



MIAI @ Grenoble Alpes
Collaborative Intelligent Systems



Monthly Meeting
Jan 2020

CIS: Monthly Meetings

Objective: Integrate the CIS Community, Stimulate collaboration and exchanges.

Time Slot: 11:00, Last Thursday of each month

Duration: 1h15

Venue(s): Gipsa B314 and IMAG meeting room

Structure: Organizational issues , followed by a technical presentation

Program:

30/01, IMAG, J. Crowley: Chess Expertise from Eye-Gaze and Emotion

20/02, GIPSA, D. Pellier: Planification (PDDL)

26/03, IMAG?, N. Aboubakr, Narrative Description of Activities

30/04, GIPSA, L. Koelsch sur la présence robotique

28/05, IMAG, J. Crowley, TBA (possibly ECAI presentation)

25/06, GIPSA, G. Bailly, TBA

...

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Agenda

- Miai@Grenoble Alpes - Mission and organization
- Collaborative Intelligent Systems – Financial Support
- News: Open Calls and Upcoming Projects
- ANR CEEGE: Chess Expertise from Eye-gaze and Emotion

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Agenda

- Miai@Grenoble Alpes - Mission and organization
 - Objectives and Scientific themes (32 chairs, 7 axes)
 - Axe 3: Perception and Interaction (7 chairs)
 - Miai Chair on Collaborative Intelligent Systems
- Collaborative Intelligent Systems – Financial Support
- News: Open Calls and Upcoming Projects
- ANR CEEGE: Chess Expertise from Eye-gaze and Emotion

MIAI @ Grenoble Alpes

Objectives and overall presentation

Institute to support the development of education, research and transfer in AI, at the service of human beings and the environment

- ▶ Develop a world-class interdisciplinary research in AI and AI for the human beings and the environment
- ▶ Offer attractive courses in AI and its applications for students of all levels and all ages and professionals
- ▶ Sustain innovation in AI and develop AI in major companies, SMEs and start-ups
- ▶ Inform and interact with citizens on all aspects of AI

MIAI @ Grenoble Alpes

MIAI Research: themes, axes and programs

NEXT STAGE AI

Axis 1. Machine learning and reasoning (8)

Axis 2. Embedded AI & hardware architecture for AI (3)

Axis 3. Perception and interaction (7)

AI FOR HUMAN BEINGS AND THE ENVIRONMENT

Axis 4. AI and society (4)

Axis 5. Health (4)

Axis 6. Environment and energy (4)

Axis 7. Industry 4.0 (2)

Axis 3 - Perception and Interaction

1. Collaborative Intelligent Systems (G. Bailly and J.L. Crowley)
2. Audio-visual machine perception and interaction for companion robots (R. Horaud and X. Alameda-Pineda)
3. AI and dynamical systems: new paradigms for control and robots (C. Prieur)
4. Artificial Intelligence and Language (L. Besacier)
5. Bayesian Cognition and Machine Learning for Speech Communication (P. Perrier)
6. Data Driven 3D Vision (E. Boyer)
7. Towards self-supervised visual learning (C. Schmid)

Collaborative Intelligent Systems

Co-Chairs: Gerard Bailly (GIPSA, CNRS) and James L. Crowley (LIG, Grenoble INP)

Official Collaborators (5): Philippe Dessus (LaRAC, UGA), Frédéric Elisei (GIPSA, CNRS), Laurence Nigay (LIG, UGA), Sylvie Pesty (LIG, UGA), Dominique Vaufreydaz (LIG, UGA),

CIS Community: Carol Adam, Francois Bérard, Renaud Blanch, Céline Coutrix, Alexandre Demeure, Julie Dugdale, Sophie Dupuy-Chessa, Humbert Fiorino, Thierry Fraichard, Alix Goguey, Damien Pellier, Patrick Reignier

Mission: Develop theories and models for systems that provide human-aware collaboration and interaction.

Themes:

1. Multi-modal perception of human commands, actions, attention and emotion.
2. Generation of visual, acoustic and corporal displays for interaction with humans.
3. Generation of models of human awareness, emotion and understanding for interaction.
4. Generation of interactive behaviors for situated collaboration.

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Agenda

- Miai@Grenoble Alpes - Mission and organization
- Collaborative Intelligent Systems – Financial Support
 - Funding, Initial Budget
 - Doctoral and Postdoctoral Positions
- News: Open Calls and Upcoming Projects
- ANR CEEGE: Chess Expertise from Eye-gaze and Emotion

Financial Support from ANR

CIS is a “Level 2” chair – 120 K€ /year ANR funding
Initial budget: 220 K€.

Funding may be used for

- Doctoral Students: (30 K€/y)

- Post Doctoral Collaborators (50 K€/y)

- Engineers (50 K€/y)

- Equipment (if cost > 4K€ w/3 year) ?

- Travel

- Supplies

Financial Manager: Céline Guillouet (Chef de service IDEX)

Open Doctoral Positions

The AI multiparty facilitator:

Training of adaptive interactive behavioural models for a social robot

Supervision: G. BAILLY, F. ELISEI (GIPSA-Lab), D. PELLIER (LIG-Lab)

Laboratory: GIPSA-lab

Doctoral School: EEATS (signal processing) or MSTII (maths and computer science) depending on the candidate's profile and career plan

Open Doctoral Positions

Multimodal, Multi-level, Collaborative Interaction

Supervision: James Crowley

Starting date: Sept 2020

Doctoral School: MSTII (maths and computer science)

Open Doctoral Positions

Learning to Inspire Affection for Healthy Aging at Home

(«Évoquer des émotions positives pour les services de maintien à domicile des personnes fragiles par des modèles connexionnistes génératifs»)

Supervision: Grégoire Lefebvre (Orange Labs) and James Crowley
CIFRE Doctoral Grant at Orange Labs Meylan

Doctoral School: MSTII

Starting Sept 2020.

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Agenda

- MIAI@Grenoble Alpes - Mission and organization
- Collaborative Intelligent Systems – Resources
- News: Open Calls and Upcoming Projects
 - ECAI Workshop on Human Centric AI
 - AI4EU Open Challenges
 - ICT48 - Humane AI Net
- ANR CEEGE: Chess Expertise from Eye-gaze and Emotion

ECAI Workshop: New foundations for Human-Centered AI

Program Chair: Alessandro Saffiotti, University of Örebro, Sweden

Organising Committee: AI4EU WP 7

Dates: 28 February 2020: Paper submission deadline

8 April 2020: Workshop paper notification

8-9 June: Workshops

10-12 June: Main Conference

Topics:

- Explainable AI
- Verifiable AI
- Collaboration between humans and AI systems
- Integrating model-based and data-driven AI
- Integrating symbolic- and sub-symbolic AI
- Mixed initiative AI-Human systems
- Understanding and naturally interacting with humans and complex social settings
- Reflexivity and expectation management
- Integrating Learning, Reasoning and Acting in AI systems

ICT 48 Proposal: Humane AI Net



(Submitted Nov 2019 – Results expected in Mar 2020)

Domain: Advanced Perception and Interaction with Humans.

Origins: Current Humane AI CSA (2019 – 2020)

HumanE AI Net will develop scientific foundations and enabling technologies for AI systems that can understand and assist humans, enhance human capabilities, and empower individuals and society as a whole.

ICT 48 Proposal: Humane AI Net



Coordinator: DFKI

Partner: 48 Universities and Public Research Institutions
(Including Univ. Grenoble Alpes, CNRS and INRIA)

Funding: 12 M Euros (2021 – 2023)

Approach

Research will be structured as a series of **challenges to the community** with **benchmark data sets** and **performance metrics** to be used to measure progress.

In the proposal we describe and motivate the topics to be addressed in the area of Interaction and Collaboration with Intelligent Systems.



Workplan and Topics

WP1 Interactive Learning, Reasoning and Planning

(John Shaw-Taylor, Stefan Rüping, Nardine Osman, Paolo, Luciano; Mohamed Chetouani, Barry O'Sullivan))

WP 2 Multi-Modal Perception and Modeling

(James Crowley, Paul Lukowicz, Jan Hajic)

WP 3 Human AI Interaction and Collaboration

(Albrecht Schmidt, James Crowley, Ana Paiva, Jan Hajic, Mohamed Chetouani)

WP 4 Social AI

(Dino Pedreschi, Fosca Giannotti , Paul Lukowicz, Andrzej Nowak):

WP 5 AI Ethics and Responsible AI

(Virginia Dignum)

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