

# CAB newsletter 30 May 2022

You are receiving this as a member of the Centre for Applied Bioinformatics (CAB)

**Not yet joined CAB?** Well if you are receiving this you already have joined, but if you know anyone who would like to join, they can now sign up using a simple web form here: [https://docs.google.com/forms/d/e/1FAIpQLSex2vZ\\_24CRgh1Nb0rKLZeN5FnYVZA\\_-6YYRH6SxbMOuoY0g/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLSex2vZ_24CRgh1Nb0rKLZeN5FnYVZA_-6YYRH6SxbMOuoY0g/viewform?usp=sf_link)

## News:

Do you have a project suitable for a Masters student? We are collating potential projects/supervisors for the Master of Bioinformatics students. If you are interested in hosting a student, please contact [Dave.Edwards@uwa.edu.au](mailto:Dave.Edwards@uwa.edu.au) for details

Contribute to microcredentials in Applied Bioinformatics: UWA is planning to launch two microcredentials in applied bioinformatics in January 2023. Each microcredential is split into 6 modules teaching some aspect of bioinformatics. Each module consists of one recorded lecture (30-45 mins) and one small practical task that can be undertaken without direct supervision by following written instructions. If you are interested in contributing to a module, please contact [Dave.Edwards@uwa.edu.au](mailto:Dave.Edwards@uwa.edu.au)

**Promote your publications!** Please email any of your recent publications and we can promote through the CAB newsletter and twitter account!

## Publication highlights:

This is a new section where members can suggest papers from their own group or elsewhere that they want to promote to centre members. They take the simple format of a title, download and short summary. Below are some examples relating to some of the launch presentations. **Please forward any papers you would like to highlight to me for inclusion in future newsletters.**

Title: Plants meet machines: Prospects in machine learning for plant biology

Download: <https://bsapubs.onlinelibrary.wiley.com/doi/10.1002/aps3.11371>

A simple introduction to machine learning that refers to a number of interesting papers, including Machine learning using digitized herbarium specimens to advance phenological research. An excellent primer for machine learning for plant biology.

Title: Machine Learning Using Digitized Herbarium Specimens to Advance Phenological Research

Download: <https://academic.oup.com/bioscience/article/70/7/610/5825721?login=true>

Short summary: An interesting ML paper that shows how phenological data can be extracted from herbarium imaging

Title: Regulatory analysis of single cell multiome gene expression and chromatin accessibility data with scREG

Download: <https://genomebiology.biomedcentral.com/articles/10.1186/s13059-022-02682-2>

Short summary: End-to-end Single cell multiomics algorithm for dimension reduction and regulatory network inference, demonstrated on IBD-associated loci.

## Talks:

**Tuesday 31st May 2022, 1 - 2 pm, Venue: CSSE Lab 2.07**

**Knowledge Graphs for Heterogenous Data Integration**

Host: A/Prof. Wei Liu, Computer Science and Software Engineering

Speakers: A/Prof. Wei Liu, Pascal Sun

**Thursday 16th June 2022, 12:30 - 1:30pm, Venue: IOMRC Oceanworks (and Zoom)**

**Data Informed Physics to Support Offshore Activities**

Host: Prof. Phil Watson, Oceans Graduate School

Speakers: Dr Jeff Hansen, Kevin Vinsen, Dr Ian Milne, Matthew Zed, Jack Lee-Kopij

\* This talk is also part of the Oceans Graduate School Seminar Series

Details

at: [https://www.uwadatainstitute.org.au/strapi/uploads/Cluster Research Talks May June 2022\\_899855f85a.pdf](https://www.uwadatainstitute.org.au/strapi/uploads/Cluster_Research_Talks_May_June_2022_899855f85a.pdf)

## Training:

Links to some relevant resources:

Basic shell/bash: <https://bioinformatics-core-shared-training.github.io/shell-novice/>

Pawsey high performance computing: <https://sarahbeecroft.github.io/Intro2HPC/>

Genomics: <https://datacarpentry.org/genomics-workshop/>

(ignore the cloud computing part)

How to apply for Pawsey Nimbus compute access:

<https://support.pawsey.org.au/documentation/display/US/Apply+for+Nimbus+Cloud+access>

## Jobs:

Minderoo is looking for a Biostatistician and a Research Data Scientist, both jobs are

here: <https://www.minderoo.org/careers/>

## Conferences:

ABACBS 2022 Conference. Save the date!!

The ABACBS 2022 conference will take place **November 28 - December 2**, including the COMBINE student symposium, the Victorian Cancer Bioinformatics Symposium, BioCAsia and workshops! It will be a hybrid event, with the in-person event being in Melbourne.