

## Issue 1 | February 2022





## EDITORIAL

### In this issue

Website	2
Social Media	2
Promotional Materials	2
Past Events	3
Staff Training	4
Dissemination, Communication and Outreach	5
Publications	6
Upcoming Events	6
More information	6

Dear readers,

Welcome to the first Newsletter of the OLISSIPO project!

OLISSIPO is a Twinning project, funded by the European Commission within Horizon 2020, to boost the research profile and innovation competence in Computational Biology at INESC-ID.

Launched in January 2021, this 3-year funded project will provide training to Early Stage Researchers (ESR), PhD students, strengthen collaborations between international institutions and INESC-ID and Instituto Superior Técnico (IST) and increase the management and administration skills of INESC-ID.

The link to society is also included in the project.

Outreach activities will engage young students from secondary schools in Portugal.

Overall, the success of this project will result in the extension of the recruitment pool and existing network of INESC-ID, becoming it attractive for young scientists that want to pursue a research career or improve their knowledge transfer skills in these areas.

The OLISSIPO Coordination Team,  
[Susana Vinga](#) (INESC-ID),  
[Niko Beerenwinkel](#) (ETH Zürich),  
[Marie-France Sagot](#) (Inria),  
[Wolfgang Huber](#) (EMBL)



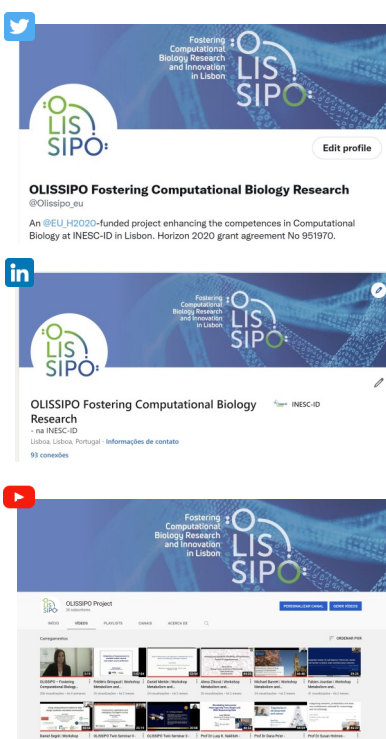
### WEBSITE



<https://olissipo.inesc-id.pt>



### SOCIAL MEDIA




### PROMOTIONAL MATERIALS

OLISSIPO [Poster](#), [Leaflet](#) and [Video](#)



## PAST EVENTS

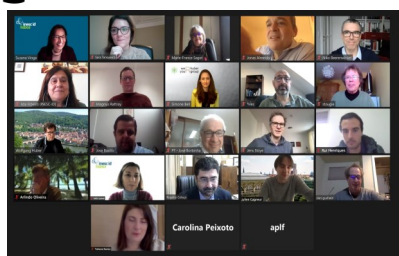
During 2021, the coronavirus pandemic restrained work travel.

In line with this, several actions were moved online to promote institutions interaction during this first year of the OLISSIPO project.

### ◇ Kick-Off Meeting | 9 Feb 2021

The first year's activities were defined and mitigation measures to be taken due to the COVID-19 pandemic outlined.

 26 participants



### ◇ First Twin Seminar | 20 May 2021

*Sparse regularization for multi-omics data with*  
Susana Vinga & Valentina Boeva

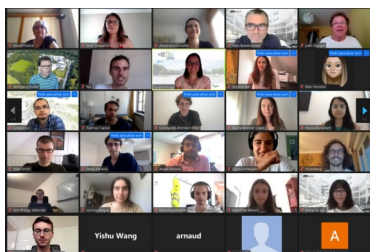
 62 participants



### ◇ OLISSIPO Week | 14-16 Jun 2021

To facilitate the interaction among members of the four partner institutions, create synergies and accelerate project activities.

 30 participants



### ◇ Inaugural Workshop | 20 Jul 2021

Speakers: Rolf Backofen, Susan Holmes, Dana Pe'er, Luay K. Nakhleh

 140 participants



### ◇ Second Twin Seminar | 16 Sept 2021

*Towards the clinical utility of polygenic risk scores with* Ana Teresa Freitas & Michael Inouye

 50 participants



### ◇ Workshop Two for a tango | 18-19 Nov 2021

Speakers: Michael Barrett, Frédéric Brégaud, Fabien Jourdan, Daniel Merkle, Daniel Segré and Alena Zikova

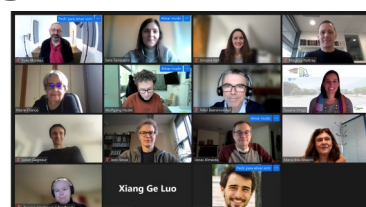
 150 participants



### ◇ First Annual Meeting | 13 Jan 2022

A very efficient and successful session to reflect on 2021, discuss relevant topics and plan new events and activities for 2022.

 16 participants



### ◇ Third Twin Seminar | 10 Feb 2022

*Protein driven machine learning and network approaches for precision medicine* with Emanuel Gonçalves & Pedro Beltrao

 49 participants





## STAFF TRAINING

One of the main aims of OLISSIPO is to sharpen the research and management profile of INESC-ID. Thus, the project supports staff participation in external courses, workshops and national and international conferences.

### Courses

◇ **Computational Data Analysis Course** | 20-28 May 2021 | University of Minho, Online

Carolina Peixoto, an ESR (PhD student at INESC-ID) participated in this 7-day hands-on advanced course and learnt the basics of fundamental advanced computational techniques to analyze large complex data sets.



Universidade do Minho  
Escola de Medicina

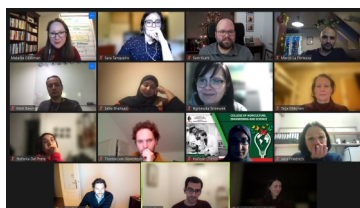
◇ **Cancer Genomics** | 22-24 Nov 2021 | EMBL, Online

This conference covered presentations from cancer genome projects, the areas of cancer functional genomics, systems biology, cancer immunogenomics and epigenomics, cancer mouse models and the translation and clinical impact of obtained scientific results. Carolina Peixoto found it an opportunity to learn about and keep up to date with the rapidly progressing area of cancer genomics.



◇ **Project Management for Scientists** | 14-16 Dec 2021 | EMBO, Online

The OLISSIPO project manager, Sara Tanqueiro, enrolled in this 3-day course to accomplish the key concepts in project management, both for planning and managing work, and for working effectively with people.



◇ **Laboratory Leadership for Group Leaders** | 19-21 Jan 2022 | EMBO, Online

The OLISSIPO principal investigator (PI), Professor Susana Vinga, participated in this course to learn how to effectively manage teams, communicate, solve conflicts and manage workloads and responsibilities.



### International Conferences

◇ **ISMB/ECCB'2021** | 25-30 Jul 2021, Online

OLISSIPO team was present in this conference which become the year's most important computational biology event globally. It is a multidisciplinary forum for disseminating the latest developments in bioinformatics and computational biology.



### Workshops

◇ **Voice and Communication Training Workshop (1st Edition)** | 5-7 Jul 2021 | INESC-ID, Lisbon

Prof. Susana Vinga, Sara Tanqueiro and Carolina Peixoto participated in this intensive and practical 3-day workshop, organized by Raquel Bulha from TIMBRE. Participants had the opportunity to discover how to effectively communicate with others in both a professional and personal sense and become aware of their own voice.



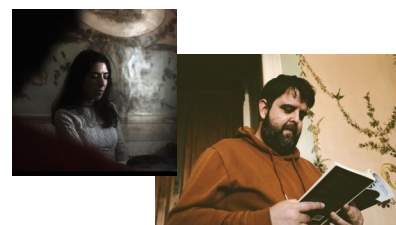
◇ **Workshop on core skills for Communicators** | 13 Oct 2021 | FICA Festival, Oeiras

Malcolm Love, an experienced public speaker and broadcast media professional, explored some key aspects of communicating to live audiences. The OLISSIPO PM learnt how to use body more effectively (body language), and some tips of structuring talks or how to rehearse.



◇ **Voice and Communication Training Workshop (2nd Edition)** | 4-5 Feb 2022 | Palácio Pincas Palha, Lisboa

The ESR Mónica Silva and José Basílio participated in the 2nd edition of this workshop.



### Seminars

◇ **Seminar on Mental Health** | 13 Dec 2021, INESC-ID, Lisboa

This seminar, given by Dr. Isabel Gonçalves from the Academic Development Office of IST, was focused on mental health and how the pandemic has been affecting people daily life, thoughts and behaviors. Two ESR, the OLISSIPO PI and PM and INESC-ID president, Professor Inês Lynce, participated.



## DISSEMINATION, COMMUNICATION & OUTREACH

The OLISSIPO work plan, achievements and results have gain visibility through its participation in several activities. Outreach activities have been also organized to promote public awareness of Computational Biology and, more in general, of Science, Technology, Engineering, and Mathematics (STEM) academic disciplines.

◇ [Open Laboratories Initiative](#) | 25 Feb 2021 | Department of Bioengineering (DBE) of IST, Online

Prof. Susana Vinga participated in the 2021 edition dedicated to secondary school students with a talk entitled "Bioinformatics: computational and mathematical challenges in the study of biological systems".



◇ [The Insider Podcast](#) | 15 Apr and 17 May 2021, INESC HUB

Prof. Susana Vinga, Prof. Arlindo Oliveira and Prof. Jonas Almeida participated in the podcast [episode](#) dedicated to artificial intelligence and machine learning in personalised medicine and healthcare and Prof. Ana Teresa Freitas in the [episode](#) about personalised health.



◇ [Girls in ICT](#) | 29 Apr Feb 2021 | Engineers for a day, Online

Aligned with the OLISSIPO objectives (gender equality and dialogue with schools), this initiative promotes the engagement of women in engineering and technology. Prof. Susana Vinga participated in this initiative.



◇ [Models4Life 2021](#) | 4 Jun 2021, Online

With the aim of attracting students and researchers to mathematical biology in Albania, Prof. Susana Vinga was invited to give a talk: "Modeling high-dimensional omics data using sparse regularization". This event also targeted secondary school students.

Models4Life2021

◇ [Interview "Solving problems with Bioinformatics"](#), | 30 Jul 2021, [H magazine](#), INESC HUB

Prof. Susana Vinga gave an interview in H, the e-magazine of INESC Brussels HUB. It is focused on the technological innovations developed at INESC, and of INESC's international present and potential partners.



◇ [Shaping the Future](#) | 8-10 Sept 2021, IST, Lisboa

This initiative promotes the adaptation of assistant professors and researchers to the IST culture and contributes to the definition of their professional identity and the construction of a career development plan. Prof. Susana Vinga participated in the 6th edition.

◇ [I'm INESC-ID Talks](#) | 8 Oct 2021, Online

Sara Tanqueiro presented the OLISSIPO project at this INESC-ID internal event, whose main objective is to foster the feeling of belonging to the institution and sharing among all scientific areas.

◇ [COMPASSO](#) project | 8 Oct 2021, Online

Prof. Susana Vinga presented OLISSIPO at the meeting of COMPASSO, a project coordinated together with Prof. Marie-France Sagot.

◇ ["DEI on Wednesdays"](#) | 20 Oct 2021, Online

Susana Vinga presented the OLISSIPO project at the Department of Computer Science and Engineering meeting in IST.

◇ [ALGO 2021](#) | 6-10 Sept 2021, Online

OLISSIPO was one of the sponsors of ALGO 2021, the major European event for researchers, students and practitioners in algorithms, which was organized by the Computer Science Department of IST.

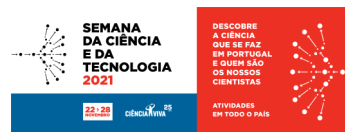
◇ [PhD Open Days](#) | 23 Nov 2021, IST, Lisboa

Prof. Susana Vinga participated in this event dedicated to IST PhD students with a talk entitled "Bridging computer science and bioengineering for modeling biological systems".



◇ [Science and Technology 2021 Week](#) | 25 Nov 2021, Online

Within the scope of the Science and Technology 2021 Week promoted by Ciência Viva, OLISSIPO developed an activity to disseminate the area of Computational Biology. Prof. Susana Vinga, Carolina Peixoto and José Basílio, two ESR of INESC-ID, were present in a virtual session with secondary schools students: "Bioinformatics: computational and mathematical challenges in Biology and Medicine".



◇ [BioData.pt](#) Meeting | 14 Feb 2022, Online

Prof. Susana Vinga presented the OLISSIPO project at an internal meeting of BioData.pt, the Portuguese distributed infrastructure for biological data and the Portuguese [ELIXIR](#) node.

BioData.pt



## SELECTED PUBLICATIONS

Members of the OLISSIPO team have been involved in several publications. All papers contain an acknowledgement to the OLISSIPO project and its European funding.

◇ Serras, J. L., Vinga, S., & Carvalho, A. M. (2021). Outlier Detection for Multivariate Time Series Using Dynamic Bayesian Networks. Applied Sciences-Basel, 11(4). doi: [10.3390/app11041955](https://doi.org/10.3390/app11041955)

◇ Lopes, M. B., Martins, E. P., Vinga, S., & Costa, B. M. (2021). The Role of Network Science in Glioblastoma. Cancers, 13(5). doi: [10.3390/cancers13051045](https://doi.org/10.3390/cancers13051045)

◇ Barata, C., Rodrigues, A. M., Canhão, H., Vinga, S., & Carvalho, A. M. (2021). Predicting Biologic Therapy Outcome of Patients With Spondyloarthritis: Joint Models for Longitudinal and Survival Analysis. JMIR medical informatics, 9(7), e26823. doi: [10.2196/26823](https://doi.org/10.2196/26823)

◇ Neto, J. P., Alho, I., Costa, L., Casimiro, S., Valério, D., & Vinga, S. (2021). Dynamic modeling of bone remodeling, osteolytic metastasis and PK/PD therapy: introducing variable order derivatives as a simplification technique. Journal of mathematical biology, 83(4), 39. doi: [10.1007/s00285-021-01666-3](https://doi.org/10.1007/s00285-021-01666-3)

◇ Jensch, A., Lopes, M. B., Vinga, S., & Radde, N. (2022). ROSIE: RObust Sparse ensemble for outlier detection and gene selection in cancer omics data. Statistical Methods in Medical Research. doi: [10.1177/09622802211072456](https://doi.org/10.1177/09622802211072456)

◇ Ferrarini, M. G., Ziska, I., Andrade, R., Julien-Laferrrière, A., Duchemin, L., César, R.M., Mary, A., Vinga, S., Sagot, M. (2022). Totoro: Identifying active reactions during the transient state for metabolic perturbations. Front. Genet. doi: [10.3389/fgene.2022.815476](https://doi.org/10.3389/fgene.2022.815476)



## UPCOMING EVENTS

### OLISSIPO Events

- ◇ OLISSIPO Twin Seminar  
TBA, Online
- ◇ OLISSIPO Retreat  
14-15 Jul 2022, Lisbon (Portugal)
- ◇ Workshop Two for a Tango  
TBA, Online
- ◇ OLISSIPO Workshop/School  
TBA, Lisbon (Portugal)

### Other Events

- ◇ [Ascona Workshop 2022](#)  
27 Mar – 1 Apr 2022, Ascona (Switzerland)
- ◇ [RECOMB 2022](#)  
22-25 May 2022, La Jolla (USA)
- ◇ [CSAMA 2022](#)  
19-24 Jun 2022, Brixen (Italy)
- ◇ [ISMB 2022](#)  
10-14 Jul 2022, Madison, Wisconsin (USA)
- ◇ [European Bioconductor Conference](#)  
14-16 Sept 2022, Heidelberg (Germany)
- ◇ [ECCB 2022](#)  
12-21 September, Barcelona (Spain)

## ●●●MORE INFORMATION

Subscribe to our newsletter at:

<https://olissipo.inesc-id.pt> |   

