COST Action CA17124
Digital Forensics: Evidence Analysis
via Intelligent Systems and Practices

Dr. Mark Scanlon – Management Committee Core Group Member

- COST (European Cooperation in Science and Technology) is a funding organisation for research and innovation networks.
- COST Actions help connect research initiatives across Europe and beyond and enable researchers and innovators to grow their ideas in any science and technology field by sharing them with their peers.
- COST Actions are bottom-up networks with a duration of four years that boost research, innovation and careers.
  - Open and Inclusive
  - Multi and interdisciplinary
  - Pan-European
  - Career enhancing
  - 45,000 researches and innovators involved
  - 240 running Actions

What does COST fund?

- Management Committee Meetings
- Short Term Scientific Missions
- Summer Schools
- Action Dissemination Activities
  - Conferences
  - Infodays
- ITC Conference Grants

- It does not fund personnel costs

ACTION MANAGEMENT COMMITTEES

DECISION MAKING BODY

2 MC Members can be nominated by each participating country

Coordination, Implementation, and Management of the Action:

→ Reporting, Membership approval, Dissemination and exploitation of results, Implementation of COST Policies

Supervising the appropriate allocation and use of funds

Achieving the Action's MoU objectives

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MANAGEMENT COMMITTEE/CORE GROUP

KEY ROLES IN ORDER TO ORGANIZE THE WORK

CORE GROUP:

Prepare MC decisions

CORE GROUP MEETINGS

Action Chair

Action Vice Chair

WG Leaders

GH Scientific Representative

STSM manager

Science Communication Manager

and other horizontal activities

COST Inclusiveness Target Countries

EU 13
Bulgaria
Croatia
Cyprus
Czech Republic
Estonia
Hungary
Latvia
Lithuania
Malta
Poland
Romania
Slovakia
Slovenia

EU Candidates and Potential Candidates
Bosnia and Herzegovina
fYR Macedonia
Montenegro
Republic of Serbia
Turkey

EU countries targeted by the European Commission:
Luxembourg
Portugal

NEW : ITC Conference Grants

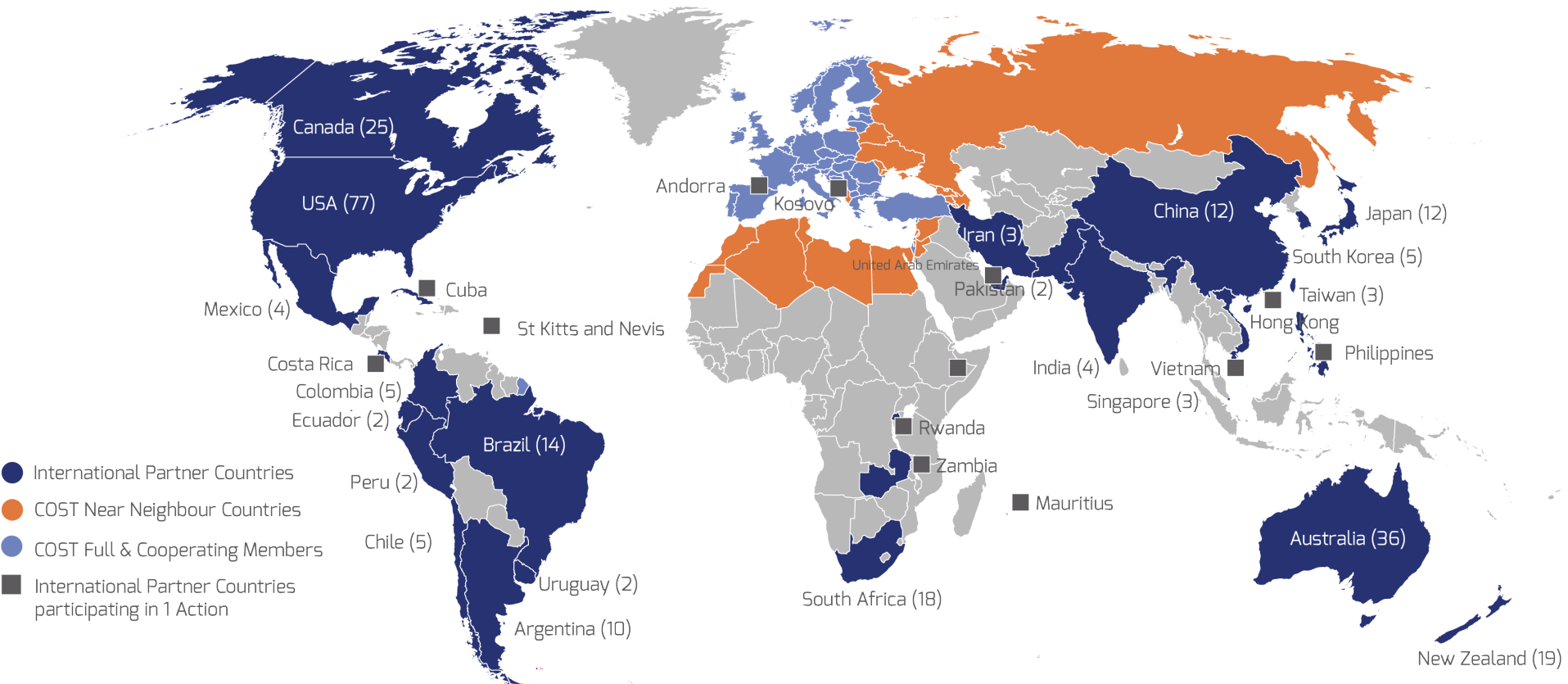• **User Guide :** http://www.cost.eu/ITC_conferencegrants_userguide

MC can nominate a ITC Conference Grants coordinator (by default it is MC Chair)

- Aimed at supporting **PhD students** and **Early Career Investigators researchers** from **Participating ITCs**
- to attend international science and technology related conferences not specifically organised by the COST Action.

The applicant must:

1. Make an oral/poster presentation at the conference in question on the topic of the Action and must acknowledge COST

2. Be listed in the official event/conference programme.

3. Fill an application form in e-cost/ complete a scientific report

Near Neighbour Countries and International Partner Countries

Legend:
- International Partner Countries
- COST Near Neighbour Countries
- COST Full & Cooperating Members
- International Partner Countries participating in 1 Action

Map labels:
- Canada (25)
- USA (77)
- Mexico (4)
- Cuba
- St Kitts and Nevis
- Costa Rica
- Colombia (5)
- Ecuador (2)
- Peru (2)
- Brazil (14)
- Chile (5)
- Uruguay (2)
- Argentina (10)
- Andorra
- Kosovo
- Iran (3)
- United Arab Emirates
- Pakistan (2)
- India (4)
- China (12)
- Japan (12)
- South Korea (5)
- Taiwan (3)
- Hong Kong
- Philippines
- Vietnam
- Singapore (3)
- Rwanda
- Zambia
- Mauritius
- South Africa (18)
- Australia (36)
- New Zealand (19)

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COST Action CA17124
Digital Forensics: Evidence Analysis
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Management and Leadership

- Action Chair: Prof. Jesús MEDINA

- Action Vice Chair: Prof. Stefania COSTANTINI

University of L'Aquila

CA17124 Objectives

- **O1:** Raise awareness among researchers in AI and AR of the main issues and problems in the daily work of DF scientists and the technical, legal and criminological aspects they involve.

- **O2:** Identify a list of realistically applicable AI and AR techniques, focusing on Computational Logic for verifiability and justifiability reasons (essential in a legal environment).

- **O3:** Promote R&D activities for integrating such techniques and defining new methods and tools.

- **O4:** Foster and coordinate related R&D activities of the partners.

- **O5:** Collect and organise anonymised data extracted from real cases provided by the DF Action partners, and devising suitable benchmarks concerning the solution of such cases.

- **O6:** Put into practice the new methods developed in the Action on the collected data thus providing a foundation for future practical tools.

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What's CA17124 trying to do?

- The main aim and objective of the Action is to create a network to explore the potential of the application of Mathematics, Artificial Intelligence and Automated Reasoning to Digital Forensics

- Establish synergies between these fields through the development of new theoretical frameworks, methodologies and tools to support Law Enforcement's evidence analysis and problem solving during digital investigations.

CA17124 Capacity Building Objectives

- **OC1:** Increase awareness among DF experts of new methods and techniques and their applicability.

- **OC2:** Assist DF experts in the practical experimentation of the new methods.

- **OC3:** Disseminate the Action results to stakeholders, not only Government Agencies and Institutions but also private companies working in the DF field.

- **OC4:** Implement training schemes for the parties that are potentially involved.

Working Groups

WG	Name	Aims & Objectives
WG1:	Digital Forensics requirement analysis	O1
WG2:	Research on applications of AI/AR to DF	O2, O3, OC1
WG3:	Prototypes and Platforms	O3, O5, O6
WG4:	Benchmarks based on real cases	O3, O5, OC1
WG5:	Platform integration and multi-dimensional environments	O5, O6
WG6:	Meetings, workshops and conferences	O4, O6, OC1
WG7:	Training, education and dissemination activities	O4, OC1, OC3, OC4
WG8:	Short-Term Scientific Missions and internal organization	O4, OC1, OC2

WG1: Digital Forensics Requirements Analysis

- Leader: Dr. Raffaele OLIVIERI
- Vice-Leader: Prof. Zeno GERADTS
- ECI Vice-Leader: Dr. María Eugenia CORNEJO

Aims & Objectives

O1: Raising awareness among researchers in AI and Automated Reasoning of the main issues and problems in the daily work of digital forensics scientists and the technical, legal and criminological aspects they involve.

WG2: Research on applications of AI/AR to DF

- Leader: Prof. Alessandra MILEO
- Vice-Leader: Prof. David PEARCE
- ECI Vice-Leader: Dr. Mark Scanlon

Aims & Objectives

O2: Identify a list of realistically applicable AI and AR techniques, focusing on Computational Logic for verifiability and justifiability reasons (essential in a legal environment).

O3: Promote R&D activities for integrating such techniques and defining new methods and tools.

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WG3: Prototypes and Platforms

- Leader: Prof. Pedro CABALAR
- Vice-Leader: Prof. Torsten SCHAUB
- ECI Vice-Leader: Dr. Pedro SALGUEIRO

Aims & Objectives

O3:Promote R&D activities for integrating such techniques and defining new methods and tools.
O5:Collect and organise anonymised data extracted from real cases provided by the DF Action partners, and devising suitable benchmarks concerning the solution of such cases.
O6:Put into practice the new methods developed in the Action on the collected data thus providing a foundation for future practical tools.

WG4: Benchmarks based on real cases

- Leader: Prof. Viviana MASCARDI
- Vice-Leader: Prof. Juan Carlos NIEVES

Aims & Objectives

O3: Promote R&D activities for integrating such techniques and defining new methods and tools.

O5: Collect and organise anonymised data extracted from real cases provided by the DF Action partners, and devising suitable benchmarks concerning the solution of such cases.

OC1: Increase awareness among DF experts of new methods and techniques and their applicability.

WG5: Platform integration and multi-dimensional environments

- Leader: Prof. Esra ERDEM

- Vice-Leader: Prof. Daniele THESEIDER

- ECI Vice-Chair: Dr. Martín DIÉGUEZ

Aims & Objectives

O5: Collect and organise anonymised data extracted from real cases provided by the DF Action partners, and devising suitable benchmarks concerning the solution of such cases.

O6: Put into practice the new methods developed in the Action on the collected data thus providing a foundation for future practical tools.

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WG6: Meetings, workshops and conferences

- Leader: Prof. Andreja TEPAVCEVIC
- Vice-Leader: Dr. Piotr A. KOWALSKI
- ECI Vice-Leader: Dr. Eloísa RAMÍREZ-POUSSA

Aims & Objectives

O4: Foster and coordinate related R&D activities of the partners.

O6: Put into practice the new methods developed in the Action on the collected data thus providing a foundation for future practical tools.

OC1: Increase awareness among DF experts of new methods and techniques and their applicability.

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WG7: Training, education and dissemination activities

- Leader: Dr. Vassia ATANASSOVA
- Vice-Leader: Dr. Szilvia NAGY
- ECI Vice-Leader: Dr. Andrii SHALAGINOV

Aims & Objectives

O4: Foster and coordinate related R&D activities of the partners.

OC1: Increase awareness among DF experts of new methods and techniques and their applicability.

OC3: Disseminate the Action results to stakeholders, not only Government Agencies and Institutions but also private companies working in the DF field.

OC4: Implement training schemes for the parties that are potentially involved.

WG8: Short-Term Scientific Missions and internal organization

- Leader: Prof. Manuel OJEDA-ACIEGO
- ECI Vice-Leader: Dr. Ondrej KRIDLO

Aims & Objectives

O4: Foster and coordinate related R&D activities of the partners.

OC1: Increase awareness among DF experts of new methods and techniques and their applicability.

OC2: Assist DF experts in the practical experimentation of the new methods.

Other Positions

- Communication Science Manager:
  Prof. Francesca A. LISI

- ITC Conference Grants Coordinator:
  Prof. Piotr A. KOWALSKI

- Short Term Scientific Missions Coordinator:
  Prof. Manuel OJEDA-ACIEGO

Action Activities

- A1. **Management Committee meetings:**
  Planned number: 2 by year.

- A2. **General Meetings, Workshops and Conferences:**
  Planned number: 2 events by year.

- A3. **Specific Meetings of each Working Group:**
  Planned number: 2 by year for each WG.

- A4. **Short-Term Scientific Missions:**
  Planned number: 10 by year.

- A5. **Training Schools:**
  1 per year

- A6. **Dissemination Activities and Publications:**
  Planned number: 2 by year.

Action Policies

- P1. Gender balance and increase the participation of ITCs and NNCs, and ECIs.

- P2. Many Leaders and Vice-Leaders will be chosen from ITCs and NNCs members and will be gender-balanced

- P3.   Increase the number of ITCs and NNCs, such as, Latvia, Cyprus, Slovenia, Lithuania, Luxembourg, etc.

- P4. Increase the cooperation between ITCs and other COST members. Specific STSM focused on these countries.

Action Policies

- P5. Info Days. Fostering ITCs participation. A senior local person in the ITC country puts out a Call to all the main relevant research groups and security forces in their country (or close countries), in order to create synergies among the different groups and institutions.

- P6. Foster the participation of SMEs and industry in the Action.

- P7. Increase the participation and the leadership position of ECI.

- P8. Meetings in ITCs (WGs, MC, etc.)

Lillehammer Summer School

August 2019

Want to join the action or get more information?

Action Websites:

https://digforasp.uca.es/

https://www.cost.eu/actions/CA17124

CA17124 Action Leaflet:

https://digforasp.uca.es/wp-content/uploads/2019/03/COST_leaflet_v11.pdf