

GAIN

Georgian Artificial Intelligence Networking and Twinning Initiative

Main Goals

Project #101078950

HORIZON EUROPE - WIDERA-2021-ACCESS-03 (Twinning)

01.10.2022 - 30.09.25

The overall goal of the Project

Is to integrate MICM into the European research community in the area of

Artificial Intelligence (AI)

by strengthening its research and innovation capacities,

to create a **European-level Centre of Excellence** in this field in Georgia

Is this goal feasible, realistic?

Project Partners

DFKI - German Research Centre for Artificial Intelligence

- ▶ one of the world's largest non-profit research institute in the field of AI-based software technologies, **Founded in 1988**
- ▶ Personnel - over 1,100 employees
- ▶ Fields: AI, Big Data and Robotics
- ▶ Area of responsibility in GAIN - Machine (Deep) Learning methods in Natural Language Processing (NLP) and Multilingual Technologies (MLT).

Project Partners

INRIA - National Institute for Research in Digital Science and Technology

- ▶ main **French** public research organization in the field, **Founded in 1967**
- ▶ more than 2,500 employees;
- ▶ Area of responsibility in GAIN - Computer Vision for Activity Recognition

Project Partners

EXOLAUNCH GmbH (EXO)

- ▶ a high-tech spin-off company from Berlin University of Technology (TU Berlin), supported the deployment of over 100 satellites
- ▶ company will contribute to building Innovation and Research Management Capacity at MICM.

Project Partners

MICM - Muskhelishvili Institute of Computational Mathematics of the Georgian Technical University - *Coordinator*

- ▶ Research Institute - **Founded in 1956** as a Computing Center of Acad. Sciences.
- ▶ Research Fields - Probability & Statistics, Computational Methods, Mathematical Modeling
- ▶ About 50 employees,
35 researchers/programmers

Project MePheSTO

Digital Phenotyping for Psychiatric Disorders from Social Interaction

Vehicle for the GAIN activities

DFKI-INRIA largescale collaboration project
AI methods in Psychiatry

WP1 - Ethics requirements

- ▶ set out the 'ethics requirements' that the project must comply with
- ▶ **Ethics protocol - Medical Data**
- ▶ Establish **cooperation with local psychiatrists**; appoint **Ethics advisor**

WP2 - Twinning Research and Innovation Programme (TRIP)

Leading - MICM all partners - contributors

- ▶ To design and implement joint research activities centered around - **3 Sub-Projects** (discussed below)

WP2 - Twinning Research and Innovation Programme (TRIP)

Leading - MICM all partners - contributors

Task 2.3. Staff Exchange Programme

Research mobility plan for Each of 3 projects

- ▶ Staff exchange (task-specific trips)
- ▶ Project specific working meetings, experiments, use of computational infrastructure, etc.
- ▶ Training visits
- ▶ Joint publications preparations

WP2 - Twinning Research and Innovation Programme (TRIP)

Leading - MICM all partners - contributors

Task 2.4. Joint Virtual Laboratory

Joint research structure

Research program - covering 3-4 years after the project end

3 Sub-Projects

Topic 1: AI Methods for Deep Speech Analysis in Health Scientific challenge (Leader: DFKI)

Topic 2: AI Technologies for Human Behavior Understanding (Leader: INRIA)

Topic 3: Pilot Research Project at MICM will be based on (but not limited to) the bilateral (INRIA-DFKI) large-scale project MePheSTO

WP3 - Scientific Excellence and Networking

Leading - DFKI

Task 3.1 GAIN workshop series

3 high-level scientific workshops

attached to most visible and relevant European / International conferences - e.g. IEEE

WP3 - Scientific Excellence and Networking

Leading - DFKI

Task 3.2 Joint Scientific Conference „AI for Human Behavior Analysis”

- ▶ Will be held in Georgia
- ▶ External European participants
- ▶ at least 100 participants

WP3 - Scientific Excellence and Networking

Leading - DFKI

Task 3.3. GAIN scientific webinar series.

- ▶ 3 webinars (one for each of the TRIP projects)
- ▶ Target - young researchers from the partner organization
- ▶ Participation of external researchers
- ▶ At least 30-40 participants per webinar

WP3 - Scientific Excellence and Networking

Leading - DFKI

Task 3.4. GAIN Summer Schools

Summer School 1: Machine Learning for Practice (collocated with the INRIA-DFKI summer school)

- ▶ A 5-day hybrid event, bringing together predominantly young researchers, including Master and PhD students in the area relevant to the TRIP

WP3 - Scientific Excellence and Networking

Leading - DFKI

Task 3.4. GAIN Summer Schools

Summer School 2: AI-empowered Cognitive Vision.

(in Georgia; with the option of participate remotely)

The Topics will be derived from Topic 2 of TRIP

WP3 - Scientific Excellence and Networking

Leading - DFKI

Task 3.5. GAIN: Highly Specialized Trainings (in Georgia)

- ▶ 10-14-days short courses for the young researchers of MICM organized by the re-trained leading research staff of MICM supported by the European colleagues (via teleconferencing)

Tentative topics: Machine Learning frameworks, AI methods applications

WP4 - Innovation and Research Management/Administration Capacity Building

Leading - EXOLAUNCH

Task 4.1 Innovation training workshops for researchers and managers

3 training workshops (webinars)

- ▶ IPR protection and marketing: European best practice
- ▶ Technology transfer and funding of innovation
- ▶ Research fundraising

WP4 - Innovation and Research Management/Administration Capacity Building

Leading - EXOLAUNCH

Task 4.2. Web-based training on European innovation tools

2 webinars

- ▶ Design of Innovation projects
- ▶ Handling innovation and exploitation activities in:
 - ❖ Research and Innovation Projects
 - ❖ Special EU Programmes as e.g. EIT (European Institute of Innovation & Technology), EIC (European Innovation Council), etc.

**WP4 - Innovation and Research
Management/Administration Capacity Building
(Leading - EXOLAUNCH)**

**Task 4.3. On-the-job training for Research
Administrative and Managerial (RAM) Staff**

The series of 6 short-term visits to the partner
organizations

- ▶ first-hand experience of practical applications of innovation procedures (focus on IPR protection and marketing, research fundraising)
- ▶ joint exploitation of research results obtained in WP1

WP4 - Innovation and Research Management/Administration Capacity Building

Leading - EXOLAUNCH

Task 4.4. Pilot Innovation Project

As a result of the scientific workshop series (WP3) the **most appropriate, mature and market-relevant results of TRIP suitable for commercialization** will be identified

WP5 - Visibility and Social Impact

Leading - MICM

Dissemination of the project tasks and activities

Task 5.1. Project website (MICM)

<http://gain-twinning.eu>

Task 5.2. Dissemination towards Research

Task 5.3. Dissemination towards Society

Task 5.4. Integration with European AI communities

Task 5.5. Exploitation (of all potential scientific results) and Sustainability Planning

WP6 - Coordination and Management

Leading - MICM supported by EXO

Task 6.1. Institutional reforms at MICM

Suggest a Plan for turning MICM into a research center with an achievement rewarding attitude

**GAIN will be a big GAIN for the
Georgian research community**

THANK YOU