TAILOR

Connectivity Fund Final Report

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Useful links

Hosted website for the connectivity fund:
https://tailor-network.eu/connectivity-fund/
Gallery of funded research visits and workshops:
https://tailor-network.eu/connectivity-fund/funded-projects/

Introduction

The TAILOR network includes many of Europe's top AI labs. However, we also want to reach out to the many other excellent labs and organisations across Europe to work together and create new breakthroughs in AI. The Connectivity Fund is a key instrument in this mission.

To establish a truly vibrant network, the Connectivity Fund provides funding to AI researchers from across Europe for research visits or workshops that bring together researchers from TAILOR labs and non-TAILOR labs. It especially aims to support young researchers to gain valuable experience and nurture the next generation of AI researchers.
The goals, scope, organisation, proposal evaluation, and legal framework have all been described in earlier deliverables D10.1-10.6. This series of deliverables provided updates on the status of the connectivity fund. They detailed the number of submissions, the evaluation process, and the outcomes, funded visits, and workshops in a transparent way.

Since this is the final report, it will summarise the results of the entire open call, from its opening until the final submission date on April 30th, 2024. The last call required that all visits be completed before the end of the TAILOR programme. Hence, this deliverable covers the period between 15th of March 2021 and the 31st of August 2024. In the remainder of this document, we will detail all received proposals, their evaluation outcome, dissemination activities and any organisational changes in the last reporting period (after 15th of July, 2023).

Overview

The connectivity fund has funded 67 research visits between TAILOR and non-TAILOR labs, 18 workshops, and 3 micro-projects with industry, hence 87 grants were funded in total. We received and evaluated 108 proposals, 12 were rejected, 2 retracted, and 7 were canceled after acceptance by the recipient because of unforeseen circumstances or inability to sign the subgrant agreement.

A geographical overview is shown below, showing how the connectivity fund has expanded research from the original TAILOR labs (in blue) to many other labs (in pink), and has realised workshops (in green) and micro-projects (in yellow) all over Europe. As such, it has spread knowledge from the TAILOR labs to many other parts of Europe, and vice versa.

Figure 1. Geographical overview of Connectivity Fund visits, with all TAILOR labs in blue, the Connectivity Fund beneficiaries (non-TAILOR labs) in pink, workshops in green, and micro-projects in yellow. Note that visits, workshops and labs within the same city can overlap.
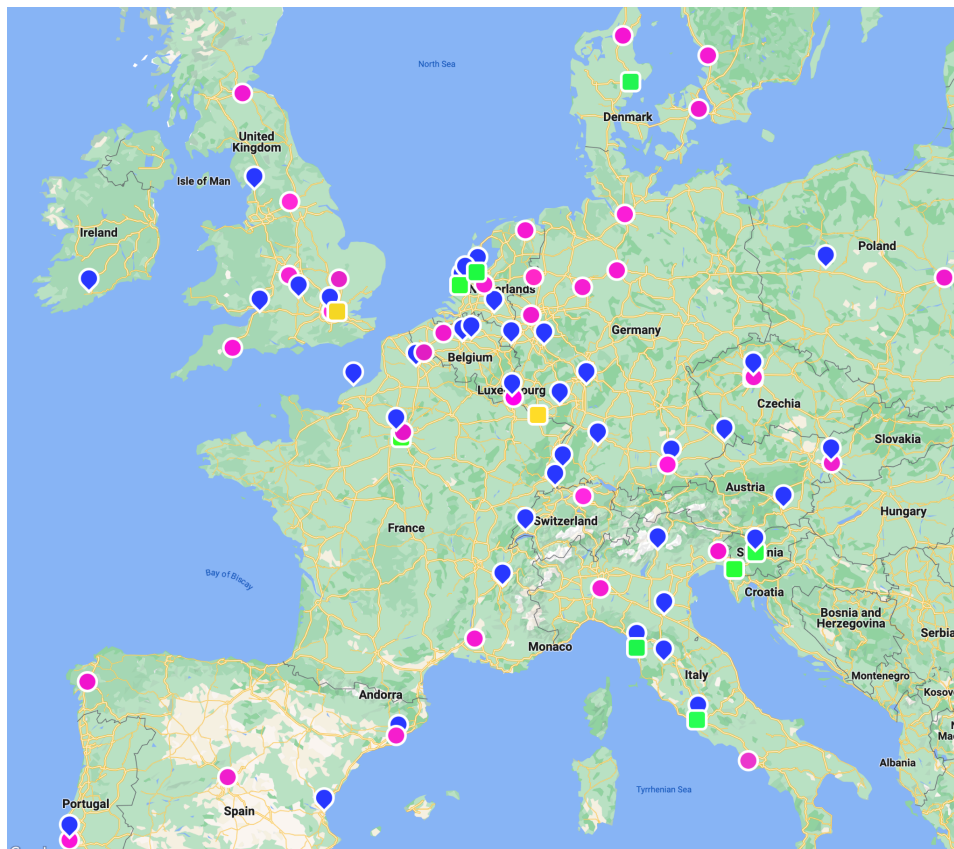
Figure 2. A zoomed-in overview focussing on western Europe, to discern labs situated more closely together.
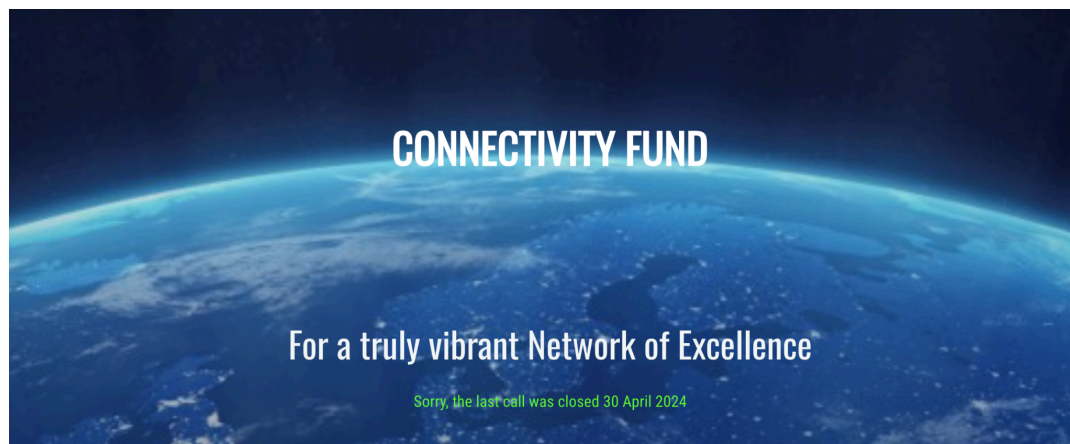
Dissemination activities

Throughout the TAILOR project, we have widely announced the Connectivity Fund calls and put a spotlight on successful activities to make sure that it is widely known in the European AI community.

Connectivity Fund Website

https://tailor-network.eu/connectivity-fund/

The Connectivity Fund website, seamlessly integrated in the TAILOR project website, has all the latest information about the aims of the fund, how to apply, the evaluation procedure, and other useful information for applicants. It was repeatedly updated to streamline the application process. It also contains a gallery of all funded projects to inspire would-be applicants. Figures 3 and 4 show screenshots of the cover page and a very small part of the project gallery of successful research visits and workshops.

CONNECTIVITY FUND

For a truly vibrant Network of Excellence

Sorry, the last call was closed 30 April 2024

Connecting all of Europe's top AI labs

The TAILOR network includes many of Europe's top AI lab, and we want to reach out to the many other excellent labs and organizations across Europe to work together and create new breakthroughs in AI.

We especially aim to support **young researchers** to gain valuable experience and nurture the next generation of AI researchers.

View funded projects ->   Read more & Apply ->   Scientific board ->

*Figure 3. Website of the Connectivity Fund with all information and application procedures.*

Fostering Appropriate Trust in Predictive Policing AI Systems
22 May 2023

Siddharth Mehrotra PhD student at TU Delft The use of AI in law enforcement, particularly in predictive policing, raises concerns about bias, discrimination, and infringement of civil liberties. Building appropriate trust in these systems is crucial to address these concerns and ensure ethical use. In this research proposal, we aim to investigate how explanations generated… Read more

Meta-learning for Continual Learning
22 May 2023

Anna Vettoruzzo PhD student at the Halmstad University Continual learning (CL) refers to the ability to continually learn over time by accommodating new knowledge while retaining previously learned experiences. While this concept is inherent in the human learning ability, current machine learning-based methods struggle with this as they are highly prone to forget past experiences… Read more
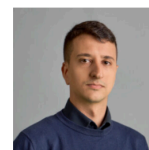
Deep reinforcement learning for predictive monitoring under LTLf constraints
22 May 2023

Efrén Rama Maneiro PhD student at the University of Santiago de Compostela Predictive monitoring is a subfield of process mining that focuses on predicting how a process will unfold. Deep learning techniques have become popular in this field due to their enhanced performance with respect to classic machine learning models. However, most of these approaches… Read more

Data-Centric AutoML and Benchmarks with Optimal Transport
22 May 2023

Prabhant Singh Research Engineer at TU Eindhoven Automated machine learning (AutoML) aims to make easier and more accessible use of machine learning algorithms for researchers with varying levels of expertise. However, AutoML systems, including classical ones such as Auto-Sklearn and Neural Architecture Search (NSGANet, ENAS, DARTS), still face challenges with starting from scratch for their… Read more

Multi-Objective Rating Systems
22 May 2023

Paolo Turrini Associate Professor at the Department of Computer Science, University of Warwick This project studies rating systems with multiple objectives, where users are matched to items in order to satisfy several desirable properties. In particular, it looks beyond classical Pareto efficiency, modelling and studying allocations that satisfy fairness, diversity and reliability. This project will… Read more
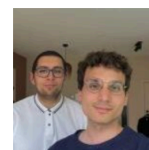
Optimal training of a structured ensemble of Binarized Neural Networks with Mixed-Integer Linear Programming techniques
22 May 2023

Simone Milanesi, Ambrogio Maria Bernardelli PhD students at the CompOpt Lab (University of Pavia) Binarized Neural Networks (BNNs) are receiving increasing attention due to their lightweight architecture and ability to run on low-power devices.The Mixed-Integer Linear Programming (MILP) approach achieves the state of the art for training classification BNNs when limited data are available.We propose… Read more

Open Machine Learning workshop
22 May 2023

Meelis Kull Associate Professor at the University of Tartu he field of Machine Learning continues to grow tremendously and has a significant impact on society. As such, it is important to democratize machine learning, i.e. to make sure that software, datasets, models, and analyses are freely available for easy discovery, verifiability, reproducibility, reuse and meta-analysis.… Read more

Predicting conversational memorability in group interactions: Continual learning approach
22 May 2023

Maria Tsfasman PhD student at TU Delft As AI applications continue to proliferate in our daily lives, the need for social intelligence in these systems becomes increasingly crucial. To enable long-term performance of social intelligence, AI systems must be aware of important moments, or "hotspots" in user conversations. Till now, conversational hotspots have been mainly… Read more

Mastering Natural Language Processing methodologies and technologies
22 May 2023

Mariangela Graziano PhD student at Università degli Studi della Campania "L. Vanvitelli" Natural Language Processing (NLP) is an area of artificial intelligence (AI) that deals with giving computers the ability to understand text and spoken words in the same way that people do. As textual data is now everywhere: documents on our PCs or in… Read more

Figure 4. Small part of the gallery of successful Connectivity Fund projects.

General dissemination

We have spread the word about the connectivity fund through various channels:

- An **open call** submitted to [the European Commission Funding and tenders website](.).
- The **TAILOR and AI4EU newsletters** posted regular announcements
- The **TAILOR Open Meetings** (online on Zoom) hosted research to speak about their work and experiences in their research visits.
- **Connectivity Fund flyers** (see Figure 5) were handed out at TAILOR Conferences and TAILOR booths at scientific conferences and other events
- On **Social media** both TAILOR, partner projects, and the researchers themselves tweeted regularly about successful visits. Some examples are shown in Figure 6.
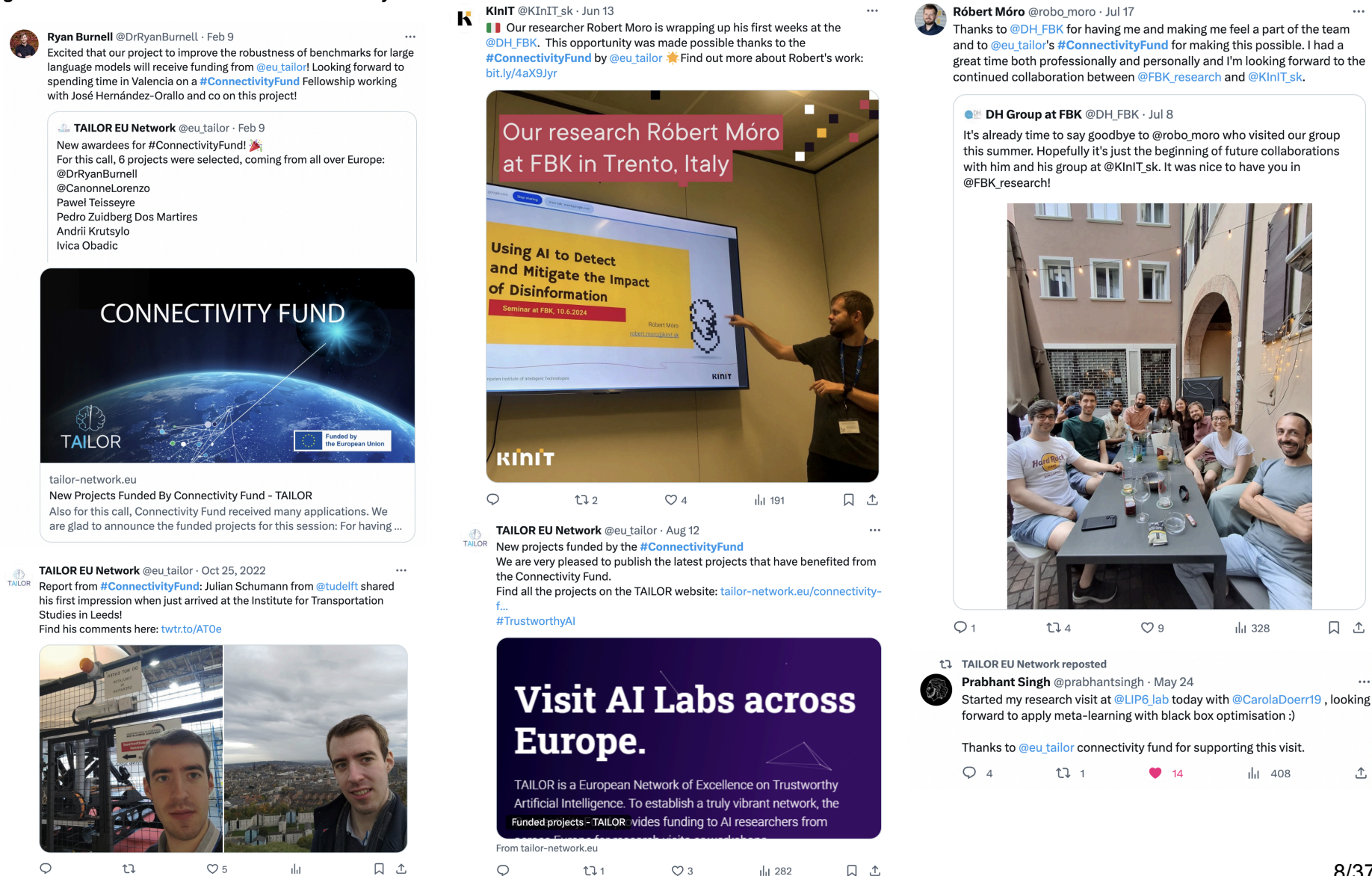

Figure 5. Poster and flyer for disseminating the Connectivity Fund at conferences and events

Figure 6. Selection of social media activity.

AI-on-Demand Platform ✔ @AIonDemand · Mar 11, 2021
📢#AI4EU urges RESEARCHERS 2 apply 4 TAILOR **Connectivity Fund** by 15 Mar. Proposals are 4 research visits & workshops starting from May 1st & worth 💶15K.

✅Subsequent rounds repeat every 4 months & open 4 labs in #Europe & associated countries.

APPLY🔽:
tailor-eu.github.io/connectivity-f…

TAILOR EU Network and 8 others

💬   ↩ 6   ♡ 10   📊   🔖 ⬆

Anna Vettoruzzo @AVettoruzzo · Jul 28
I will be at @CoLLAs_Conf in Pisa this week presenting our latest work titled "Learning to Learn without Forgetting using Attention".

Pass by at our poster on Tuesday 30th!

📄 🎥 Paper and video: lifelong-ml.cc/Conferences/20…

#CoLLAs2024

💬 1   ↩ 1   ♡ 3   📊 260   🔖 ⬆

Anna Vettoruzzo @AVettoruzzo · Jul 28
TL;DR: A meta-learned optimizer uses attention to learn the relationships between model parameters across a stream of tasks and generate weight updates for the current task while preventing catastrophic forgetting.

💬 1   ↩   ♡   📊 55   🔖 ⬆

Anna Vettoruzzo @AVettoruzzo · Jul 28
This work was a collaboration with @joavanschoren Mohamed-Rafik Bouguelia, Thorsteinn Rögnvaldsson and it was funded by TAILOR Connectivity Project.

💬   ↩ 1   ♥ 1   📊 117   🔖 ⬆

KInIT @KInIT_sk · Feb 29
Our PhD student @RbertBelanec on his research visit at @DFKI in Saarbrücken🧑‍💻 His interest in parameter-efficient fine-tuning got him into a top AI research institute!👉 This research visit was possible thanks to **Connectivity fund** by @eu_tailor

Internship at
DFKI
in Saarbrücken

Jeff Clark @savvy_scientist · Jul 21
Heading back home to @BristolUni after a fantastic six week research visit to @UiTNorgesarktis and @SFI_VI thanks to the @eu_tailor #ConnectivityFund. Feeling very grateful for the opportunity!
#AcademicTwitter #MidnightSun

💬   ↩ 2   ♡ 5   📊 325   🔖 ⬆

TAILOR EU Network @eu_tailor · Dec 21, 2023
🌐@BranislavPecher from @KInIT_sk spent a research stint at @TUeindhoven for his PhD. 🎓 TAILOR wishes you the best in your future career, Branislav! 🚀 Explore the **Connectivity Fund** for young researchers:
tailor-network.eu/connectivity-f…

KInIT @KInIT_sk · Dec 20, 2023
Thanks to the @eu_tailor, our PhD student Branislav Pecher visited the AutoML group at the @TUeindhoven and explored efficient #MachineLearning with limited labelled data🧑‍💻 More info about his research visit 👉kinit.sk/research-visit…

TU/e EINDHOVEN UNIVERSITY OF TECHNOLOGY

TAILOR

Branislav Pecher

PhD Student

"This research visit was a great opportunity for me to grow personally and professionally. It provided me with ample opportunities to grow as a researcher, improving my methodological and research skills, and to meet other researchers working on the same research problem, allowing me to strengthen my international cooperation and research network.

💬   ↩   ♡ 4   📊 174   🔖 ⬆

TAILOR EU Network @eu_tailor · Mar 22
Time for #wearetailor!
This week we present @TUeindhoven, with @joavanschoren as leader of WP10 (#ConnectivityFund) and @p_gijsbers. They work on several aspect of #TrustworthyAI, and coordinate exchanges for enhance our network. A great duo that represents TAILOR in Eindhoven!

💬   ↩   ♥ 7   📊 237   ⬆

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Organisational streamlining

In the last reporting period, we had already taken a list of measures to ensure that the connectivity funding is put to good use, described in Deliverable 10.6. This included a continuous review process so that participants could submit at any time, as well as faster reviewing and coverage of overhead costs to execute the research visits.

Mini-projects with industry

In WP8, through re-allocations of partners' budgets, 3 micro-projects with industry were funded with a maximum of €50,000 each. Since we also want to promote cooperation with non-TAILOR partners and especially start-ups and SMEs, we also made 150.000 € of the Connectivity fund available, in coordination with the Project Officer, for funding opportunities for third party companies in the form of 3 micro-projects. The call for these projects and their evaluation was handled by DFKI in Saarbrücken, according to the rules of the original micro-projects. This is perfectly in line with the goals of the Connectivity Fund, and this action further facilitated technology transfer outside of the TAILOR network.

Applications received

Table 1 lists all the eligible applications in this reporting period, including the project titles, authors, the TAILOR labs and non-TAILOR labs involved, and the amount of requested funding. The institute shown in **bold** is the *hosting lab*, hosting the researcher(s) during their visit or organising a workshop. Most of these are proposals for research visits, others are workshops (highlighted in blue) or micro-projects (highlighted in yellow). Proposals with a female first author are indicated with a pink ID number.

As can be seen from this table, the projects cover a wide range of topics all centred around trustworthy AI. These topics are visualised in Figure 7.

The maximum recommended funding is 15.000 EUR, in order to realise about 100 research visits and workshops on different topics and in different countries. Some visits have a slightly higher budget because of added overhead costs. Some high-impact workshops and summer-schools were allowed a larger budget (with approval from the coordinator) to generate larger impact. For instance, this was done for the ESSAI summer schools, which are also a key TAILOR activity and some participants from the TAILOR network received a free registration. The micro-projects were each allowed a budget of 50.000 EUR, which was agreed with the project officer. While applicants could submit multiple proposals, no organisation was granted more than 60,000 EUR in total, following the FSTP funding rules.

Table 1. Overview of all eligible proposals received during this reporting period. The hosting lab is shown in bold. The non-TAILOR lab is always the recipient of the funding. Workshops are highlighted in blue, micro-projects in yellow. Pink IDs are projects with a female lead author. The final column shows the funding requested.

ID	Title and applicant	TAILOR lab	Non-TAILOR lab	Funding
1	**Affine-transform equivariant transformers for trustworthy and sample efficient computer vision -** *Mohammadreza Amirian (U. Zurich)*	**EPFL**	*U. Zurich*	€ 15000
2	**1st International Joint Conference on Learning & Reasoning - IJCLR 2021** *Nikos Katzouris (NCSR Demokritos Athens)*	KU Leuven	***NCSR Demokritos Athens***	€ 1500
3	**Abstraction and Implementation: Towards a Context-Dependent Conflict Resolution Algorithm for the Ethics of AI** - Réka Markovich (U. Luxembourg)	**CNR**	U. Luxembourg	€ 3810
5	**Design of Matheuristic Techniques for Timetabling Problems** *Roberto Maria Rosati (U. Udine)*	**IIIA-CSIC Barcelona**	*U. Udine*	€ 14940
6	**Neuro-symbolic integration for graph data** *Manfred Jaeger (U. Aalborg), Andrea Passerini (U. Trento)*	**Univ. Trento**	Univ. Aalborg	€ 3735
7	**Conformal Inference for multivariate, complex, and heterogeneous data** *Marcos Matabuena (CiTIUS, Univ. Compostela)*	**U.Pompeu Fabra**	CiTIUS	€ 6398
8	**Private Continual Learning from a Stream of Pretrained Models** *Joost van de Weijer (U.A. Barcelona)*	Univ. Pisa	**U.A. Barcelona**	€ 5000
10	**Logic-based multi-agent reinforcement learning** *Natasha Alechina, Mehdi Dastani, Brian Logan and Giovanni Varricchione (U. Utrecht)*	**La Sapienza, Roma**	Univ. Utrecht	€ 10200
11	**Modeling others for cooperation under imperfect information** *Nieves Montes, Nardine Osman, Carles Sierra (IIIA Barcelona)*	IIIA, Barcelona	**King's college London**	€ 15000
12	**Deep fake videos detection through explainable AI to combat disinformation on social media** *Nadeem Qazi (U. East London)*	**TIETO Finland**	Univ. East London	€ 15000
13	**IAIL 2022 - Imagining the AI landscape after the AI act** *Francesca Naretto (Scuola Normale Superiore)*	CNR Italy	Scuola Norm. Superiore	€ 10000
14	**Trustworthy AI for human behavior prediction by autonomous vehicles: Towards a comprehensive benchmark -** *Julian Schumann (TU Delft), Gustav Markkula (U. Leeds)*	TU Delft	**Univ. Leeds**	€ 7000

15	**A Modular Framework for Hybrid Participatory Systems** *Enrico Liscio (TU Delft), Maite Lopez Sanchez (U. Barcelona)*	TU Delft	**Univ. Barcelona**	€ 8400
16	**Multi-Objective Statistically Robust Algorithm Ranking** *Jeroen Rook (U Twente), H. Hoos (RWTH Aachen), H. Trautmann (U. Munster)*	**RWTH Aachen**	Univ. Twente	€ 4617
17	**Graph Gaussian Processes for Interactive Robot Task Learning** *Giovanni Franzese (TU Delft), Marc Deisenroth (UC London)*	TU Delft	**Univ. College London**	€ 8150
18	**Learning trustworthy models from positive and unlabelled data** *Paweł Teisseyre (Warsaw University of Technology)*	**KU Leuven**	Warsaw University of Technology	€ 4900
19	**Learning Neural Algebras** *Pedro Zuidberg Dos Martires (Orebro University)*	**University of Trento**	Orebro University	€ 6824
20	**Making big benchmarks more trustworthy: Identifying the capabilities and limitations of language models by improving the BIG-Bench benchmark.** - *Ryan Burnell (Univ. of Cambridge)*	**UP Valencia**	University of Cambridge	€ 14850
21	**Mastering experience in Natural Language Processing, Federated Learning, Time-Series Analysis and Process Mining** - *Luigi Colucci Cante (University della Campania)*	**IIIA-CSIC Barcelona**	Universita della Campania	€ 15000
22	**Large Scale Combinatorial Graybox Optimization** *Lorenzo Canonne (Université de Lille)*	**University of Malaga**	Universite de Lille	€ 16900
23	**Samples Selection with Group Metric for Experience Replay in Continual Learning** *Andrii Krutsylo (Polish Academy of Sciences)*	**University of Pisa**	Polish Academy of Sciences	€ 9350
24	**Efficient Meta-Learning in Neural Networks** *Mike Huisman (Leiden University)*	U Leiden	**University of Edinburgh**	€ 5800
25	**Towards Prototype-Based Explainable Machine Learning for Flood Detection** *Ivica Obadic (LMU Munich)*	**University of Lancaster**	U Munich	€ 4150
26	**Automating Reliability Check for Machine Learning Models** *Xin Du (University of Edinburgh)*	**TU Eindhoven**	U Edinburgh	€ 15000
27	**Deep reinforcement learning for predictive monitoring under LTLf constraints** *Efrén Rama Maneiro (U Santiago de Compostela)*	**University Sapienza Rome**	U Santiago de Compostela	€ 8120

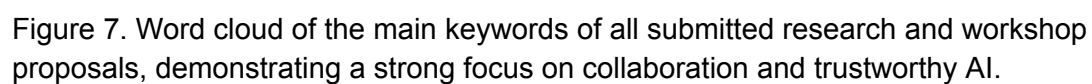| 28	**Mastering Natural Language Processing and Process Mining methodologies and technologies** *Luigi Colucci Cante and Mariangela Graziano (University della Campania)*	**IIIA-CSIC Barcelona**	Universita della Campania	€ 23440
29	**Multi-objective Rating Systems** *Paolo Turrini (University of Warwick)*	Vrije Universiteit Brussels	**University of Warwick**	€ 8100
30	**TAILOR workshop on Open Machine Learning** *Meelis Kull (University of Tartu, Estonia)*	TU Eindhoven	**University of Tartu**	€ 15000
31	**Graph learning and applications considering high-order interactions** *Andrei Buciulea (Universidad Rey Juan Carlos, Spain)*	TU Delft	**Universidad Rey Juan Carlos**	€ 8150
32	**Fostering Appropriate Trust in Predictive Policing AI Systems** *Siddharth Mehrotra (TU Delft, Netherlands)*	TU Delft	**Univeristy of Hamburg**	€ 11700
33	**Optimal training of a structured ensemble of Binarized Neural Networks with Mixed-Integer Linear Programming techniques -** *Simone Milanesi (University of Pavia, Italy)*	TU Delft	**University of Pavia**	€ 9500
34	**Predicting conversational memorability in group interactions: Continual learning approach** *Maria Tsfasman (TU Delft, Netherlands)*	TU Delft	**Univeristy of Cambridge**	€ 14948
35	**Meta-learning for Continual Learning** *Anna Vettoruzzo (Högskolan i Halmstad)*	**TU Eindhoven**	Högskolan i Halmstad	€ 16250
36	**AI-Assisted Quantum Optimisation Algorithms: Application to Smart City Problems** *Zakaria Abdelmoiz Dahi (Universidad de Malaga)*	Universidad de Malaga	**University of Exeter**	€ 14364
37	**Data Centric AutoML and Benchmarks with optimal transport** *Prabhant Singh (TU Eindhoven)*	TU Eindhoven	**Sorbonne University**	€ 13350
38	**Towards Efficient Energy Management in Microgrids: AI-Based Modeling of Household Power Consumption** *Petra Vrablecova (KINIT)*	Universita de Bologna	**KINIT, Bratislava**	€ 7000
39	**Connecting TAILOR and CLAIRE Rising Research Network: Strengthening AI Research through Collaborative Summer School Event -** *Nicolo Brandizzi (La Sapienza, Rome)*	La Sapienza, Rome	**CLAIRE, The Hague**	€ 8650
40	**Continual Learning Unconference** *Vincenzo Lomonaco (University of Pisa)*	**University of Pisa**	ContinualAI (non-profit)	€ 5600

41	**ESSAI & ACAI 2023 summer school** *Vida Groznik (University of Ljubljana)*	All TAILOR project partners	**University of Ljubljana**	€ 46300
42	**Leveraging Social Agents as Mediators to Foster Comprehension and Control of Affective Engagement with Digital Content -** *Sergio Muñoz (Universidad Politécnica de Madrid)*	**Istituto Superior Técnico, Lisboa**	U. Politécnica de Madrid	€ 5800
43	**Robust and safe reinforcement learning against uncertainties in human feedback** *Taku Yamagata (University of Bristol)*	University of Bristol	**LMU Munich**	€ 2960
44	**The First Workshop on Hybrid Human-Machine Learning and Decision Making (HLDM' 2023)** *Andrea Passerini (University of Trento)*	University of Trento	**Scuola Normale Superiore, Pisa**	€ 14500
45	**Trustworthy Probabilistic Machine Learning Models** *Stefano Teso (University of Trento)*	University of Trento	**University of Edinburgh**	€ 7500
46	**Boolean Seminar Liblice 2023** *Ondrej Cepek (Charles University, Prague)*	Charles University, Prague	**Czech Academy of Sciences**	€ 5600
47	**Holistic Evaluation of AI-assisted Biomedicine: A Case Study on Interactive Cell Segmentation** - *Wout Schellaert (UP Valencia)*	UP Valencia	**Ghent University**	€ 15000
48	**Ethics, Norms and AI: Navigating the Regulatory Domain of Artificial Intelligence in Healthcare with a Focus on Federated Learning** - *Gennaro Junior Pezzullo (Univ. of Campania)*	**IIIA-CSIC Barcelona**	University of Campania	€ 15000
49	**Explainable Semi-Supervised Fuzzy C-Means** *Kamil Kmita (Polish Academy of Sciences)*	**La Sapienza, Rome**	Polish Academy of Sciences	€ 10850
50	**5th Young Researchers' Workshop on Machine Learning for Materials Science** *Saso Dzeroski (JSI)*	Jozef Stefan Institute	**SISSA (IT)**	€ 15000
51	**Uncertainty-aware calibration for trustworthy AI: Combining approaches from machine learning and speaker verification** - *Paul-Gauthier Noé (Avignon University)*	**University of Bristol**	Avignon University	€ 10000
52	**International Conference on AI for People: Democratizing AI** *Marta Ziosi (University of Oxford)*	University of Oxford	**University of Bologna**	€ 3874
53	**Supervised Learning for Enhancing the Quantum Approximate Optimisation Algorithm** *Zakaria Abdelmoiz Dahi (Universidad de Malaga)*	Universidad de Malaga	**University of Exeter**	€ 11756

54	**Temporal & Sequential Neurosymbolic AI** *Nikolaos Manginas (NCSR "Demokritos")*	**KU Leuven**	NCSR "Demokritos"	€ 9900
56	**Trustworthy, Ethical and Beneficial-to-All Multiagent Systems Solutions for Social Ridesharing and the Hospitality Industry** - *Georgios Chalkiadakis (TU. Crete)*	**IIIA-CSIC Barcelona**	Technical University of Crete	€15000
57	**Exploration of Cooperation Factors in Human-Human and Human-AI Interactions** Tiffany Matej Hrkalovic (Delft University of Technology)	Delft University of Technology	**University of Duisburg-Essen**	€ 8625
59	**A human perceptual metric based on a Riemannian geodesic distance in the probability-extended image domain** - *Alexander Hepburn (Univ. of Bristol)*	University of Bristol	**CSIC Madrid**	€ 4128
60	**Investigating Meta-modeling Languages with the aim to Better Characterize the Hidden Semantics of the Knowledge Graph** - *Zekeri Adams (Slovak AI)*	Slovak AI	**Prague University**	€ 8688
61	**A workshop series on Trustworthy European Generative AI** *Bjorn Hovstadius (Lindholmen Science Park / AI Sweden)*	**INRIA**	AI Sweden	€ 11000
62	**Improving Multi-Task Parameter-Efficient Fine-Tuning Methods** *Róbert Belanec (KInIT)*	**DFKI**	KInIT	€ 10650
63	**Leveraging Social Agents as Mediators to Foster Trust and Comprehension of Affective Engagement with Digital Content** - *Sergio Muñoz López (Univ. Politécnica de Madrid)*	**U. Lisbon**	Univ. Politécnica de Madrid	€ 8375
64	**An Adaptive Initial Design for Bayesian Optimization** *Carolin Benjamins (Leibniz University Hannover)*	**RWTH Aachen**	Leibniz University Hannover	€ 4190
65	**CERN4AI conference** *Alexa Kodde (CLAIRE)*	DFKI & Czech Inst. Informatics	**CLAIRE**	€ 18125
67	**Grounded World Models for Higher Layers of Meaning** *Stefano De Giorgis (University of Bologna - CNR)*	University of Bologna - CNR	**University of Jönköping**	€ 6800
68	**Trustworthy Data-Driven Decision Support with Explainable Artificial Intelligence** *Mohsen Abbaspour Onari (Eindhoven University of Technology)*	Eindhoven Univ. of Technology	**University of Cambridge**	€ 9620
69	**Evolution of higher-order theory of mind** *Harmen de Weerd (University of Groningen)*	**Vrije Universiteit Brussel**	University of Groningen	€ 3500

70	**Neuro-symbolic integration for graph data, part II** *Manfred Jaeger (U. Aalborg), Andrea Passerini (U. Trento)*	**Univ. Trento**	Univ. Aalborg	€ 2850
71	**AI Safety Working group - European kickoff workshop** *Xavier Fresquet (Sorbonne University, Paris)*	Eindhoven University	***Sorbonne University***	€ 4962
72	**Workshop for Public Sector on the use of Foundation Language Models** *Niclas Fock (Santa Anna IT Research Institute)*	Linköping University	***Santa Anna IT Research Institute***	€ 60000
73	**Eindhoven-Leuven-Aachen AI Workshop Series on Secure, Reliable and Trustworthy AI** *Alexa Kodde (CLAIRE)*	**Eindhoven, Leuven & Aachen U.**	CLAIRE	€ 18375
74	**Enhancing Trustworthiness in Healthcare Large Language Models** *Muhammad Waseem (University of Jyväskylä)*	**Tietoevry Finland Oy**	University of Jyväskylä	€ 15000
75	**Mobility Data Analysis Investigating New Data Representations** *Cristiano Landi (University of Pisa)*	University of Pisa	**University of Piraeus**	€ 14935
76	**Graph Neural Networks meet Volterra: exploring high-order interactions with Volterra GNNs** *Víctor Manuel Tenorio Gómez (King Juan Carlos University)*	**Delft University of Technology**	King Juan Carlos University	€ 9025
77	**Large Language Models for Media and Democracy: Wrecking or Saving Society?** *Davide Ceolin (CWI)*	Delft University of Technology	**CWI, Amsterdam**	€ 28000
78	**Multi-agent scheduling in a human-robot collaborative warehouse** *Bram Renting (Leiden University)*	Leiden University	**University of Edinburgh**	€ 5500
80	**Evaluation of cognitive capabilities for LLMs** *Lorenzo Pacchiardi (Univ. Cambridge)*	**Univ.Politècnica de València**	Univ. Cambridge	€ 4470
82	**Learning the structure of complex datasets: The case for simplicial complexes** *Antonio Marques (King Juan Carlos University)*	**Delft University of Technology**	King Juan Carlos University	€ 7970
83	**Exploring Intrusion Detection Knowledge Transfer Between Network Environments** *Patrik Goldschmidt (KInIT)*	**INRIA**	KInIT	€ 12480
84	**Exploring the (Lack of) Cultural Diversity in Multilingual Datasets for NLP** *Lea Krause (Vrije Universiteit Amsterdam)*	**Oxford U.**	Vrije Universiteit Amsterdam	€ 8600

85	**Translating between AI Evaluation and Job Tasks in the human workplace for trustworthy and reliable AI deployment** - *Marko Tesic (Univ. Cambridge)*	**Univ.Politècnica de València**	Univ. Cambridge	€ 4275
86	**Evaluating the Trustworthiness of Human-like Robotic Motion** *Filipa Correia (University of Lisbon)*	University of Lisbon	**Bielefeld University**	€ 6000
87	**Continual Self Supervised Learning** *Joost van de Weijer (UA Barcelona)*	**University of Pisa**	Univ. Autonoma Barcelona	€ 7500
88	**The second CLAIRE Rising Research Network workshop on AI Research and Mental Well-Being** - *Marie Anastacio (RWTH Aachen)*	RWTH Aachen	**CLAIRE**	€ 18470
89	**Improving Cross-Lingual Retrieval of Previously Fact-Checked Claims** *Róbert Móro (KInIT)*	**Fondazione Bruno Kessler**	KInIT	€ 5660
90	**Leveraging Uncertainty for Improved Model Performance** *Luuk de Jong (Leiden University)*	Leiden University	**Fraunhofer Portugal**	€ 2350
91	**Tractable and Explainable Probabilistic AI** *Lennert De Smet (KU Leuven)*	KU Leuven	**University of Edinburgh**	€ 10700
92	**Enhancing Reliability and Trustworthiness in IoT Applications through Deep Learning-Based Data Imputation Techniques** - *Hakob Grigoryan (NVision Systems)*	**University of Athens**	NVision Systems	€ 13020
93	**Grounding trustworthiness** *Sietze Kuilman (TU Delft)*	Delft University of Technology	LMU Munich	€ 8780
94	**Exploring Improvement in Malware Clustering Using Self-Supervised Learning** *Martin Mocko (KInIT)*	**INRIA**	KInIT	€ 8125
95	**Exploring Prosocial Dynamics in Child-Robot Interactions: Adaptation, Measurement, and Trust** - *Ana Isabel Neto (University of Lisbon)*	University of Lisbon	**University of Amsterdam**	€ 9680
98	**Explanations and Reasoning: Proofs and Models of Intuitionistic Logic** *Philippe Balbiani (CNRS Toulouse)*	**CNRS Toulouse**	University of Barcelona	€ 10000
99	**Graph Neural Networks robust to imperfect topology knowledge** *Samuel Rey Escudero (Rey Juan Carlos University)*	**Delft University of Technology**	Rey Juan Carlos University	€ 6600

100	**AI/TP Methods for maximizing generality and tractability of algebras.** *Gonçalo Araújo (Universidade Nova de Lisboa)*	**CIIRC CTU**	Universidade Nova de Lisboa	€ 17800
101	**The European ecosystem of Large Language Models** *Iris Hempel (Alexandra Instituttet)*	Linköping University & TNO	**Alexandra Instituttet**	€ 1996
102	**Reconciling AI explanations with human expectations towards trustworthy AI** *Jeff Clark (Univ. of Bristol)*	Univ. of Bristol	**University of Tromsø**	€ 9220
103	**Types of Contamination in AI Evaluation: Reasoning and Triangulation** *Behzad Mehrbakhsh (Universitat Politècnica de València)*	*Univ. Politècnica de València*	**University of Madeira**	€ 14380
104	**Trustworthy Healthcare Professional (Physicians) Assistant for Text Summarization, Assisting and Validating the Prescription for Patients** - *Muhammad Waseem (Tietoevry Oy)*	Tietoevry Oy, DFKI	**Lakeframe Oy**	€ 50000
106	**Towards a Trustworthy and Efficient Companion for Car Part Catalogs** Patrick Lang (DFKI)	DFKI	**N4**	€ 50000
107	**Advancing Alzheimer's Diagnosis: Multimodal Explainable AI for Early Detection and Personalized Care -** *Nadeem Qazi (University of East London)*	DFKI	***University of East London***	€ 50000

Figure 7. Word cloud of the main keywords of all submitted research and workshop proposals, demonstrating a strong focus on collaboration and trustworthy AI.

Review process and outcome

All applications submitted within the deadline were evaluated for formal eligibility. The eligibility criteria are specified in deliverable D10.1. From the 108 submitted proposals, 8 were desk-rejected since they failed the eligibility test or missed key information. 2 proposals were retracted. All other proposals were reviewed by members of the scientific board, selected based on their topic of expertise. We checked for any conflicts of interest in the assignment. Since proposal 14, on the request of project reviewers, we assigned two reviewers per proposal.[1] Every decision was made based on independent reviews based on a clear set of predefined evaluation criteria.

Gender balance

Ignoring desk rejects and retracted proposals, 19 proposals came from female lead authors (19.4%). All of these were accepted, but two were cancelled after acceptance due to personal reasons, hence finally 89.5% success rate. The remainder had male first authors, with a success rate of 76% (5 were cancelled and 4 rejected).

Scientific board

The scientific board consisted of these experts (23% are female), which played a vital role in selecting promising proposals and helping young researchers gain valuable experience:
- Mitra Baratchi (Leiden University, Netherlands)
- Peter Flach (Bristol University, UK)
- Jose Hernandez-Orallo (Universitat Politècnica de València, Spain)
- Andrea Passerini (Trento University, Italy)
- Joaquin Vanschoren (Eindhoven University of Technology, Netherlands)
- Eva Onaindia (Universitat Politècnica de València)
- Silvia Tulli (Instituto Superior Técnico)
- Jérôme Euzenat (INRIA & University Grenoble Alpes)
- Raul Santos-Rodriguez (University of Bristol)
- Agnieszka Ławrynowicz (Poznan University of Technology)
- Giovanni Casini (National Research Council of Italy)
- Hector Geffner (Universitat Pompeu Fabra, Spain)
- Catholijn Jonker (Delft University, Netherlands)
- Marie-Christine Rousset (Laboratoire d'Informatique de Grenoble, France)
- André Meyer-Vitali (DFKI)
- Francisco Chicano (University of Malaga)
- Isabel Neto (University of Lisbon)
- Hossein Rahmani (Lancaster University)
- Miguel Couceiro (University of Lorraine, CNRS, LORIA)
- Neil Yorke-Smith (Delft University of Technology)
- Saso Džeroski (Jozef Stefan Institute, Slovenia)

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[1] On a few occasions, it was not possible to receive two reviews per proposal on time due to high workloads for the scientific board experts.

- Marco Gori (University of Siena, Italy)
- Gerhard Lakemeyer (RWTH Aachen University, Germany)
- Carles Sierra (Artificial Intelligence Research Institute (IIIA-CSIC), Spain)
- Wico Mulder (TNO)
- Andreas Herzig (IRIT-CNS)
- Kim Baraka (VU Amsterdam)
- Manolis Koubarakis (National and Kapodistrian University of Athens)
- Nikolaos Matragkas (CEA)
- Fabrizio Riguzzi (CINI)

Evaluation criteria

All proposals were evaluated according to 5 criteria (AI excellence, scientific track record of the candidate, scientific step-up, the suitability of the host, and appropriateness of the activity duration). The final score is a weighted average of all scores, using the weighting described in deliverable D10.1. As per the Connectivity Fund rules, proposals must achieve a minimum of 70% of the maximal score to receive funding.

Scores per criteria are on a scale from 0-10:
- **0-1** Application fails to address the criterion or cannot be assessed due to missing or incomplete information
- **2-3 Poor** – criterion is inadequately addressed or there are serious inherent weaknesses
- **4-5 Fair** – application broadly addresses the criterion, but there are significant weaknesses
- **6-7 Good** – application addresses the criterion well, but a number of shortcomings are present
- **8-9 Very good** – application addresses the criterion very well, but a small number of shortcomings are present
- **10 Excellent** – application successfully addresses all relevant aspects of the criterion. Any shortcomings are minor.

Proposal 104-107 where for microprojects, which were reviewed independently by DFKI according to the evaluation criteria described in Deliverable 8.2. Of all these, one was canceled and 3 accepted. The final results of the evaluation are summarised in Table 2.

Table 2. Overview of TAILOR Connectivity fund applications and their evaluation. Each cell shows the evaluation results by two independent reviewers. Hence, '7,9' means that the first reviewer rated the proposal 7/10 and the second reviewer rated it 9/10.

ID	AI Excellence	Scientific record	Scientific step-up	Host lab	Visit length	Final Score	Decision
1	7	9	8	9	9	8.3	accept
2	10	10	8	9	10	9.4	accept
3	9	9	8	9	7	8.5	accept
4	0	0	0	0	0	0	desk reject
5	9	7	8	8	8	8	accept
6	8	8	9	8	9	8.4	accept
7	9	9	9	9	8	8.9	accept
8	8	8	9	8	7	8.1	accept
9	0	0	0	0	0	0	retracted
10	9	10	9	9	8	9.1	accept
11	8	7	10	10	9	8.6	accept
12	7	7	8	7	7	7.3	accept
13	8	8	8	9	8	8.1	accept
14	8,8	8,7	8,10	9,10	9,9	8.4	accept
15	8,6	9,6	9,7	9,6	9,6	7.5	accept
16	9,8	8,9	9,7	9,10	9,8	8.5	accept
17	8,8	8,9	9,9	8,9	8,9	8.5	accept
18	9,6	9,8	9,6	10,8	10,5	7.9	accept
19	10,10	10,9	10,10	10,10	8,10	9.8	accept
20	6,10	7,9	7,10	9,8	9,10	8.4	accept
21	6,7	8,8	5,7	5,10	4,7	6.8	reject
22	7,8	8,9	8,9	9,9	7,10	8.3	accept
23	8,9	7,8	9,8	9,10	7,8	8.3	accept
24	8,7	7,8	8,9	9,9	8,8	8	canceled
25	8,10	8,8	8,9	8,9	7,7	8.3	accept
26	7,7	7,7	5,5	7,7	5,7	6.4	reject
27	9,9	8,9	9,9	10,9	9,9	8.9	accept
28	3,7	7,9	9,8	10,6	10,9	7.6	accept
29	9,10	7,10	9,10	10,10	6,10	9.1	accept
30	9,10	10,10	9,10	10,10	9,10	9.7	accept
31	8,8	8,8	8,8	8,8	7,7	7.9	accept

32	10,9	9,7	1,8	10,7	8,8	7.6	accept
33	7,9	6,6	8,9	8,8	8,8	7.6	accept
34	10,9	10,9	10,9	10,10	9,9	9.5	canceled
35	8,9	7,7	8,9	8,10	7,9	8.1	accept
36	6,6	6,7	6,6	7,8	7,7	6.4	reject
37	8,7	7,8	8,9	9,9	8,7	7.9	accept
38	10,4	8,7	8,5	9,8	8,7	7.3	canceled
39	7,7	7,7	8,8	9,8	8,8	7.6	accept
40	7,7	7,8	8,8	8,7	8,8	7.6	accept
41	10	8	10	9	9	9.25	accept
42	10,3	10,4	10,3	10,3	8,2	6.4	reject
43	8,8	8,7	8,8	9,9	7,4	7.7	accept
44	8,8	9,9	9,9	8,8	10,10	8.8	accept
45	6,6	8,8	7,7	8,8	8,8	7.3	accept
46	6,8	8,9	7,7	8,10	8,10	7.9	accept
47	9,10	10,10	9,10	8,8	9,8	9.3	accept
48	10,10	8,8	9,9	10,10	7,7	8.9	accept
49	5,7	7,8	8,9	8,8	8,7	7.4	accept
50	10,8	10,9	10,9	10,9	10,7	9.3	accept
51	10,9	8,7	10,10	10,9	8,9	9	accept
52	9,6	10,4	9,4	10,5	9,7	7.2	accept
53	2,10	8,9	7,9	6,8	9,9	7.6	accept
54	9,10	7,9	9,10	10,10	8,10	9.1	cancelled
55	0	0	0	0	0	0	desk reject
56	8,8	10,9	7,8	10,9	9,7	8.44	accept
57	7,7	7,8	9,9	8,8	7,7	7.75	accept
58	0	0	0	0	0	0	desk reject
59	7,9	8,8	7,8	8,10	6,7	7.81	accept
60	8,7	7,7	7,7	8,8	7,6	7.19	accept
61	10	10	9	9	9	9.5	accept
62	7	5	9	8	8	7.25	accept
63	8	7	7	9	7	7.5	accept
64	8	9	8	9	7	8.25	accept
65	9	9	9	10	8	9	accept
66	0	0	0	0	0	0	desk reject
67	10,5	8,7	8,7	10,10	8,10	8	accept

68	6	7	7	9	8	7.13	accept
69	7,10	8,10	9,10	8,10	8,8	8.87	accept
70	10,8	10,7	10,7	10,9	10,8	8.81	accept
71	10	9	8	8	7	8.63	accept
72	6,8	6,8	6,8	6,8	6,8	7	accept
73	9	8	8	7	7	8	accept
74	9	7	9	7	8	8.13	accept
75	5,8	6,9	7,9	9,9	7,7	7.5	accept
76	7,5	7,8	8,8	9,8	8,9	7.5	accept
77	9,5	9,7	8,5	9,10	10,5	7.5	accept
78	10,6	10,8	9,7	10,8	9,7	8.38	accept
79	5	5	8	8	1	5.63	desk reject
80	10,7	8,6	9,7	10,8	7,7	7.88	accept
81	0	0	0	0	0	0	retracted
82	6	9	8	9	7	7.75	accept
83	9,8	8,7	10,9	10,9	10,9	8.75	accept
84	8,7	7,6	7,8	9,9	9,9	7.63	accept
85	10,9	10,8	10,8	10,9	8,6	8.94	accept
86	10,8	10,8	9,10	10,10	7,9	9.13	accept
87	9,8	7,9	9,9	9,8	8,8	8.44	accept
88	8,7	7,6	8,7	8,8	9,7	7.38	accept
89	7	7	7	8	7	7.13	accept
90	8,8	7,8	8,9	8,10	7,8	8.1	accept
91	10,8	10,7	8,8	10,10	8,8	8.6	accept
92	7,8	6,7	6,8	9,7	9,8	7.31	accept
93	8	6	8	8	7	7.38	accept
94	7,8	5,5	8,9	9,9	7,7	7.25	cancelled
95	10,5	9,8	9,9	10,10	7,2	8.06	accept
96	0	0	0	0	0	0	desk reject
97	0	0	0	0	0	0	desk reject
98	9,10	10,8	7,8	10,8	10,10	8.88	cancelled
99	7,8	7,8	8,7	8,8	4,5	7.19	accept
100	7,8	7,7	8,10	9,10	6,9	8	accept
101	7,9	5,7	7,9	6,8	9,8	7.44	accept
102	8,8	9,8	7,10	8,9	7,8	8.25	accept
103	7,9	7,8	9,7	7,8	9,8	7.88	accept

104	/	/	/	/	/	Reviewed by DFKI	accept
105	/	/	/	/	/	Reviewed by DFKI	cancelled
106	/	/	/	/	/	Reviewed by DFKI	accept
107	/	/	/	/	/	Reviewed by DFKI	accept
108	0	0	0	0	0	0	desk reject

Granted projects

The Connectivity Fund awarded a total of 87 grants for research visits and workshops all over Europe. Below is an overview of most of the grantees with their project titles, project ID, and a very short summary of their work. Click the links to read more about their projects.

[Trustworthy Probabilistic Machine Learning Models](#) (#45)
Stefano Teso. Senior Assistant Professor at CIMeC and DISI, University of Trento. There is an increasing need of Artificial Intelligence (AI) and Machine Learning (ML) models that can reliably output predictions matching our expectations. Models learned from data should comply with specifications of desirable behaviour supplied or elicited from humans and avoid overconfidence.

[Leveraging Uncertainty for Improved Model Performance](#) (#90)
Luuk de Jong. Master student at Universiteit Leiden. This project investigates the integration of a reject option in machine learning models to enhance reliability and explainability. By rejecting uncertain predictions, we can mitigate risks associated with low-confidence decisions, meaning the model will be more reliable.

[TEC4CPC – Towards a Trustworthy and Efficient Companion for Car Part Catalogs](#) (#106) **Patrick Lang.** B.Sc. at N4. N4, a leading provider of procurement platforms in the automotive sector, is facing the challenge of making its catalogues for car parts (N4Parts) more user-friendly. These catalogues are used by customers both to purchase parts and to obtain information, such as installation instructions and maintenance intervals.

[Reconciling AI explanations with human expectations towards trustworthy AI](#) (#102) **Jeff Clark.** Research Fellow at the University of Bristol. With the widespread deployment of AI systems, it becomes increasingly important that users are equipped to scrutinise these models and their outputs. This is particularly true for applications in high-stakes domains such as healthcare.

[The European ecosystem of Large Language Models](#) (#101)
Dan Saattrup Nielsen PhD student at Alexandra Instituttet. Presentation on the benchmarking of LLMs, with a specific application to the Northern European languages. The challenges of evaluating generative language models, the different ways in which this can be done, and the current status within the Northern European language will be presented.

[Alzheimer's Diagnosis: Multimodal Explainable AI for Early Detection and Personalized Care](#) (#107) **Nadeem Qazi.** Senior Lecturer at University of East London, UK. Alzheimer's disease (AD) is becoming more common, emphasising the need for early detection and prediction to improve patient outcomes. Current diagnostic methods are often too late, missing opportunities for early intervention. We develop explainable AI models to identify early signs and risk factors of AD.

[Exploring Prosocial Dynamics in Child-Robot Interactions: Adaptation, Measurement, and Trust](#) (#95) **Ana Isabel Caniço Neto.** Assistant Researcher at the University of Lisbon. Social robots are increasingly finding application in diverse settings, including our homes and schools, thus exposing children to interactions with multiple robots individually or in groups. Understanding how to design robots that can effectively interact and cooperate with children in these hybrid groups is crucial for ensuring satisfactory and enduring interactions.

[Types of Contamination in AI Evaluation: Reasoning and Triangulation](#) (#103)
Behzad Mehrbakhsh PhD student at Universitat Politècnica de València. A comprehensive and accurate evaluation of AI systems is indispensable for advancing the field and fostering a trustworthy AI ecosystem. AI evaluation results have a significant impact, ultimately determining which products or services are deemed effective, safe and reliable.

[CLAIRE | Rising Research Network: AI Research and Mental Well-Being Workshop 2nd edition](#) (#88) **Marie Anastacio** PhD candidate at Leiden University, RWTH Aachen. After the successful workshop in collaboration with the TAILOR- ESSAI Summer School, we propose a 2nd edition at ESSAI2024. The event will focus on fostering a community of young AI researchers in Europe, supporting AI researchers and promoting mental well-being for Ph.Ds.

[Machine Learning Modalities for Materials Science](#) (#50)
Milica Todorovic Associate professor at University of Turku. In the past decade, AI algorithms have demonstrated a tremendous potential and impact in the discovery of new materials. The objective of the workshop and school "Machine Learning Modalities for Materials Science" (MLM4MS 2024) is to bring together computer science, materials science, physics and chemistry communities.

[Evaluating the Trustworthiness of Human-like Robotic Motion](#) (#86)
Filipa Correia Assistant Researcher at Interactive Technologies Institute, University of Lisbon. The research project will explore the trustworthiness of an embodied AI, such as a social robot. Specifically, it will investigate whether the performance of humanlike motions of a non-humanoid robot enhances the perceived trustworthiness of that robot.

[Explanations and Reasoning: Proofs and Models of Intuitionistic Modal Logics](#) (#98) **Philippe Balbiani** CNRS researcher at Toulouse Institute of Computer Science Research (Toulouse, France). Rooted in Intuitionistic and Constructive Reasoning, Intermediate Logics have found important applications through the Curry-Howard correspondence. Nowadays, there is an Intuitionistic Modal Logics renaissance in Computer Science and Artificial Intelligence.

[Neuro-symbolic integration for graph data](#) (#70)
Manfred Jaeger Associate Professor at Aalborg University. Learning and reasoning with graph and network data has developed as an area of increasing importance over recent years. Social networks, knowledge graphs, sensor and traffic networks are only some of the examples where graph-structured data arises in important applications.

[Improving Cross-Lingual Retrieval of Previously Fact-Checked Claims](#) (#89)
Róbert Móro Researcher at Kempelen Institute of Intelligent Technologies. To mitigate disinformation with AI in a trustworthy way, it should prioritise human agency and control, transparency, and accountability including the means for redress. This can be achieved by using AI to support rather than to replace media professionals, such as fact-checkers.

[AI/TP Methods for maximizing generality and tractability of algebras](#) (#100)
Gonçalo Gomes Araújo PhD at Nova FCT. We value a mathematical theory for its generality and its tractability. The goal of this project is to use Artificial Intelligence Theorem Proving (AITP) tools and AI techniques to devise new mathematical theories, maximising generality and tractability.

Enhancing Reliability and Trustworthiness in IoT Applications through Deep Learning-Based Data Imputation Techniques (#92)
Hakob Grigoryan PhD at NVISION. With the evolution of intelligent sensing devices and the Internet of Things (IoT), a vast amount of data is generated from various sources, including sensors, cameras, and network infrastructures. The goal of my research visit to the University of Athens is to investigate the effectiveness of intelligent data-driven methodologies for the imputation task of IoT data streams.

Exploring Intrusion Detection Knowledge Transfer Between Network Environments (#83) **Patrik Goldschmidt** PhD candidate at Kempelen Institute of Intelligent Technologies. With the rise of the Internet, the number of cyber-security incidents has grown immensely. As a response, the research area of Intrusion Detection Systems (IDSs), has gained significant attention. Our research focuses on Network IDSs, which detect attacks on the network level.

Enhancing Trustworthiness in Healthcare Large Language Models (#74) **Muhammad Waseem** Postdoctoral Researcher at Faculty of Information Technology, University of Jyväskylä, Finland. Large Language Models (LLMs) are advanced AI tools capable of understanding and generating human-like text, advancing various sectors. This project aims to enhance healthcare services using LLMs, focusing on improving their trustworthiness for clinical applications.

Continual Self-Supervised Learning (#87)
Giacomo Cignoni Research Fellow at the University of Pisa. Learning continually from non-stationary data streams is a challenging research topic of growing popularity in the last few years. Being able to learn, adapt and generalise continually, in an efficient way appears to be fundamental for a more sustainable development of Artificial Intelligent systems.

Tractable and Explainable Probabilistic AI (#91)
Lennert De Smet PhD at KU Leuven. Transparency and technical robustness are two fundamental requirements for AI systems following the European Union AI Act, especially in higher-risk domains. Transparency is intricately related to the notion of explainability, allowing an AI system to accurately describe the reasoning behind its predictions.

Trustworthy, Ethical and Beneficial-to-All Multiagent Systems Solutions for Social Ridesharing and the Hospitality Industry (#56) **Georgios Chalkiadakis** Professor at Technical University of Crete. Current mobility-as-a-service platforms have departed from the objectives of the sharing economy-inspired social ridesharing paradigm: they view drivers as taxi workers; focus on profit maximisation rather than fair travel costs' allocation; and disregard essential private preferences of users.

Translating between AI Evaluation and Job Tasks in the human workplace for trustworthy and reliable AI deployment (#85) **Marko Tesic** Post-doc at LCFI, University of Cambridge, UK. Recent advancements in AI have rekindled concerns about the potential automation of certain roles within the human workforce. We aim to better understand which roles are susceptible to automation and to ensure the trustworthy and reliable deployment of AI.
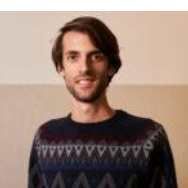
Evaluation of cognitive capabilities for LLMs (#80)
Lorenzo Pacchiardi Post-doc at University of Cambridge. Artificial Intelligence (AI) systems (such as reinforcement-learning agents and Large Language Models, or LLMs) are typically evaluated by testing them on a benchmark and reporting an aggregated score. As benchmarks are constituted of instances demanding various capability levels to be completed, the aggregated score is uninformative of the AI's cognitive capabilities.

Large Language Models for Media and Democracy: Wrecking or Saving Society?
(#77) **Davide Ceolin, Piek Vossen, Ilia Markov, Catholijn Jonker, and Pradeep Murukannaiah**. Foundational models have significantly advanced the possibilities regarding the understanding, analysis, and generation of human language. With this workshop, we intend to map the salient technical and societal issues that emerged and to discuss recent developments to address them.
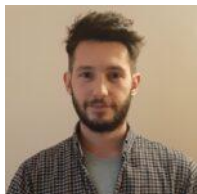
Grounded World Models for Higher Layers of Meaning (#67)
Stefano de Giorgis Post-doc researcher at Institute for Cognitive Sciences and Technologies – National Research Council (ISTC-CNR), Italy. The project involves knowledge representation techniques, neuro-symbolic AI, and cognitive semantics. The notion of "Grounded Wold Models" is here defined as Cognitive Representations of (a certain portion of) the world.

Multi-agent scheduling in a human-robot collaborative warehouse (#78)
Bram Renting PhD at Leiden University, Delft University of Technology. In cooperative multi-agent environments, agents can be interdependent in completing tasks. We consider environments where agents schedule future interactions with others they depend on to perform the task. Our project focuses on human-robot warehouses where humans pick products from shelves and robots transport goods.

Evolution of Theory of Mind (#69)
Harmen de Weerd Assistant Professor at University of Groningen In social interactions, humans often make use of their "theory of mind", which refers to their ability to reason about unobservable mental content of others. This project revolves around the question of why such a cognitively demanding ability may have evolved for humans, but not for other species.

AI Safety Working group – European kickoff workshop (#71)
Xavier Fresquet Deputy Director, PhD at Sorbonne Université. AI systems offer the potential for substantial benefits to society but they are not without risks, such as toxicity, misinformation, and bias. As with other complex technologies, society needs industry-standard safety testing to realise the benefits while minimising the risks.

Building trust in administrative automation through the use of LLMs in the public sector of Sweden (#72) **Niclas Willem Fock** CEO Santa Anna IT Research Insititute, Sweden (Linköping University). There are today a number of use cases for language models that have been identified as possible to implement. The purpose of the Workshop is to demonstrate completed and ongoing project examples to effectively illustrate what can be realistic goals, or possible projects to start as soon as the will and resources are available.

Eindhoven - Leuven - Aachen AI Workshop Series on Secure, Reliable and Trustworthy AI (#73) **Alexa Kodde** Project Manager at CLAIRE. The AI Workshop Series on Secure, Reliable and Trustworthy AI, hosted by TU Eindhoven, KU Leuven, and RWTH Aachen University, is to strengthen regional, regional, cross-border, and European research in transparent and reliable AI, and explicitly align with TAILOR, focusing on Trustworthy AI.
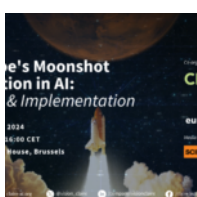
Europe's Moonshot Ambition in AI: Vision & Implementation (#65)
Alexa Kodde Project Manager at CLAIRE. AI is the primary driver of scientific discoveries, industrial engineering, energy production, logistics, the creative economy, education, and public services. The vision for "AI Made in Europe" is more important than ever. But are we sure the vision has not become "AI Made Elsewhere"?

[An Adaptive Initial Design for Bayesian Optimization](#) (#64)
Carolin Benjamins PhD at Leibniz University Hannover. Our goal is to progress on Dynamic Algorithm Configuration (DAC) for Bayesian Optimization (BO). BO is a widely-used and sample-efficient framework for optimising black-box problems, which are often expensive to evaluate. Dynamically configuring BO enables to adapt to the optimization progress and to any problem landscape.

[Leveraging Social Agents as Mediators to Foster Trust and Comprehension of Affective Engagement with Digital Content](#) (#63)
Sergio Muñoz Assistant Professor at Universidad Politécnica de Madrid The vast and ever-expanding digital landscape presents significant challenges for users striving to navigate and discern accurate information. This challenge is compounded by the dynamic nature of the Internet, characterised by attention-seeking strategies intended to exploit users' unconscious emotional responses. This affects the credibility of information…

[Improving Multi-Task Parameter-Efficient Fine-Tuning Methods](#) (#62)
Róbert Belanec PhD at Kempelen Institute of Intelligent Technologies The trustworthiness of the generative AI models is an important topic, especially with the increase in popularity of generative large language models. In recent years, the transformer architecture has become popular in the field of natural language processing. However, the increase in parameters is reducing the…
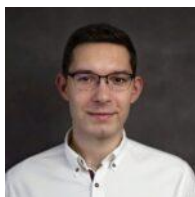
[Explainable Semi-Supervised Fuzzy C-Means](#) (#49)
Kamil Kmita Research Assistant at Systems Research Institute, Polish Academy of Sciences Semi-Supervised Fuzzy C-Means (SSFCMeans) model adapts an unsupervised fuzzy clustering algorithm to handle partial supervision in the form of categorical labels. One of the key challenges is to appropriately handle the impact of partial supervision (IPS) on the outcomes of the model.

[The First Workshop on Hybrid Human-Machine Learning and Decision Making](#) (#44) **Andrea Passerini** Associate professor at University of Trento. In the past, machine learning and decision-making have been treated as independent research areas. However, with the increasing emphasis on human-centered AI, there has been a growing interest in combining these two areas. We explore approaches that complement human decision-making rather than replace it.

[International Conference "AI for People: Democratizing AI"](#) (#52)
AI for People International nonprofit organisation. The International Conference "AI for People" was born out of the idea of shaping Artificial Intelligence technology around human and societal needs. While Artificial Intelligence (AI) can be a beneficial tool, its development and its deployment impact society and the environment in ways that need to be thoroughly addressed.

[Robust and safe reinforcement learning against uncertainties in human feedback](#) (#43) **Taku Yamagata** Senior Research Associate at the University of Bristol Abstract One of the promising approaches to improve the robustness and safety of reinforcement learning (RL) is collecting human feedback and, that way, incorporating prior knowledge of the target environment. However, human feedback can be inconsistent and infrequent.

[Holistic Evaluation of AI-assisted Biomedicine: A Case study on Interactive Cell Segmentation](#) (#47) **Wout Schellaert** PhD student at Universitat Politècnica de València. Abstract Rapid advances in artificial intelligence have resulted in a correspondingly growing prominence of AI-based tools in day to day biomedicine workflows. As a high-risk domain with impact on human health, it is of vital importance that any AI systems in use are reliable, safe, and…
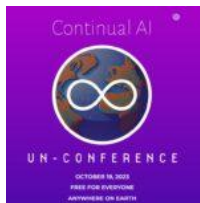
1st ContinualAI Unconference (#40)

Vincenzo Lo Monaco Assistant Professor, ContinualAI President. Organised by the non-profit ContinualAI, the conference will speed up the long desired inclusive and sustainable progress of our community with an open-access, multi-timezone, 24-hour-long event that brings together ideas at the intersection of machine learning, computational neuroscience, robotics and more!

CLAIRE | Rising Research Network: AI Research and Mental Well-Being Workshop

(#39) **Nicolò Brandizzi** PhD student at Sapienza University of Rome. The CLAIRE Rising Researcher Network (R2Net) aims to create a shared space for Ph.D. students in AI across Europe, offering support, networking opportunities, and resources. This one-day event during the ESSAI Summer School will feature a panel discussion on Ph.D. life, an ESA presentation, and a networking session.


Fostering Appropriate Trust in Predictive Policing AI Systems (#32)

Siddharth Mehrotra PhD student at TU Delft. The use of AI in law enforcement, particularly in predictive policing, raises concerns about bias, discrimination, and infringement of civil liberties. In this proposal, we aim to investigate how explanations generated by predictive policing systems and trust calibration cues can be used to establish appropriate trust in these systems.

Meta-learning for Continual Learning (#35)

Anna Vettoruzzo PhD student at Halmstad University. Continual learning (CL) refers to the ability to continually learn by accommodating new knowledge while retaining previously learned experiences. While this concept is inherent in the human learning ability, current machine learning-based methods struggle with this as they are highly prone to forget past experiences.
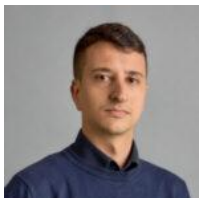
Deep reinforcement learning for predictive monitoring under LTLf constraints (#27)

Efrén Rama Maneiro PhD student at the University of Santiago de Compostela. Predictive monitoring is a subfield of process mining that focuses on predicting how a process will unfold. Deep learning techniques have become popular in this field due to their enhanced performance. This research proposal aims to define a novel predictive monitoring approach.

Data-Centric AutoML and Benchmarks with Optimal Transport (#37)

Prabhant Singh Research Engineer at TU Eindhoven. Automated machine learning (AutoML) aims to make easier and more accessible use of machine learning algorithms for researchers with varying levels of expertise. Our project aims to develop methods and systems that utilise Optimal Transport-based measures to calculate dataset similarity in these scenarios.

Multi-Objective Rating Systems (#29)

Paolo Turrini Associate Professor at the Department of Computer Science, University of Warwick. This project studies rating systems with multiple objectives. In particular, it looks beyond classical Pareto efficiency, studying allocations that satisfy fairness, diversity, and reliability.

Optimal training of a structured ensemble of Binarized Neural Networks with Mixed-Integer Linear Programming techniques (#33)

Simone Milanesi, Ambrogio Maria Bernardelli PhD students at the CompOpt Lab (University of Pavia). Binarized Neural Networks (BNNs) are receiving increasing attention due to their lightweight architecture and ability to run on low-power devices. We propose the BeMi ensemble, a structured architecture of BNNs available.

Open Machine Learning workshop (#30)
Meelis Kull Associate Professor at the University of Tartu. The field of Machine Learning continues to grow tremendously and has a significant impact on society. As such, it is important to democratize machine learning, i.e. to make sure that software, datasets, models, and analyses are freely available for easy discovery, verifiability, reproducibility, reuse and meta-analysis.


Predicting conversational memorability in group interactions: Continual learning approach (#34) **Maria Tsfasman** PhD student at TU Delft. As AI applications continue to proliferate in our daily lives, the need for social intelligence in these systems becomes increasingly crucial. To enable long-term performance of social intelligence, AI systems must be aware of important moments, or "hotspots" in user conversations.


Mastering Natural Language Processing methodologies and technologies (#28) **Mariangela Graziano** PhD student at Università degli Studi della Campania "L. Vanvitelli". Natural Language Processing (NLP) is an area of artificial intelligence (AI) that deals with giving computers the ability to understand text and spoken words in the same way that people do. The major challenge is to build intelligent and autonomous systems (cognitive computing), maybe in the body of a robot.

Mastering Natural Language Processing and Process Mining methodologies and technologies (#28) **Luigi Colucci** Cante PhD student at Università degli Studi della Campania "Luigi Vanvitelli". A very ambitious process has been going on to digitalize the entire public administration system. I want to investigate Business Process Management based on event logs obtained from public administrations' IT systems, using specific Process Mining techniques.
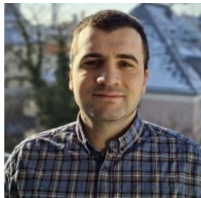
Towards Prototype-Based Explainable Machine Learning for Flood Detection (#25) **Ivica Obadic** Chair of Data Science in Earth Observation at the Technical University of Munich. High-resolution satellite data has shown to be a valuable resource in tackling pressing issues related to climate change and urbanisation such as flood detection. We aim to develop an explainable model that combines prototype-based explainability with graph neural networks.
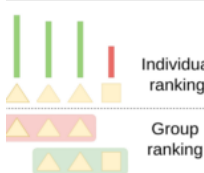
Sample Selection with Group Metric for Experience Replay in Continual Learning (#23) **Andrii Krutsylo** PhD student at the Institute of Computer Science of the Polish Academy of Sciences. The study aims to reduce the decline in performance of a model trained incrementally on non-i.i.d. data, using replay-based strategies to retain previous task knowledge. To address limitations in existing variations, a new metric will be found to choose the optimal replay batch from the memory buffer.

Large Scale Combinatorial Graybox Optimization (#22)
Lorenzo Canonne PhD student at Inria. The field of grey box optimization has led to the design of new operators capable of using the structural information of problems; these operators are now the basis of powerful meta-heuristics. For large-scale NK landscapes, many operators have been proposed and iterated local search combined with grey box crossovers is now the state of the art.

Making big benchmarks more trustworthy: Identifying the capabilities and limitations of language models by improving the BIG-Bench benchmark (#20)
Ryan Burnell Postdoctoral Research Fellow at Leverhulme Centre for the Future of Intelligence, University of Cambridge, UK. AI systems are becoming an integral part of every aspect of modern life. To ensure public trust in these systems, we need tools that can be used to evaluate their capabilities and weaknesses.

[Learning Neural Algebras](#) (#19)
Pedro Zuidberg Dos Martires Postdoctoral Researcher at Örebro University (Sweden). Algebra provides a formalism to study sets and how the elements of these sets relate to each other by defining relations between set elements. Abstract algebraic structures are abundantly present in artificial intelligence. For instance, Boolean algebra constitutes the bedrock of symbolic AI

[Learning trustworthy models from positive and unlabelled data](#) (#18)
Pawel Teisseyre Assistant Professor at the Polish Academy of Sciences The goal of the research stay is to explore learning classification models using positive-unlabelled (PU) data. In PU learning, it is assumed that only some observations in training data are assigned label, which is positive, whereas the remaining observations are unlabelled and can be either…

[Imagining the landscape after the AI Act](#) (#13)
Francesca Naretto PhD Student In April 2021, the EU Parliament published a proposal, the AI Act (AIA), for regulating the use of AI systems and services in the Union market. However, the effects of EU digital regulations usually transcend its confines. An example of what has been named the "Brussel effect" – the high impact…

[A Modular Framework for Hybrid Participatory Systems](#) (#15)
Enrico Liscio TU Delft PhD student Participatory systems aim to elicit citizens' stances on societal discussions to inform policy making. In particular, human values are a crucial component of citizens' stances, since they are the drivers of our opinions and behaviours. AI can enable mass participation and process large quantities of citizens' input.

[Trustworthy AI for human behavior prediction by autonomous vehicles](#) (#14)
Julian F. Schumann TU Delft PhD student. For humans to trust autonomous vehicles, they need to have confidence in the vehicles' ability to reliably resolve space-sharing conflicts with other traffic participants in a safe manner – such as in the case of crossing or merging paths. Planning safe and efficient interactions for autonomous vehicles.

[Graph Gaussian Processes for Interactive Robot Task Learning](#) (#17)
Giovanni Franzese TU Delft PhD candidate. The adaptability of robot manipulators to many different tasks is currently constrained by systematic hard coding of each specific task. Machine learning methods like Learning from Demonstrations (LfD) and Reinforcement Learning (RL) have shown promising results in having fast reprogramming of the task using human demonstrations.

[Multi-Objective Statistically Robust Algorithm Ranking](#) (#16)
Jeroen G. Rook University of Twente PhD candidate Comparing algorithms is a non-trivial task. Often, a set of representative problem instances are used to compare algorithms. However, these problem instances introduce biases in the comparison outcomes, which is often not taken into account. The confidence of the comparison can be strengthened by using statistical… [Read more](#)
[: Multi-Objective Statistically Robust Algorithm Ranking](#)

[Deep fake videos detection through Explainable AI](#) (#12)
Nadeem Qazi University of East London. Aiming towards combating the challenges faced by fake video detection, the prime objective of this research is to develop a proactive, advanced explainable, human collaborated AI-based online disinformation detecting tool for securing a trustworthy social media environment.
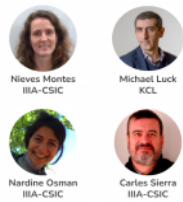
[Modeling others for cooperation under imperfect information](#) (#11)
Nieves Montes PhD Student at Artificial Intelligence Research Institute (IIIA-CSIC). This research visit will focus on models for empathetic software agents. This means embedding autonomous agents with the ability to model their peers and understand the reasons behind their behaviour. This work is to enhance the performance of agents in cooperative tasks.
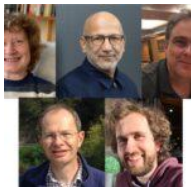

[Logic-based multi-agent reinforcement learning](#) (#10)
Brian Logan Associate Professor at Utrecht University. Many activities that are easy for humans, such as walking together with other humans, are hard to program as a set of rules for Artificial Intelligence (AI) robots. The project will investigate techniques to speed up learning, and guarantee that the learnt behaviour satisfies pre-defined properties.


[Conformal Inference for multivariate, complex, and heterogeneous data](#) (#7)
Marcos Matabuena University of Santiago de Compostela. In this project, in collaboration with Gábor Lugosi (UPF), we propose new uncertainty quantification methods based on the design of new Conformal Inference strategies for complex data that arise in modern personalised medicine applications.
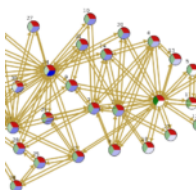
[Neuro-symbolic integration for graph data](#) (#6)
Manfred Jaeger Associated Professor at Aalborg University. From Social networks to bibliographic databases: many important real-world phenomena consist of networks of connected entities. The mathematical model of such networks is that of a graph, which in its basic form just consists of a collection of nodes that are connected by edges.
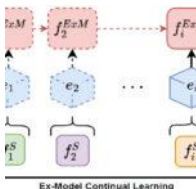
[Private Continual Learning from a Stream of Pretrained Models](#) (#8)
Antonio Carta Post-doc at Pisa University. Learning continually from non-stationary data streams is a challenging research topic of growing popularity in the last few years. Being able to learn, adapt and generalise continually, in an efficient, effective and scalable way appears to be fundamental for a more sustainable development of Artificial Intelligent systems.

[Matheuristic Techniques for Timetabling Problems](#) (#5)
Roberto Maria Rosati PhD Student in Information Engineering at University of Udine. Recently, matheuristics has emerged as a promising research branch in combinatorial optimization. Thanks to this collaboration supported by TAILOR connectivity fund, we will design and apply novel matheuristic techniques to a variety of timetabling problems that are under investigation.

[1st International Joint Conference on Learning & Reasoning](#) (#2)
Nikos Katzouris National Center for Scientific Research "Demokritos". The rapid progress in machine learning has been the primary reason for a fresh look at the transformative potential of AI as a whole during the past decade. The 1st International Joint Conference on Learning & Reasoning (IJCLR 2021) brought together four international conferences and workshops, addressing various aspects of integrating machine learning and machine reasoning.

[Trustworthy and sample efficient computer vision](#) (#1)
Mohammadreza Amirian Research assistant, Zurich University of Applied Sciences (ZHAW). Transformers are being adapted for computer vision and image classification tasks. We aim to extend the concept of rotation equivariance to affine-transformation equivariance to improve the trustworthiness of the decisions and robustness of the vision transformer models.

[Conflict Resolution Algorithm for the Ethics of AI](#) (#3)
Réka Markovich Post-doctoral Researcher at Luxemburg University. The ethical rules for the so-called moral behaviour of AI tools are a major concern, and each AI tool has multiple stakeholders with possibly different moral backgrounds and expectations. How should we decide whose moral expectations these tools should meet?

Retrospective

Problems encountered and solutions

This is primarily a mobility fund, and COVID-19 meant that almost no visits were possible during the first 1,5 years of the Connectivity Fund. The extension of TAILOR to 4 years helped a lot to still realise many visits. We originally envisioned to fund 100 visits, and realised 87. We actually accepted 94, but 7 were cancelled unilaterally after acceptance, most of them towards the end of the TAILOR project, often because the host university couldn't complete the paperwork on time to start the research visit in a timely fashion, or for personal reasons.

The number of proposals was a lot of administrative work. We resolved this by devoting extra staff to this (but more than was initially planned), and by extensively streamlining the process via automated forms.

There were many small problems which are linked to the strict requirements of FSTP funding and a lot of back and forth with 80+ different university and SME administrations. In one case it took 6 months to get the agreement signed. Allowing 25% overhead to be charged for managing the received funds simplified things a lot (otherwise some beneficiaries refused to collaborate). The main 'solution' here was to iterate many times over the subgrant agreement to get the language right and the edge cases resolved.

What has been learned

The connectivity fund proved to be an extremely useful instrument and a major benefit for European AI researchers. It's also extremely effective, resulting in new collaborations and outcomes at low cost, resulting in many new ideas and outcomes that otherwise would not have happened.

Administration is a major headache since we had to deal with so many different labs. It would make a lot of sense if this could be managed by a single third party entity rather than with 80+ other administrations.

Impact

The Connectivity fund is a key mechanism to foster collaboration and allows researchers all over Europe to work on the core research problems addressed by the TAILOR network. It also allows TAILOR to open up to a wider section of the AI community. To measure its impact, for all proposals since 2022, we ask all participants to send a structured scientific report containing:

- A summary of the research objectives
- Technical approach, findings, and future work
- A self-assessment of the impact of the research visit on AI excellence and their own careers, as well as the suitability of the host and the visit length.
- A list of publications and other outcomes of the visit.

These reports (for the completed visits) are attached with this deliverable. The amount of outputs is too extensive to list in this deliverable, but for every project the corresponding scientific report can be found. In most cases, the granted projects led to very useful research visits and workshops with useful outcomes. Most of them resulted in new publications and plans for further collaboration. A very positive experience was reported for almost all participants. It allowed the TAILOR network to interact with a much broader range of AI labs than those in the original network, and made TAILOR much more visible and impactful. Connectivity Fund recipients were also very active in TAILOR webinars, meetings and conferences.