INDA Hands-on NGS-Statistics course

October 3rd - 14th, 2016
Mbour, Senegal

This theoretical and practical course is aimed at researchers that would like to get the most out of their Next Generation Sequencing datasets. We will tackle several topics, encompassing theoretical NGS approaches and statistical analysis of NGS data.

The first week of this course (Oct 3rd – 7th) will be devoted to theory and practical examples for a broad audience (100 participants), while the second week (Oct 10th – 14th) will be dedicated to practical analysis for a selected group (30) of participants. Prospective students for the hands-on section should apply and will be selected on the basis of their data and the analyses they wish to perform. The exact syllabus will depend on the interest of the attendees, we want this course to be of immediate value.

The course will be held in Mbour in the AIMS Senegal facilities. The official language for the theoretical and hands-on session will be English. This hands-on NGS course is open to the whole Pasteur International Network, Senegalese Universities (CEA-MITIC), H3ABioNet and AIMS Senegal.

Topics

NGS:

- Basic statistics and probability concepts applied to NGS
- Experimental design applied to NGS
- Quality analysis NGS data
- Mapping and assembling algorithms
- Variant calling algorithms, statistical models and approaches / strategies used
- Resequencing and variant analysis

Statistics:

- Multidimensional Statistics
  - Principal Component Analysis
  - Correspondence Analysis (simple and multiple)
- Multivariate Generalized Linear Models
- Bayesian models for NGS

Deadline August 15th 2016

Registration

To register, fill the application form before August 15th, 2016 (midnight Paris time) at http://inda.pasteur.fr.

Sponsors

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