

**AMSI BIOINFOSUMMER 2017  
TIMETABLE**

**Monday 4 December - Day 1**

**Introduction to bioinformatics**

Time	Activity/Speaker	Venue
10:00-11:00	<i>Registration</i>	
11:00-11:30	Conference opening Professor Susan Wilson, University of NSW	Lecture theatre K309
11:30-12:30	Opening lecture Bioinformatics: just pipelines, isn't it? Professor Melanie Bahlo, Walter & Eliza Hall Institute of Medical Research	Lecture theatre K309
12:30-14:00	<b>CHOOSEMATHS Lunch Event (catered)</b>	<b>**NEW ROOM** Building H, Level 8, Function Pavilion</b>
12:30-14:00	<i>Lunch (catered)</i>	
	<i>Chair: Associate Professor Torsten Seemann</i>	
14:00-14:30	Bioinformatics, the honest trailer Dr Saskia Freytag, Walter & Eliza Hall Institute of Medical Research	Lecture theatre K309
14:30-15:00	The people that paved the way for biological insight through mathematics Dr Mark Flegg, Monash University	Lecture theatre K309
15:00-15:30	Statistics in biology Dr Nicola Armstrong, Murdoch University	Lecture theatre K309
15:30-16:00	<i>Break</i>	
16:00-17:00	Computational analysis of mutations in tumors reveals unexpected carcinogenic exposures Professor Steve Rozen, Duke-NUS Medical School Singapore	Lecture theatre K309
17:00-18:30	<b>Welcome Reception (catered)</b>	<b>**NEW ROOM** Building H, Level 8, Function Pavilion</b>

**Tuesday 5 December - Day 2**

**Visualisation, modelling & analysis**

Time	Speaker	Venue
8:45-9:00	<i>Registration</i>	
	<i>Chair: Kirill Tsyganov</i>	
9:00-10:00	"How do you see if you don't see": using randomisation with plots to explore 'omics data Professor Dianne Cook, Monash University	Lecture theatre K309
10:00-11:00	An Introduction to Bioconductor Dr Michael Lawrence, Genentech	Lecture theatre K309
11:00-11:30	<i>Break</i>	
11:30-12:30	An introduction of molecular network analysis Dr Sriganesh Srihari, South Australian Health and Medical Research Institute	Lecture theatre K309
12:30-13:30	<b>Lunch: Celebrating Diversity in STEM (catered)</b>	<b>**NEW ROOM** Building H, Level 8, Function Pavilion</b>
	<i>Chair: Dr Nick Wong &amp; Dr Sarah Williams</i>	
13:30-14:00	Lessons from the Marchantia genome Professor John Bowman, Monash University	Lecture theatre K309
14:00-14:15	Identification of effective combinatorial therapies for cancer using integrated pathway modelling Dr Lan Nguyen, Biomedicine Discovery Institute, Monash University	Lecture theatre K309
14:15-15:30	Lightning Poster Talks	Lecture theatre K309
15:30-16:00	<i>Afternoon tea</i>	
16:00-17:00	Workshop: Data visualisation with Python and the Jupyter Notebook Dr Clare Sloggett, Melbourne Bioinformatics	Lecture theatre K309

**Wednesday 6 December - Day 3**

**RNA-seq theory and practice**

Time	Speaker	Venue
8:45-9:00	<i>Registration</i>	
	<i>Chair: Dr Stuart Archer &amp; Adele Barughare</i>	
9:00-10:00	Statistical analysis of RNA-seq data: from reads to genes to pathways Professor Gordon Smyth, Walter & Eliza Hall Institute of Medical Research	Lecture theatre K309
10:00-10:45	Machine Learning in Genetics Beth Signal, Garvan Institute	Lecture theatre K309
10:45-11:15	<i>Break</i>	
11:15-12:00	Introduction to pathway and network analysis Dr Melissa Davis, Walter & Eliza Hall Institute of Medical Research	Lecture theatre K309
12:00-12:45	I've got my list of differentially expressed genes, now what? Dr Mirana Ramialison, Australian Regenerative Medicine Institute, Monash University	Lecture theatre K309
12:45-13:30	Exploring the boundaries of transcription factor-mediated reprogramming Associate Professor Jose Polo, Australian Regenerative Medicine Institute, Monash University	Lecture theatre K309
13:30-14:30	<i>Lunch</i>	
14:30-15:30	Workshop 1: RNAseq via GVL+ degust demo Dr Stuart Archer, Monash Bioinformatics	STARlabs H404a
(Parallel sessions)	Workshop 2: Introduction to Python programming Dr Andrew Perry, Monash Bioinformatics Platform	STARlabs, H404b
15:30-16:00	<i>Break</i>	
16:00-17:00	Workshop 1 Continues: RNAseq via GVL+ degust demo Dr Stuart Archer, Monash Bioinformatics	STARlabs H404a
(Parallel sessions)	Workshop 2 Continues: Introduction to Python programming Dr Andrew Perry, Monash Bioinformatics Platform	STARlabs, H404b
16:45-18:00	<i>Public Lecture registration and refreshments</i>	
18:00-19:30	<b>Public Lecture (catered): Professor John Mattick AO Genomics, Big Data and the Future of Medical Research and Healthcare</b>	Lecture theatre K309

**Thursday 7 December - Day 4**

**Proteomics & metabolomics data**

Time	Speaker	Venue
8:45-9:00	<i>Registration</i>	
	<i>Chair: Rob Goode</i>	
9:00-9:45	Mass spectrometry, proteomics and more Dr Ralf Schittenhelm, Proteomics Platform, Monash University	Lecture theatre K309
9:45-10:30	Metabolomics Bioinformatics – Current State and Future Challenges Dr Saravanan Dayalan, Metabolomics Australia, The University of Melbourne	Lecture theatre K309
10:30-11:00	<i>Break</i>	
11:00-13:00	Workshop: Introduction to statistical analysis of metabolomics data Dr Alysha De Livera, University of Melbourne and Dr Kaushala Jayawardana, Baker Heart & Diabetes Institute	Lecture theatre K309
13:00-14:00	<i>Lunch</i>	

**Clinical bioinformatics & variant calling for disease**

Time	Speaker	Venue
	<i>Chair: Dr David Goode</i>	
14:00-14:45	Detecting somatic variants in cancers using whole genome sequencing Dr Ann-Marie Patch, QIMR Berghofer Medical Research Institute	Lecture theatre K309
14:45-15:30	Translating genomics to the clinic for rare and advanced cancers Dr Mark Cowley, Garvan Institute	Lecture theatre K309
15:30-16:00	<i>Break</i>	
16:00-16:45	Translating research: How is it done, why is it important, and what are the impacts? Dr Sebastian Lunke, Victorian Clinical Genetics Services	Lecture theatre K309
18:00-20:00	<b>COMBINE Careers Session (catered)</b>	<b>Racecourse Hotel 895 Dandenong Rd</b>

**Friday 8 December - Day 5**

**Single-cell genomics**

Time	Speaker	Venue
8:45-9:00	<i>Registration</i>	
	<i>Chair: Dr Fernando Rossello</i>	
9:00-09:45	Using ultra high-throughput single cell sequencing to understanding cellular heterogeneity Dr Joseph Powell, Institute for Molecular Bioscience, University of Queensland	Lecture theatre K309
09:45-10:30	Designing and analysing single-cell RNA sequencing experiments Associate Professor Alicia Oshlack, Murdoch Children's Research Institute	Lecture theatre K309
10:30-11:00	<i>Break</i>	
11:00-12:00	The molecular atlas – transcriptomes from tissues to single cells. Professor Christine Wells, Centre for Stem Cell Systems, University of Melbourne	Lecture theatre K309
12:00-13:00	From cell-type to function using single-cell RNA sequencing Dr Tallulah Andrews, The Wellcome Trust Sanger Institute	Lecture theatre K309
13:00-14:00	<i>Lunch</i>	

**Open science, bioinformatics on clouds**

Time	Speaker	Venue
	<i>Chair: Dr Bernie Pope</i>	
14:00-14:45	Open Science – one goal, many perspectives Dr Tamara Heck, University of Southern Queensland	Lecture theatre K309
14:45-15:30	Data driven science in biology: a brief view into the many resources available to help you Dr Jeff Christiansen, Queensland Cyber Infrastructure Foundation & University of Queensland	Lecture theatre K309
15:30-16:00	<i>Break</i>	
16:00-17:00	Developing national bioinformatics infrastructure Associate Professor Andrew Lonie, University of Melbourne, Melbourne Bioinformatics and EMBL-Australia Bioinformatics Resource	Lecture theatre K309
17:00-17:30	Conference close	Lecture theatre K309