

THE CAMBRIDGE STATISTICS DISCUSSION GROUP

Tuesday 26th November 2019 7:15 for 7:45

The Statistical Laboratory,
Centre for Mathematical Sciences,
Wilberforce Road, Cambridge, CB3 0WB

How feasible is DNA as a long-term digital storage system?

Nick Goldman
European Bioinformatics Institute

Abstract: The recent exponential growth in digital data production has led to work looking at new ways to store vast amounts of such data for long term future use which have increased durability compared to mainstream storage solutions. This talk presents a proof-of-principle study into the feasibility of DNA as a long-term digital information storage medium. This project presented a number of good scientific challenges, and is accessible to a wide audience.

Speaker: Nick Goldman began working at the European Bioinformatics Institute in 2002 attaining the role of senior scientist in 2009. Nick's past work has been on maths, stats and algorithmics of the analysis of genomics data, with particular emphasis on studying evolution. This has included everything from technical notes on the use of maximum likelihood for inferring evolutionary trees and for estimating the strength of natural selection acting on protein-coding DNA sequences, through to co-authorship of 'classic' papers reporting the initial sequencing and analysis of important model organism genomes (e.g. mouse, gorilla).

Directions: The main entrance is reached from Clarkson Road by going along the footpath to the right of the Newton Institute, and turning left through the gatehouse towards the main building (Pavilion A), which has a glass front and a curved grassed roof. The main entrance is in the middle of the glass front. Coffee before the talk will be in the common room in Pavilion D, and the talk will be in Meeting Room 4 in Pavilion A. Free parking is available after 5pm on Clarkson and Wilberforce Roads.

Provisional Next Meetings (2020):

3rd February – Oliver Exton (Economics) on 'The impact of uncertainty on trade agreements between the UK and EU'.

27th February – Meredith Crowley (Economics) on 'Invoicing and Pricing-to-market: Evidence from UK Exports/Imports Transactions'.

23rd April – Peter Treasure (National Cancer Registration and Analysis Service).

7th May – Allègre Hadida (Judge Business School).

6th October – Rod Jones (Chemistry).

Supper: Some members eat regularly in the University Centre before each meeting at **5-45pm**. Feel free to join them.

Subscriptions: of 1 pound are now due for attending the 2019-2020 session.

Secretary: Peter Watson, MRC Cognition and Brain Sciences Unit, 15 Chaucer Road, Cambridge CB2 7EF;
telephone 01223 769479; E-mail peter.watson@mrc-cbu.cam.ac.uk.

Slides and .mp3 files of old talks: <http://www.mrc-cbu.cam.ac.uk/people/peter.watson/csdg.html>

Approved Minutes of Annual General Meeting 2017-2018

The Annual General Meeting for the year 2017-2018 was held at the Cognition and Brain Sciences Unit on 10th October 2018. Present: Ted Harding (in chair), Alex Baker, Matt Barclay, Sara Benitez Majano, Connie Chew, Nikos Demiris, Andrew Dillon, Ruben Drews, Josephine French, Mary Garratt, Martin Gibson, Mark Hill, Robert Kozarski, Trevor Lewis, Yoryos Lyratsopoulos, Holly Pavey, Adam Wagner, Sarah Walters, Peter Watson. **Apologies:** Margaret Corbett, David Culliford. The **minutes** of the previous A.G.M. were circulated and approved. The secretary reported a total attendance over 4 meetings of 83 for the 2017-2018 session. Anyone with suggestions for speakers or venues or anyone interested in joining the committee please contact a committee member.

Treasurer's Accounts and Report 2017-2018:

The CSDG started the year in October 2017 with £44.88 cash in addition to £252.69 in the Cambridge Building Society. The table below shows the financial activity during the current year (Oct17 to Sept18).

Expenditure		Income	
Speakers' expenses	£34.26	Balance at Sep 2017	£44.88
Added to Bank a/c		Subscriptions	£45.00

Cash balance at 1st October 2017 £44.88, cash remaining 1st October 2018 £55.62. There is now £252.69 (plus interest) in a Community account at the Cambridge Building Society. The account holders are Ted Harding (current chairman), Peter Watson (current secretary) and Adam Wagner (current treasurer). These names can be changed on application. The principle holder is the treasurer. Any of the three account holders can deposit and withdraw money. It is suggested subscriptions remain at £1 for the 2018-2019 session.

Election of officers and committee: Committee for 2018-2019: *chair* Ted Harding; *secretary* Peter Watson; *treasurer* Adam Wagner; *officio* Dave Andrews; *ordinary* Martin Gibson, Haidee Philpott, Tony Sabin.

Any Other Business: None.

Draft Minutes of Annual General Meeting 2018-2019

The Annual General Meeting for the year 2018-2019 was held at the Cognition and Brain Sciences Unit on 9th October 2019. Present: Peter Watson (in chair), Cong Chen, Hongyan Chen, M Courtney, David Culliford, Mary Garratt, Martin Gibson, Stephen Kaptoge, Imre Leader, Alexey Lukionov, Melina Moore, Chris Pointon, Linda Pointon, Jayantha Ratnayake, Alex Reid, Roger Sewell, Sally Vernon, Adam Wagner, Klaudia Walter, Lorenz Wernisch, Andras Zsak. **Apologies:** Ted Harding, Nelson Kinnersley, Garo Panikian, Haidee Philpott. The **minutes** of the previous A.G.M. were circulated and approved. The secretary reported a total attendance over 7 meetings of 100 for the 2018-2019 session. He also asked for anyone who might be interested in chairing future meetings to please contact him.

Treasurer's Accounts and Report 2018-2019:

The CSDG started the year in October 2018 with £55.62 cash in addition to £252.69 in the Cambridge Building Society. The table below shows the financial activity during the current year (Oct18 to Sept19).

Expenditure		Income	
Speakers' expenses	£32.44	Balance at Sep 2018	£55.62
Added to Bank a/c		Subscriptions	£69.10

Cash balance at 1st October 2018 £55.62, cash remaining 1st October 2019 £92.28. There is now £252.69 (plus interest) in a Community account at the Cambridge Building Society. The account holders are Ted Harding (past chair), Peter Watson (current secretary) and Adam Wagner (current treasurer). These names can be changed on application. The principle holder is the treasurer. Any of the three account holders can deposit and withdraw money. It is suggested subscriptions remain at £1 for the 2019-2020 session.

Election of officers and committee: Committee for 2019-2020: *chair* David Galloway; *secretary* Peter Watson; *treasurer* Adam Wagner; *officio* Ted Harding; *ordinary* Haidee Philpott, Jayantha Ratnayake, Tony Sabin.

Many thanks to Ted and Martin Gibson for their long-standing support and work on the committee.

Any Other Business: None.