

Journée GDR ISIS
Goal Oriented and Semantic Communications

Date: 10/11/2023

Place: INRIA, 2 rue Simone Iff, Paris (12^{ème})
Salle JL Lions au RDC du bâtiment C

The Day is co-organized by the project NF-FOUND (Foundations of Communication Networks) from the Network of the Future PEPR.

Organizers: Laurent Clavier, Malcolm Egan, Marios Kountouris

Objectives: Today's wireless networks have started catering to cyber-physical and mission-critical systems. Fueled by the emergence of networks of autonomous agents with advanced sensing, learning, and decision-making capabilities, emerging communication systems are expected to efficiently and effectively handle and transport massive volumes of multimodal data, which is acquired, fused, and/or processed in different geographical locations. A fundamental shift in thinking is necessary to design communication systems for scenarios entailing event-driven and interactive communication, status updates transmission, and autonomous decision making. Goal-oriented semantic communication has recently emerged as a promising paradigm shift.

This GDR ISIS meeting will address the open questions and key challenges related to this change of paradigm. They can be related to information theory, digital communication considerations, signal processing, learning, system optimization, etc. ***Do not forget to register on the GDR ISIS website.***

Planning:

Start	End	Activity
9h15	9h45	Welcome
9h45	9h55	Introduction
9h55	10h40	Nikolaos Pappas ; Linköping Univ., Suède
10h40	11h10	Break
11h10	11h30	Giuseppe Serra , Perceptual Metrics as a Semantic Fidelity Measure: the Role of the Rate-Distortion-Perception Function
11h30	11h50	Tom Bordin , Semantic based generative compression of images for extremely low bitrates
11h50	12h10	Maël Le Treust , Strategic Lossy Source Coding
12h10	12h30	Jiahui Wei , Information-Theoretic Bounds and Practical Coding Schemes for Parametric Regression
12h30	14h00	Lunch
14h00	14h45	Deniz Gunduz ; Imperial College London
14h45	15h15	Break
15h15	15h35	Malcolm Egan - Goal Oriented Communications
15h35	15h55	Salah E. Elayoubi , M. Ferreira Da Costa , Goal-Oriented Communications for Distributed Sensing of Gaussian Sources
15h55	16h15	Hang Zou , Goal-oriented quantization
16h15	16h35	Elsa Dupraz , Practical coding schemes for Distributed Hypothesis Testing
16h35	17h00	Discussion
17h00		End

Déjeuner à proximité : liste des restaurants autour du centre Inria de Paris :

- Il Goto - 212bis Rue de Charenton - 75012 Paris - <https://www.ilgoto.fr/ilgoto.fr/menu.html>
- 01 43 46 30 02 - Restaurant Italien chic à 2 pas du centre
- Le Repaire 100 av Daumesnil Paris 12 - 01 43 43 39 70 - Le plus près du centre -
Brasserie
- Chez Coquille (brasserie) - 7 boulevard de Reuilly - 75012 Paris - 01 43 43 09 93 -
Terrasse disponible
- L'alchimiste 181 Rue de Charenton, 75012 Paris - 01 43 47 10 38
- The Godfather (accepte les groupes) 41 allée Vivaldi 75012 Paris - 01 43 47 50 54
- Cavalinho (pizzeria) - 96 Avenue Daumesnil, 75012 Paris - 09 83 60 19 30
- Le Touareg (Couscous / cuisine orientale) - 228 Rue de Charenton, 75012 Paris - 01
43 07 68 49