Amedeo Roberto Esposito

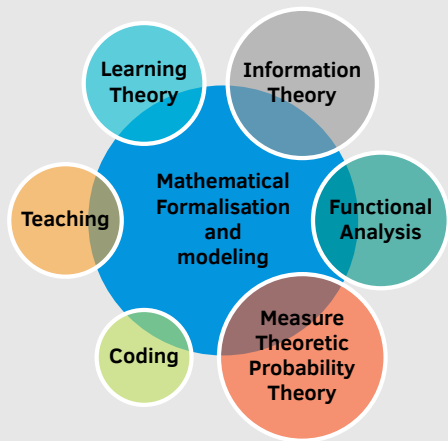ⓘ 31/08/1994

🏠 Am Campus 1, Klosterneuburg

📞 +43 69010198688

✉ aesposit@ist.ac.at

Skills

Languages

Swedish

Japanese

French

English

Italian

Current Employment

09/2022 - ... **Postdoctoral Scholar, Institute of Science and Technology Austria (ISTA)**   ISTA
Klosterneuburg, Austria
Host: Marco Mondelli

Education

2017 - 2022 **PhD, School of Computer and Communication Sciences**   EPFL
Lausanne, Switzerland
Thesis Title: A Functional Perspective on Information-Measures
Supervisor: Michael Gastpar

2015 - 2017 **MSc., Computer Science**   University of Salerno
Fisciano, Salerno, Italy
110/110 cum laude and distinction
Thesis Topic: Entropic Causal Inference, Supervisor: Ugo Vaccaro

Research

Aug 2021 **Generalization Error Bounds Via Rényi-, f-Divergences and Maximal Leakage**
Authors: Amedeo Roberto Esposito, Michael Gastpar, Ibrahim Issa
IEEE Transactions on Information Theory Volume: 67, Issue: 8
Available Online

Jul 2022 **From Generalisation Error to Transportation-cost Inequalities and Back**
Authors: Amedeo Roberto Esposito, Michael Gastpar
International Symposium on Information Theory 2022 - Helsinki
Available Online

Jul 2022 **On Sibson's α-Mutual Information**
Authors: Amedeo Roberto Esposito, Adrien Vandenbroucque, Michael Gastpar
International Symposium on Information Theory 2022 - Helsinki
Available Online

Jul 2022 **Lower-bounds on the Bayesian Risk in estimation procedures via f-Mutual Information**
Authors: Adrien Vandenbroucque, Amedeo Roberto Esposito, Michael Gastpar
International Symposium on Information Theory 2022 - Helsinki
Available Online

Jul 2022 **Towards a Standard Testing Data Set in Privacy**
Authors: Amedeo Roberto Esposito
Symposium on Open Data and Knowledge for a Post-Pandemic Era - UK
Available Online

Jul 2021 **On conditional Sibson's α-Mutual Information**
Authors: Amedeo Roberto Esposito, Diyuan Wu, Michael Gastpar
International Symposium on Information Theory 2021 - Melbourne
Available Online

Jul 2021 **Lower-bounds on the Bayesian Risk in estimation procedures via Sibson's α-Mutual Information**
Authors: Amedeo Roberto Esposito, Michael Gastpar
International Symposium on Information Theory 2021 - Melbourne
Available Online

Jul 2020 **Robust Generalization via $f-$Mutual Information**
Authors: Amedeo Roberto Esposito, Michael Gastpar, Ibrahim Issa
International Symposium on Information Theory 2020 - Los Angeles
Available Online
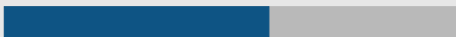
Coding Skills

Java

R

C#

XML, XPath, XQuery

Game Development (Unity)

Javascript

Project Management

Mobile Development

PHP

C,C++

Feb 2020 — **Robust Generalization via $\alpha-$Mutual Information**
Authors: Amedeo Roberto Esposito, Michael Gastpar, Ibrahim Issa
International Zürich Seminar, pages 96-100
Available Online

Aug 2019 — **Learning and Adaptive Data Analysis via Maximal Leakage**
Authors: Amedeo Roberto Esposito, Michael Gastpar, Ibrahim Issa
Information Theory Workshop 2019 - Visby
Available Online

Jul 2019 — **Strengthened Information-theoretic Bounds on the Generalization Error**
Authors: Ibrahim Issa, Amedeo Roberto Esposito, Michael Gastpar
International Symposium on Information Theory 2019 - Paris
Available Online

Talks & Conferences

2022/2023 — **Technical Program Committee Member for the International Symposium on Information Theory 2023**   ISIT 2023

Nov 2021 — **Invited Talk for the equipe Comète, hosted by Catuscia Palamidessi**
INRIA Saclay and LIX

Oct 2021 — **Invited talk at the "Information Theory, Machine Learning and Statistics Seminar"**   Universidad Nacional Autónoma de México (UNAM)
Link to Online Schedule

Teaching

2017 - 2022 — **Teaching Assistance**   EPFL

- Advanced information, computation, communication II (Head Teaching Assistant, 2021 and 2022)
- Networks Out of Control (Elements of Random Graph theory, 2018)
- Information, Computation and Communication (2018 and 2020)
- Advanced Probability and Applications (2019)
- Foundations of Data Science (2019)
- Signals and Systems (2020)

2017 - 2022 — **Project Supervision**   EPFL

- Definition and application in hypothesis testing of a new information measure (Part of it is included in the work titled "On conditional Sibson's α-Mutual Information", accepted and presented at ISIT 2021)
- Lower bounds on the risk in distributed estimation problems (Part of it is included in the work titled "Lower-bounds on the Bayesian Risk in estimation procedures via f-Mutual Information", accepted and presented at ISIT 2022 and included in a submission to IEEE Transactions on IT)

Hobbies and Passions

2021 - ... — **Host of an (italian) Podcast on Science Dissemination**   Link

- I am the host of an italian podcast in which I talk about science. The topics range from basic neuroscience (neuroplasticity, influence of the neurotransmitters on behaviour, etc.), to math, basic biology, psychiatry, nutrition, etc. One of the purposes is to get people closer to science by presenting the scientific literature in a simple and accessible way. Another purpose is to increase the visibility of local scientists via interviews. This provides a platform in which experts can talk about the fields they work in, the research they perform and the impact that this has on society and progress.