

INCF-France Workshop on Data Management and Sharing in Neuroinformatics

Tuesday 21st May 2019, Marseille

9:00 - 9:30 Introduction

What is neuroinformatics? - Stanley Durrleman (ICM - Centre de Neuroinformatique)

INCF national node of France - Andrew Davison (NeuroPSI, CNRS-Univ. Paris-Saclay)

MADICS, FLI, INT & OpenAIRE - Olivier Coulon (INT, CNRS - Aix Marseille Université)

9:30 - 10:00 Distance matters: Electrophysiology data sharing and management for complex data analysis collaboration - Junji Ito (Jülich Research Centre, Jülich) & Frédéric Barthelemy (Jülich Research Centre, Jülich; Institut des Neurosciences de la Timone (INT), UMR 7289, CNRS - Aix Marseille Université, Marseille)

10:00 - 10:20 Solutions, tools and open questions in electrophysiology (contributed talks)

Transfer, data collection and organisation for multi-centric studies - Nicolas Roehri (Institut de Neurosciences des Systèmes, Marseille)

The Human Brain Project data sharing platform - Andrew Davison (NeuroPSI, CNRS-Univ. Paris-Saclay)

10:20 - 10:35 Pause

10:35 - 11:05 Sharing scientific data for calcium imaging - Chris van der Togt (Netherlands Institute for Neuroscience, Amsterdam)

Given the diversity of recording systems and data formats how can we provide researchers with a tool to manage their data and associate it with metadata, to make it searchable, sharable and suitable for publication within online archives? Here I present a tool that can be applied with minimal effort to accomplish this for raw data. Researchers save a minimal set of metadata in JSON files and keep this associated with a data recording once it has been copied to a centralized storage system. These files serve as tags that can be parsed by scripts and indexed in a MySQL database. This approach makes it easy for investigators to manage their data and maintain metadata consistency. It also has the potency of providing an interface between researchers and data curators since metadata definitions can be laid down in the structure of database tables.

11:05 - 11:15 Solutions, tools and open questions in imaging microscopy

A simple way to manage big collections of heavy, multidimensional images - Arnim Jenett (TEFOR, Gif-sur-Yvette)

11:15 - 11:50 Open discussion

11:50 - 12:20 Let's do open neuroimaging sciences - Camille Maumet (Inria, Univ Rennes, CNRS, Inserm, IRISA UMR 6074, Empenn ERL U 1228)

Like many other fields, neuroimaging is becoming increasingly open, effectively transforming the way we do science. But including open science practices in everyday research is not always straightforward and the wealth of tools available can become overwhelming. In this talk, I will discuss how to work openly and collaboratively in neuroimaging, highlighting recent initiatives such as the brain imaging data structure and the OpenAIRE-connect platform.

12:20 - 14:00 Lunch break & posters/demos

14:00 - 14:20 Solutions, tools and open questions in neuroimaging

A pseudonymisation solution for Neuroimaging data organisation et management - David Meunier (Institut de Neurosciences de la Timone, CNRS, Univ Aix-Marseille)

Sharing Data and Image Processing Pipelines: The Information Analysis & Management initiative - Michel Dojat (Grenoble Institut Neurosciences, INSERM, Univ. Grenoble-Alpes)

14:20 - 14:50 Resources for the reproducibility of bioinformatics analysis. Pr. Jacques van Helden (Co-director, Institut Français de Bioinformatique (IFB), CNRS, IFB-core UMS3601, Evry, France; Aix-Marseille University, INSERM, Laboratory of Theory and Approaches of Genome Complexity (TAGC), Marseille, France)

14:50 - 15:10 Solutions, tools and open questions in bioinformatics

Omics data storage and management - Dipankar Bachar (Institut de Neurosciences de la Timone, CNRS, Univ Aix-Marseille)

Omics data processing and interpretation - Ivan Moszer (Brain and Spine Institute, Paris)

15:10 - 15:40 Pipelines, tools and methods for reproducible science - Sorina Caramasu Pop (Univ Lyon, INSA-Lyon, Université Claude Bernard Lyon 1, UJM-Saint Etienne, CNRS, Inserm, CREATIS UMR 5220, U1206)

The talk will introduce the Virtual Imaging Platform (VIP), Boutiques and the CARMIN API, as tools for a FAIR approach to scientific data analysis. Through Boutiques (<https://boutiques.github.io/>), VIP is able to easily describe and integrate new pipelines, as well as publish them on open repositories, such as Zenodo (<https://zenodo.org/>), to make them findable and accessible. Through CARMIN (Common API for Research Medical Imaging Network), VIP fosters data integration and interoperability among platforms

15:40 - 16:00 Pause

16:00 - 16:20 Computer/data science and solutions

Ontological and systemic approaches combination in order to integrate heterogeneous data in Neurosciences - Vincent Henry (Brain and Spine Institute, Paris)

Nurturing an Open Source Library into success - Kshitij Chawla (INRIA)

16:20 - 17:00 Open discussion and closing remarks

