FLowCAP SUMMIT 2010

U.S. NIH Campus
Natcher Auditorium
Bethesda, MD.
21 - 22 September 2010

Flow Cytometry:
Critical Assessment of Population Identification Methods (FlowCAP)
To advance the development of computational methods for the
identification of cell populations of interest in flow cytometry data

http://flowcap.flowsite.org

FLowCAP Organizing Committee

- **Ryan Brinkman,** British Columbia Cancer Agency
- **Raphael Gottardo,** Fred Hutchison Cancer Research Center
- **Richard Scheuermann,** University of Texas Southwestern Medical Center
- **Jill Schoenfeld,** Tree Star, Inc.

Sponsored by the National Institute of Allergy and Infectious Diseases

FlowCAP Summit 2010

Date: September 21st & 22nd, 2010
Time: 8:30AM-5:50 PM (Tuesday) and 9:00AM-3:30 PM (Wednesday)
Location: Natcher Conference Center, NIH Campus
45 Center Drive
Bethesda, Maryland 20892

AGENDA

DAY ONE (Tuesday):

8:30-9:00AM   **Registration**

9:00-9:10AM   **Importance of FlowCAP from the DAIT Perspective**
Dan Rotrosen
Division of Allergy Immunology and Transplantation, NIAID

9:10-9:40AM   **FlowCAP: history, goals and design of FlowCAP-I**
Richard H. Scheuermann
U.T. Southwestern Medical Center

9:40-10:10AM   **Rapid Cell Population Identification in Flow Cytometry Data**
Nima Aghaeepour
British Columbia Cancer Agency

10:10-10:40AM   **Automatic determination of the number of mixture components in Flow Cytometry with Variational Bayes**
Hannes Bretschneider
University of British Columbia

10:40-11:00AM   *BREAK*

11:00-11:30AM   **GPU accelerated Bayesian mixture models for FCM analysis**
Cliburn Chan
Duke University

11:30-12:00PM   **flowMerge: Merging mixture components for automated gating of flow cytometry data**
Greg Finak
Clinical Research Institute of Montreal

12:00-12:30PM   **Flow Cytometry Data Assessment with L2 Discrepancy Learning Process: Analysis and Visualization**
Faysal Khettabi
British Columbia Cancer Agency
12:30-1:30PM   **LUNCH**

1:30-2:00PM	*On the use of NMF and curvHDR to cluster flow cytometry data*
	Joe Maisog
	Medical Numerics, Inc. / Georgetown University MedicalCenter
2:00-2:30PM	**TBD (FLAME)**
	Geoff McLauchlan
	University of Queensland
2:30-3:00PM	**SWIFT: Scalable Weighted Iterative Flow-clustering Technique**
	Iftekhar Naim
	University of Rochester
3:00-3:30PM	**Self-organizing Maps for Flow Cytometry Data Analysis**
	Radina Nikolic
	British Columbia Institute of Technology (BCIT)
3:30-3:50PM	*BREAK*
3:50-4:20PM	**FLOCK: a density-based clustering method for automated identification and comparison of cell populations in high-dimensional flow cytometry data**
	Yu Qian
	U.T. Southwestern Medical Center
4:20-4:50PM	**Support Vector Machines for classification of flow data**
	John Quinn
	TreeStar, Inc
4:50-5:20PM	**Misty Mountain - A Parallel Clustering Method. Application to Fast Unsupervised Flow Cytometry Gating**
	Istvan Sugar
	Mt. Sinai School of Medicine
5:20-5:50PM	*SamSPECTRAL: Efficient spectral clustering on flow cytometry data*
	Habil Zare
	British Columbia Cancer Agency
5:50PM	**ADJOURN**

DAY TWO (Wednesday):

9:00-10:00AM	**KEYNOTE ADDRESS**
	Coherent Single Cell Analysis in the 21st Century: ROFLMAO
	Mario Roederer
	National Institutes of Health
10:00-10:20AM	*BREAK*
10:20-11:20AM	**FlowCAP-I Results**
	Ryan Brinkman

British Columbia Cancer Agency

11:20-12:00PM   **FlowCAP-I Debrief: What worked and what didn't work**
Richard H. Scheuermann
U.T. Southwestern Medical Center

12:00-1:00PM   **LUNCH**

1:00-1:30PM   **Comparative Metrics: Measuring the quality of a classification method without a known ground truth**
Adam Triestar
TreeStar, Inc

1:30-1:50PM   **FlowCAP-II: comparative metrics**
Jill Schoenfeld
TreeStar, Inc

1:50-2:20PM   *FlowCAP-II: Dataset classification and identification of important gaps in datasets used for FlowCAP-I*
Richard H. Scheuermann
U.T. Southwestern Medical Center

2:20-2:40PM   **FlowCAP-II: Beyond classification – other opportunities for FCM data analysis**
Ryan Brinkman
British Columbia Cancer Agency

2:40-3:00PM   **FlowCAP-II: design, funding**
Ryan Brinkman
British Columbia Cancer Agency

3:00-3:30PM   **Wrap up**
Richard H. Scheuermann
U.T. Southwestern Medical Center

3:30PM   **ADJOURN**