

# Northern Bioinformatics User Group

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The Northern Bioinformatics User Group (<https://northernbug.github.io>) is a network of computational biologists and bioinformaticians (current and aspiring) in the north of England and a user-driven meeting that aims to build an engaged community of researchers to discuss ways to analyse or exploit large-volume data in biology. Modelled after the Scotland-based Next Generation Bioinformatics User Group (<http://nextgenbug.org>), Northern BUG was initiated at the University of York in May 2018 and, after four meetings, became a Sectional Interest Group, supported by the Genetics Society in September 2019.

Since then, we organised two meetings, at the University of Hull on 9th September 2019 and at the University of Leeds in 24 January 2020, with next meetings, originally planned for May at the University of Liverpool and for September at the University of Manchester, suspended until the end of the SARS-CoV-2 pandemic.

The meetings are small (50-75 participants) on a single day and single track, allowing for participants from the area stretching from Liverpool to Hull and from Sheffield to Newcastle to go to and back from the meetings on the same day. We are trying to treat them not as conferences but rather user groups, emphasising the more informal, open and collaborative nature of the meetings.

The Hull Northern BUG began with a short organising session, where

the Steering Committee was selected and an organising structure was established: Northern BUG has now a Slack channel (<https://northernbug.slack.com>), a Google Group page (<https://groups.google.com/forum/#!forum/northern-bug>) and a public website hosted at GitHub (<https://northernbug.github.io>). Dr Mark Dunning from the Bioinformatics Core Facility at the University of Sheffield then gave an overview of an offshoot initiative of the Northern BUG, a workshop for trainers (both core facilities-based and academic) held at the University of Sheffield on 19th July 2019 with the purpose of understanding similarities in current bioinformatics education across the region, standardise learning outcomes, and to share teaching load between institutions.

Research talks were delivered on medical genomics (Dr Lucy Stead, University of Leeds), on treatment-resistant glioblastomas, ancient DNA and big data archeology (Eleanor Green, BioArCh, University of York) and were complemented by an overview of the state-of-the-art in genome assembly (Dr John Davey, University of York) and Dr Chris Collins' (University of Hull) presentation on their 5000-core high performance computing cluster.

In the meantime, poster authors presented a series of 1-minute talks, briefly describing their projects and encouraging participants to learn more about them during the poster session.

The Leeds Northern BUG, organised by Dr Lucy Stead from Leeds, introduced two new sessions during the meeting: a coding clinic, matching up participants with bioinformatics questions to volunteers who can help them, and an in-depth best practices tutorial, the first

one on ChIP-sequencing, delivered by Dr Ian Donaldson (University of Manchester) and Dr Iros Barozzi (Imperial College London).

The meeting followed with a series of research talks on the analysis of carryover sequences in RAD-seq data (Haeyam Taiy from the University of Huddersfield), on the translation of long non-coding RNAs (Isabel Birds from the University of Leeds) and on bacterial GWAS (Dr Alexander Predeus from the University of Liverpool), among others. A poster session was held during the lunch break and the after-lunch session was enlivened by an opinionated talk by Dr Alastair Droop from the Wellcome Trust Sanger Centre on essential methods for modern bioinformatics: containerization, workflow management and code repositories. Dr Connor Meeham (University of Bradford) then delivered an overview of the genomic complexities of the West African strain of *Mycobacterium tuberculosis* and, finally, Dr Jarek Bryk (University of Huddersfield) presented his idea for a future grant application for comments and suggestions from the audience.

Both meetings concluded in nearby pubs, a crucial networking activity for the participants, who overwhelmingly agreed that the informal and flexible format of the meetings and its support for early career researchers are working very well and have already established Northern BUG as an important and useful focal point for the research community in the north.

We are all - organisers and participants - looking forward to resuming the Northern BUG meetings in the future.