to pandemics, has been organised virtually and rescheduled in M13.

Organisation details

The Summer School was a free access event, but with mandatory registration. The participants should have sent an email to Martina Bacaro to be registered and consequentially admitted at the online event.

The Summer School was held on Microsoft Teams, the platform the University of Bologna institutionally adopted for online events.

All the lecturers were enabled to share their screen to show their presentation slides. All the attendees were muted, with the possibility to ask for permission to turn their microphone on by raising their virtual hand to ask questions and actively participate in the lessons.

The class schedule was set in CEST timezone.

Every session or lesson was recorded, and all the recordings and other useful materials (slides, presentations, links shared during the classes) can be found by all the members of TAILOR project in a shared file uploaded in TAILOR Google Drive - TAILOR Shared Materials Folder.

Summer School Dissemination Actions

The summer school has been advertised through different channels:

1. Emails:
 - a. from TAILOR in two email to the consortium (TAILOR August Newsletter; Reminder: TAILOR Conference and TAILOR Summer School);
 - b. from projects outside TAILOR (AIDA, AI4EU newsletter);
2. Post on the Website: <https://tailor-network.eu/summer-school-2021/>
3. Reminder during the first TAILOR Conference (September 21st-22nd, 2021);
4. Internal communications within the partner institutions.

Program

The program was scheduled in agreement with all the involved lecturers, and it consisted of two days of classes, each of which was dedicated to a specific theme, composed as follows:

Day 1, September 23rd - Dimensions of Trustworthy

9.00-11.00 **Fredrik Heintz** and **Fosca Giannotti** - Introduction to Trustworthy AI dimensions, description of TAILOR

11.30-13.30 **Salvatore Ruggieri** - Discrimination and Fairness in AI
 16.00-18.00 **Kacper Sokol** and **Peter Flach** - What and How of Machine Learning
 Transparency: Building Bespoke Explainability Tools with Interoperable Algorithmic Components

Day 2, September 24th - Approaches for Learning, Optimisation and Reasoning

9.00-12.00 **Luc De Raedt** and **colleagues** - From StarAI to Neurosymbolic AI
 14.00-15.30 **Andrea Orlandini** - Automated Planning and Scheduling: Development of Robust and Dependable Systems
 16.00-18.00 **Neil Yorke-Smith** - Agent-Based Modeling for Social Simulation

Flyer and Detailed Program poster

For the Summer School, a flyer and a detailed program poster were produced. The first was used to advertise the event through multiple channels (see section above **Summer School dissemination actions**), while the second was used to show and keep track of the activities throughout the summer school sessions.

Flyer



Detailed program poster





1 st Summer School Bologna, September 24th	
Day 2 – Approaches to Learning, Optimisation and Reasoning	
9:00-12:00 (CEST) →	<u>Luc De Raedt and Colleagues</u> . From StarAI to NeuroSymbolic AI
12:00-14:00 (CEST) → Break	
14:00:15:30 (CEST) →	<u>Andrea Orlandini</u> . Automated Planning and Scheduling: Development of Robust and Dependable Systems
15:30-16:00 (CEST) → Break	
16:00-18:00 (CEST) →	<u>Neil Yorke-Smith</u> . Agent-Based Modelling for Social Simulation
18:00-18:15 (CEST) → Conclusion	
 TAILOR is an ICT-48 Network of AI Research Excellence Centers funded by EU Horizon 2020 research and innovation programme GA No 952215	

Data

All the data were collected and shared among all TAILOR partners in the TAILOR Google Drive - TAILOR Shared Materials Folder and made for consultation.

Here below some general data about the lecturers and participation, and two graphics representing the positions held by participants and the countries from which they come.

Name and Affiliation of the lecturers:

- **Fredrik Heintz.** Associate Professor of Computer Science at Linköping University, SE.
- **Fosca Giannotti.** Director of research of computer science at the Information Science and Technology Institute “Alessandro Faedo” of the National Research Council in Pisa, IT.
- **Salvatore Ruggieri.** Full Professor at the Computer Science Department of the University of Pisa, Italy.
- **Kacper Sokol.** Senior Research Associate at the University of Bristol, UK.
- **Peter Flach.** Full Professor of Artificial Intelligence at the University of Bristol, UK.
- **Luc de Raedt.** Full professor of Computer Science at KU Leuven, BE.
- **Andrea Orlandini.** Researcher at the Institute of Cognitive Sciences and Technologies (ISTC-CNR), Rome, IT.
- **Neil Yorke-Smith.** Associate Professor of Socio-Technical Algorithmics in the Faculty of Electrical Engineering, Mathematics and Computer Science at Delft University of Technology, NE.

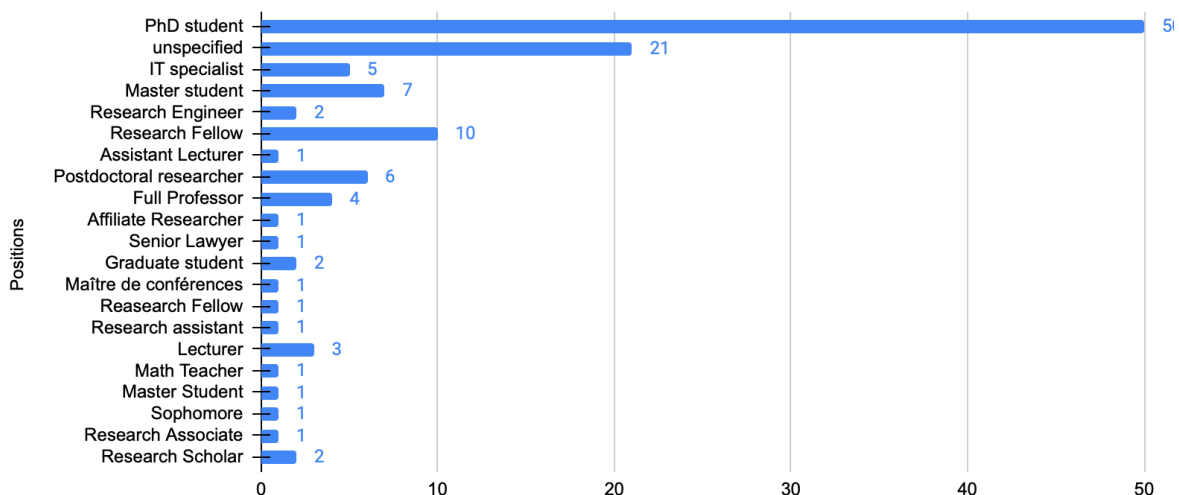
Number of lessons: 6

Hours of lesson: 12,5 hours

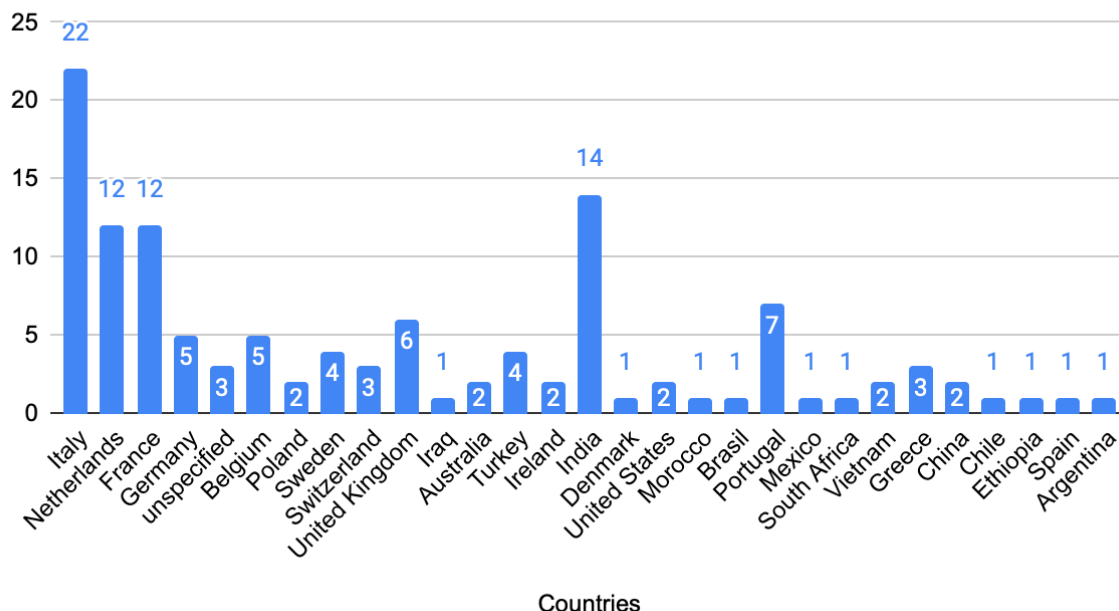
Registrations: 122

Average number of participants per lesson: 36

Positions held by participants



Participants by Country



Certificate of attendance

A certificate of attendance was produced to acknowledge the presence of the registered participants who ask for it.

The summer school did not give academic credits for participants.

