AMSI 18

BIOINFO SUMMER

A SYMPOSIUM IN BIOINFORMATICS

3–7 DEC 2018

THE UNIVERSITY OF WESTERN AUSTRALIA

EVENT REPORT

AMSI AUSTRALIAN MATHEMATICAL SCIENCES INSTITUTE

THE UNIVERSITY OF WESTERN AUSTRALIA

Murdoch UNIVERSITY

AUSTRALIA ECU EDITH COWAN UNIVERSITY

Australian Government
Department of Education and Training

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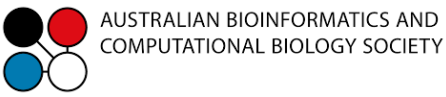


AMSI BioInfoSummer 2018

Symposium in Bioinformatics

The University of Western Australia | 3-7 December 2018

FOREWORD

Bioinformatics is an exciting discipline analysing and simulating both the structures and processes of biological systems. It is a constantly evolving field that offers researchers and students a wide breadth of opportunities. Since its first iteration in 2003, AMSI BioInfoSummer has brought together people from all disciplines to share current research and developments in bioinformatics. As one of five premier flagship events hosted each year around Australia it forms part of the Securing Australia's Mathematical Workforce: 2016-2020 agreement between AMSI and the Department of Education and Training.

"The AMSI BioInfoSummer program reflects the broad application and need for bioinformatics and biostatistics to drive discovery in the age of big data"

Professor Geoff Prince
AMSI Director

The five-day program includes a combination of networking events, hands-on introductory workshops and specialist lectures from international speakers and Australia's top scientists and academics. AMSI BioInfoSummer allows attendees to develop their bioinformatics skills, national networks and employability, and nurtures the collaborations between the mathematics, statistics and information technology disciplines.

*AMSI BioInfoSummer 2018 was jointly funded by the Australian Mathematical Sciences Institute and the Australian Government's Department of Education and Training, with support from The University of Western Australia, Murdoch University, Edith Cowan University, Pawsey Supercomputing Centre, EMBL Australian Bioinformatics Resource (EMBL-ABR), Decode Science, the Harry Butler Institute, the Australian Bioinformatics and Computational Biology Society (ABACBS) and the BHP Foundation through the AMSI CHOOSE**MATHS** program.*

DIRECTOR'S REPORT

Associate Professor Nicola Armstrong

Murdoch University

AMSI BioInfoSummer is Australia's leading bioinformatics and mathematical and computational biology training event. The 2018 edition was held at UWA from 3-7 December, jointly hosted by UWA, Murdoch University and Edith Cowan University. It was the first time the event has been held in WA. Over 130 students, researchers, academics and professionals attended the five-day program, including representatives from all the WA universities, main medical research institutes and several state government departments as well as interstate participants.

The event was officially opened by Professor Peter Klinken AC, Chief Scientist of Western Australia after a traditional welcome to Nyoongar country by Walter McGuire. UWA Deputy Vice Chancellor of Research Professor Robyn Owens also welcomed participants to the UWA campus before the opening address was delivered by Professor Susan Wilson. After lunch, the focus was on computing, with parallel sessions on using the R programming environment for beginners, and the Pawsey Supercomputing cloud services for more advanced users. The day finished with Professor Dave Edwards (UWA) presenting on "Improving crops with genomics and bioinformatics" followed by a welcome reception and networking opportunity.

The major themes in 2018 were single cell 'omics, plants and animals, epigenetics and metabolomics and proteomics. As usual, the program was a blend of scientific seminars and practical workshops with plenty of time for networking in-between. Discussion from the floor after each presentation was lively, aided in part by chocolates for question-askers. And, importantly, gender balance was once again achieved both in the program, and in participants.

The program featured over 20 national and international speakers including Assistant Professor Stephanie Hicks (Johns Hopkins Bloomberg School of Public Health), Assistant Professor Simon van Heeringen (Radboud University), Jason Williams (Cold Spring Harbour Laboratory), Professor Zhiping Weng (University of Massachusetts Medical School) and Professor Matthew Hahn (Indiana University).

A fast-forward poster session, where each presenter had two minutes to talk about their research, was followed by the traditional poster-viewing over a catered lunch which celebrated diversity in STEM. Both the posters and presentations were of high scientific quality making the judges' decisions very difficult, and in the end three prizes were awarded to students. COMBINE organised a well-attended careers session at the UWA tavern, where people could ask questions of bioinformaticians who had very diverse career pathways. The

public lecture, after an evening reception, was given by Australian Museum Research Institute Director Professor Rebecca Johnson, who gave a fascinating insight into life as a wildlife detective.

In closing, despite lower numbers than BioInfoSummer attracts on the East Coast, the engagement of the WA community in the event was outstanding. It was really pleasing to see the uptake and participation from all WA institutions, including the UWA peacocks who made their views of some talks clearly heard. Perth put on a week of perfect sunny weather, which was highly appreciated by interstate and international visitors and we finished at lunchtime on Friday to allow people to catch flights back to East Coast. We look forward to hosting the event again at some point in the future!

PROGRAM

MONDAY 3 DECEMBER
Day 1—Introduction to Bioinformatics

Choose Maths Networking Lunch
Welcome Reception

TUESDAY 4 DECEMBER
Day 2—Single Cell 'omics

Poster Session
Celebrating Diversity in STEM Lunch

WEDNESDAY 5 DECEMBER
Day 3—Plants and Animals

Public Lecture

THURSDAY 6 DECEMBER
Day 4—Epigenetics

COMBINE Careers Session

FRIDAY 7 DECEMBER
Day 5—Metabolomics and Proteomics

SPEAKERS

INTERNATIONAL SPEAKERS

SPEAKER	TITLE	ORGANISATION
Professor Matthew Hahn	Errors and error-correction in plant and animal genomes	Indiana University
Assistant Professor Stephanie Hicks	Missing data and technical variability in single cell RNA-sequencing experiments	Johns Hopkins Bloomberg School of Public Health, USA
Assistant Professor Simon van Herringen	Deciphering the sequence determinants of regulatory dynamics	Radboud University, Netherlands
Professor Zhiping Weng	The genome of the Hi5 germ cell line from *Trichoplusia ni*, an agricultural pest and novel model for small RNA biology	University of Massachusetts Medical School, USA
Jason Williams	Improving the bioinformatics curriculum	Cold Spring Harbor Laboratory, DNA Learning Center

"This event attracted me because it featured internationally renowned academics from a broad range of interesting research topics."

Shing Yan Kwong
The University of Adelaide

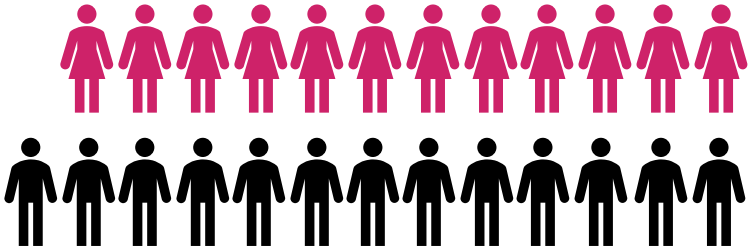
NATIONAL SPEAKERS

SPEAKER	TITLE	ORGANISATION
Dr Laura M. Boykin	Real-time portable genome sequencing for global food security	The Cassava Virus Action Project, The University of Western Australia
Professor Dave Edwards	Improving crops with genomics and bioinformatics	The University of Western Australia
Professor Alistair Forrest	Western Australian cancer single-cell initiative	Harry Perkins Institute of Medical Research
Dr Saskia Freytag	Fast-forward poster session facilitator	Walter & Eliza Hall Institute of Medical Research
Dr Shila Ghazanfar	scMerge: integration of multiple single-cell transcriptomics datasets leveraging stable expression and pseudo-replication	The University of Sydney
Dr James Hane	Bioinformatics and genomics application in plant pathology	Centre for Crop & Disease Management, Curtin University
Dr Camilla Hill	Genome sequencing and association mapping to dissect the genetic basis of yield and adaption in barley	Murdoch University
Dr Rebecca Johnson	Wildlife detectives: the story of genome research discovery and exploration at Australia's first museum	Australian Museum Research Institute
Dr Timo Lassmann	Modelling biological sequences using infinite hidden Markov models	Telethon Kids Institute
Dr Ryan Lister	Emerging technologies in reading and writing the epigenome	The Harry Perkins Institute of Medical Research, The University of Western Australia
Marina Naval Sanchez	Sheep functional annotation reveals proximal regulatory elements contributed to the evolution of modern breeds	CSIRO
Dr Stacey Reinke	Multi-block multivariate data integration: insights into asthma	Centre for Integrative Metabolomics & Computational Biology, Edith Cowan University
Associate Professor Torsten Seemann	How bioinformatics, genomics, and open data is transforming public health and clinical microbiology	The University of Melbourne
Professor Gordon Smyth	Hi-C explores genome-wide chromatic architecture and identifies long-range enhancers	Walter & Eliza Hall Institute of Medical Research
Dr Ashley Waardenberg	Kinase activity prediction from phosphoproteomics data	Australian Tropical Health and Medicine (AITHM) James Cook University
Professor Susan Wilson	Opening plenary lecture	The University of New South Wales

"Professor Susan Wilson is an inspirational role model for women in the field."

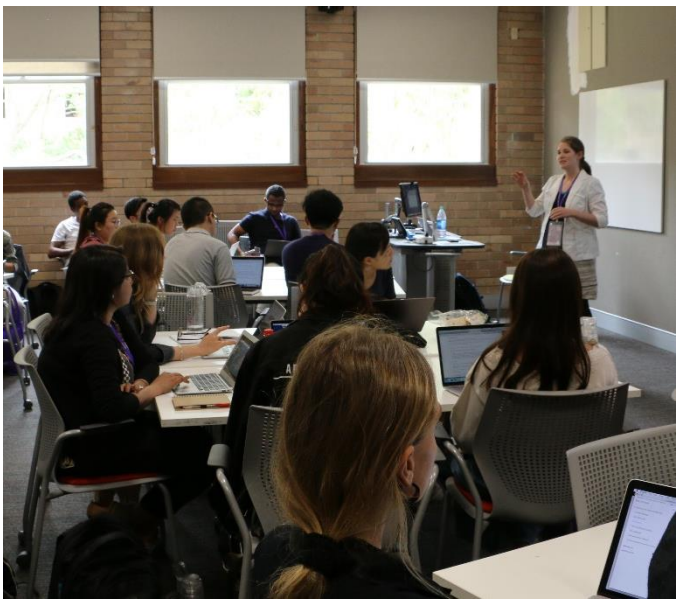
Lucinda Ham
The University of Melbourne

25 speakers



WORKSHOPS

TITLE	WORKSHOP PRESENTER
scMerge	Dr Shila Ghazanfar The University of Sydney
Introduction to Pawsey Cloud	Mark Gray Pawsey Supercomputing Centre
The integration of analytical workflows and data analytics for metabolomics	Dr Joel Gummer Murdoch University
Statistical analysis and comprehension of single cell RNA-sequencing data in R/Bioconductor	Assistant Professor Stephanie Hicks Johns Hopkins Bloomberg School of Public Health, USA
Building Shiny apps	Dr Rebecca Lange Curtin University
Introduction to R	Dr Alethea Rea The University of Western Australia
Introduction to genome assembly and annotation	Associate Professor Torsten Seemann The University of Melbourne
Integrative analysis of epigenomic dynamics at regulatory elements	Assistant Professor Simon van Herringen Radboud University, Netherlands
Predicting kinase activity from phosphor-proteomics data with KinSwingR	Dr Ashley Waardenberg Australian Tropical Health and Medicine (AITHM) James Cook University
Building a registry of candidate cis-regulatory elements for human and mouse	Professor Zhiping Weng University of Massachusetts Medical School, USA
Workshop: introduction to RNA-Seq with the Kallisto and Sleuth workflows	Jason Williams Cold Spring Harbor Laboratory, DNA Learning Center



"5 days of action-packed lectures and hands on workshops from the best in the bioinformatics field, from Australia and abroad."

Liam Crowhurst
Queensland University of Technology

PARTICIPANT BREAKDOWN

UNIVERSITY/INSTITUTION	
Australian Museum Research Institute	1
Australian National University	2
Cold Spring Harbor Laboratory (USA)	1
CSIRO / Data61	1
Curtin University of Technology	19
Department of Primary Industries and Regional Development	5
Edith Cowan University	6
Flinders University	1
James Cook University	1
Johns Hopkins Bloomberg School of Public Health (USA)	1
La Trobe University	4
Macquarie University	2
Monash University	4
Murdoch University	12
Pawsey Supercomputing Centre	3
Radboud University (Netherlands)	1
RMIT University	4
Telethon Kids Institute	1
The University of Adelaide	5
The University of Melbourne	8
The University of New South Wales	2
The University of Queensland	4
The University of Sydney	6
The University of Western Australia	40
University of Massachusetts (USA)	1
WA Health	1
Walter & Eliza Hall Institute of Medical Research	2

GENDER		
Female	75	54%
Male	62	45%
Undisclosed	1	1%

ATSI		
Yes	0	0%
No	137	99%
Undisclosed	1	1%

STATE/TERRITORY		
ACT	2	1%
NSW	12	9%
QLD	5	4%
SA	5	4%
TAS	0	0%
VIC	22	16%
WA	88	63%
International	4	3%

PARTICIPANT TYPE		
Academic	19	14%
Agency	1	1%
Early-Career Researcher	18	13%
Honours	11	8%
Industry	1	1%
Masters	14	10%
PhD	52	37%
Research Assistant	2	1%
Research Institute	8	6%
Undergraduate	12	9%

RESIDENCY STATUS		
Australian Citizen	78	57%
Not an Australian Resident	6	4%
Permanent Resident	20	15%
Student Visa	25	18%
Work Visa	6	4%
Other	3	2%

138 attendees

"The most valuable part of BioInfoSummer is the people you meet. The future of science is interdisciplinary research so making contacts in a wide range of fields will be beneficial."

Bobbie Cansdale
The University of Sydney

GRANTS

AMSI TRAVEL GRANTS

AMSI Travel Grants support undergraduate and postgraduate students to build and extend their skills and professional networks at AMSI BioInfoSummer by providing travel support to participate in the AMSI Higher Education Flagship programs.

In 2018, 14 students from 10 AMSI Member Institutions were awarded AMSI travel grants:

- Sungbo Cho
  The University of Queensland
- Craig Correy
  The University of Queensland
- Liam Crowhurst
  The University of Queensland
- Mohsen Dorraki
  The University of Adelaide
- Gabriel Hauswirth
  Monash University
- Shingyan (Anthony) Kwong
  The University of Adelaide
- Chuanxin Liu
  La Trobe University
- Yixuan Liu
  Macquarie University
- Ding Ma
  Macquarie University
- Gabriel Makuei
  RMIT University
- Robert Qiao
  Flinders University
- Luyi Tian
  The University of Melbourne
- Xiangnan Xu
  The University of Sydney
- Muzhi (Eric) Zhao
  Australian National University

"AMSI travel grants are particularly important for students from a less central location like me, as it provides essential financial support and encouragement for us to participate in national events."

Robert Qiao
Flinders University

AMSI CHOOSEMATHS GRANTS

AMSI CHOOSE**MATHS** Grants are designed to provide full or partial support for Australian female mathematical sciences students and early-career researchers to participate in the AMSI Higher Education Flagship programs. The grants support women to build and extend their skills and professional networks by providing financial support to attend and/or assist with caring responsibilities. The Awards are funded by the BHP Foundation and are an initiative of the AMSI CHOOSE**MATHS** Project.

BHP | Foundation CHOOSE MATHS

In 2018, 17 female students and early-career researchers from 8 AMSI Member Institutions were awarded AMSI CHOOSE**MATHS** grants:

- Shanika Amarasinghe
  The University of Melbourne
- Jennifer Boer
  RMIT University
- Bobbie Cansdale
  The University of Sydney
- Yue Cao
  The University of Sydney
- Erika Duan
  La Trobe University
- Lucinda Ham
  The University of Melbourne
- Jiru Han
  The University of Melbourne
- Tooba Jalalidil
  Monash University
- Alice Johnstone
  RMIT University
- Hue Mai La
  Monash University
- Dilys Lam
  The University of New South Wales
- Yingxin Lin
  The University of Sydney
- Marina Masioti
  La Trobe University
- Jannina Ong
  Monash University
- Veronika Petrova
  The University of Sydney
- Evelyn Phlox
  The University of Adelaide
- Huiwen (Vivian) Zheng
  The University of Queensland

The recipients got to find out more about the AMSI CHOOSE**MATHS** program and meet other grant winners and female attendees at a networking lunch held on Monday 3 December.

"Initiatives such as the CHOOSE**MATHS** Grants are a great way to encourage and ensure the participation of women in events such as these and to foster networking between women. It opens up more training opportunities, and highlights the achievement of women in mathematics, in an otherwise predominantly male-dominated field."

Dilys Lam
Garvin Institute

PROGRAM EXTRAS

WELCOME LUNCH AND EVENING RECEPTION

Day 1 of AMSI BioInfoSummer kicked off with two networking events. Following the opening session, a catered lunch was held to provide delegates with an opportunity to meet their fellow attendees and speakers. The day ended with an evening reception to further facilitate networking in a casual social environment.

"The most valuable part of the AMSI BioInfoSummer for me was the connections I made with other researchers in the area and the ability to interact with the speakers and workshop facilitators directly."

Alice Johnstone
RMIT University

POSTER SESSION AND DIVERSITY IN STEM LUNCH

A poster session was held on Tuesday 4 December chaired by Dr Saskia Freytag from the Walter & Eliza Hall Institute of Medical Research. Twelve delegates submitted abstracts and took up the challenge of spruiking their poster and research in under two minutes as part of the Fast Forward Presentations.

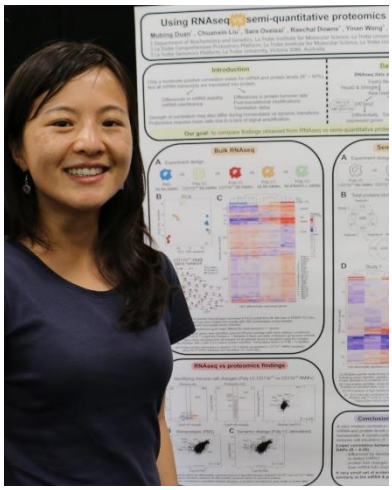
A second catered networking lunch celebrating Diversity in STEM followed on from the poster session and gave attendees the opportunity to view each of the posters and participate in a Q&A session with the poster presenters.

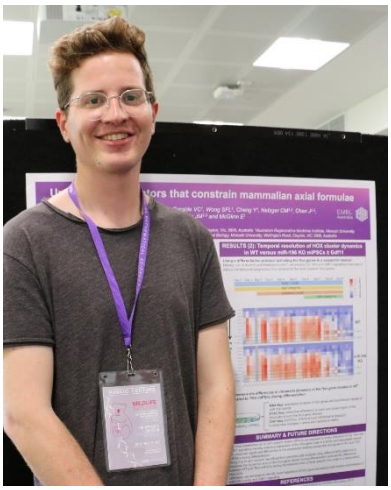
A panel of judges determined three winners for Best Poster:

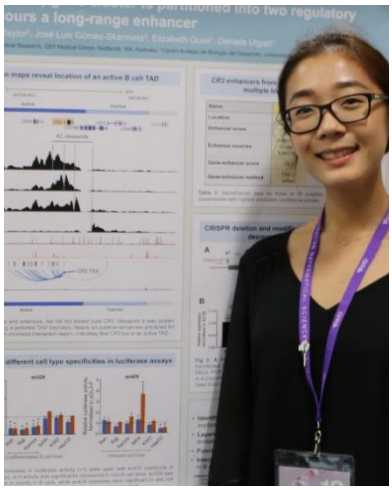
- **Dr Erika Duan, La Trobe University**
  Transcriptomics versus Proteomics: a side-by-side study of immune cell behaviour

- **Jessica Cheng, The University of Western Australia**
  Chromatin interactions across the Regulators of Complement Activation (RCA) gene cluster are partitioned into regulatory domains which harbour functional long-range enhancer elements

- **Gabriel Hauswirth, Australian Regenerative Medicine Institute & EMBL Australia, Monash University**
  Identifying regulators of posterior Hox gene activation and axis elongation







PUBLIC LECTURE

On Wednesday evening, Professor Rebecca Johnson, Director of the Australian Museum Research Institute (AMRI) gave a public lecture on Wildlife Detectives: The Story of Genome Research, Discovery and Exploration at Australia's first museum to over 70 attendees. Rebecca presented case studies from her work to demonstrate how important museum research is to engage, educate and inspire custodianship in the next generation of researchers. She also provided an overview of her career pathway cumulating in her current role as the first female director of science at the Australian Museum in its 191-year history. This free event open to BioInfoSummer delegates and the general public attracted a range of attendees including a young budding scientist currently in primary school!

"Rebecca talked about how science can influence the real world"

Vivian Zheng
The University of Queensland

COMBINE CAREERS SESSION

The final social event in the program was the COMBINE Careers Session which was held on Thursday night. Organised in partnership with the University of Western Australia COMBINE (the student-run Australian organisation for students in computational biology, bioinformatics, and related fields) representative, the event showcased bioinformatics career opportunities and provided a forum for discussion around the different career pathways.

First up, attendees heard about the APR.Intern program from Rachel Geddes, Senior Business Development Partner. The panel of speakers (listed below) then shared their own experiences and career journeys before opening it up for questions from the audience.

- **Professor Matthew Hahn,** Indiana University
- **Dr Monica Kehoe,** WA Department of Primary Industries and Regional Development
- **Dr Ashley Waardenberg,** James Cook University
- **Professor Sue Wilson,** The University of New South Wales

"The careers session at the conference was great at showing the variety of careers in bioinformatics, especially with relation to industry and the government which are both areas which I previously did not know much about."

Craig Coorey
University of Queensland

FEEDBACK

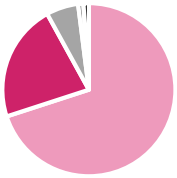
51%

Fifty-one per cent of attendees at AMSI BioInfoSummer 2018 completed the online survey to provide their feedback and comments on the event.

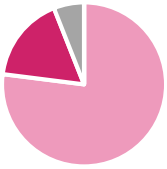
8.4

In rating their overall experience at the event on a scale of 1 to 10, where 1 is poor and 10 is excellent, the respondents' average rating was 8.4.

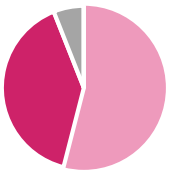
BIOINFOSUMMER WAS OF A HIGH STANDARD	
Strongly Agree	70%
Agree	22%
Neutral	6%
Disagree	1%
Strongly Disagree	0%
Prefer not to Say	1%



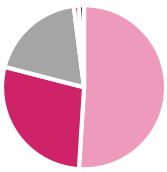
BIOINFOSUMMER WAS WELL-ORGANISED	
Strongly Agree	77%
Agree	17%
Neutral	6%
Disagree	0%
Strongly Disagree	0%
Prefer not to Say	0%



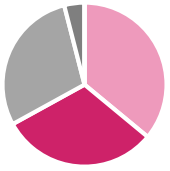
THE PRESENTATIONS WERE PROFESSIONAL AND ENGAGING	
Strongly Agree	55%
Agree	39%
Neutral	6%
Disagree	0%
Strongly Disagree	0%
Prefer not to Say	0%



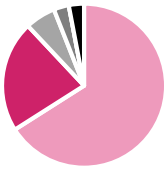
I FOUND THE SOCIAL EVENTS A GOOD OPPORTUNITY TO NETWORK	
Strongly Agree	51%
Agree	27%
Neutral	20%
Disagree	0%
Strongly Disagree	1%
Prefer not to Say	1%



THE CONTENT PRESENTED WAS RELEVANT TO MY STUDY/PROFESSION	
Strongly Agree	37%
Agree	31%
Neutral	28%
Disagree	4%
Strongly Disagree	0%
Prefer not to Say	0%



I WOULD RECOMMEND BIOINFOSUMMER TO OTHERS	
Strongly Agree	67%
Agree	21%
Neutral	6%
Disagree	3%
Strongly Disagree	0%
Prefer not to Say	3%



"This has been the most interesting, well-organised, and value for money conference I have attended in the last 12 months."

Craig Duncan
The University of Western Australia

EARLY-CAREER RESEARCHER PROFILE

Making an Impact: Choose Maths Opens Door to BioInfoSummer

Lucinda Ham, The University of Melbourne

Having completed her PhD in pure mathematics, Dr Lucinda Ham found herself at the intersection of logic, universal algebra and theoretical computer science and intrigued by the possibilities of an applied pathway. After a brief left turn into architecture, she settled on theoretical systems biology.

Theoretical systems biology uses mathematics to help understand underlying biological systems with focus on modelling stochastic processes. Research that has potential to enhance medical and biological research and assist in tackling disease.

“The development of mathematical, statistical and computational tools in cell biology helps us better understand and explain complex biological processes and their evolution,” she explains.

Grappling with this career change and a limited background in biology and programming, the University of Melbourne postdoctoral student was drawn to the cutting-edge program on offer at Australian Mathematical Sciences Institute (AMSI) BioInfoSummer 2018.

“AMSI BioInfoSummer assisted enormously with my transition from pure mathematical research to systems biology and statistical bioinformatics. I gained a much deeper understanding of the biological mechanisms and processes underlying my research,” she says.

With only casual work as a demonstrator at La Trobe University, attending AMSI BioInfoSummer would have been out of reach for Dr Ham without the support of a CHOOSEMATHS grant. Such support, she believes, is critical to fostering the participation of women in mathematics and righting their underrepresentation in STEM fields.

“I see these initiatives as extremely important to encourage female scientists to explore opportunities and continue their career development. The opportunity to network with other women in the area creates a sense of unity and this is empowering,” she says.

For Dr Ham, AMSI BioInfoSummer was a chance to deepen her understanding of the various challenges and complexities in cell biology and genetics, insights already helping her refocus her efforts in theoretical systems biology.

“My understanding of the fundamental workings of gene transcription opened my mind to expanding models I was considering, which quickly lead to improvements to work I was involved in. I’ve also learnt many statistical ideas to use when explaining basic mathematics and statistics to students,” she says.

Now a long way from 2017, Dr Ham knows she has made the right choice and looks forward to using her skills to make an impact where it is needed most.

“I am passionate about mathematics and contributing to the scientific knowledge base. In five, ten years’ time I hope to be making advances on my field that impact positively on biological research.”


FREE PUBLIC LECTURE AS PART OF
AMSIBIOINFOSUMMER18
WILDLIFE
DETECTIVES
THE STORY OF GENOME RESEARCH,
DISCOVERY AND EXPLORATION
AT AUSTRALIA'S FIRST MUSEUM
DR REBECCA
JOHNSON
DIRECTOR, AUSTRALIAN MUSEUM
RESEARCH INSTITUTE
6PM WED 5 DEC
WESFARMERS LECTURE THEATRE G.91
UWA BUSINESS SCHOOL
THE UNIVERSITY OF
WESTERN AUSTRALIA
REGISTER BIS.AMSI.ORG.AU/PUBLIC-LECTURE
AMSI RESEARCH

MEDIA RELEASE

Wildlife Detective and STEM Superstar Sheds Light on Museum Research

Monday 29 November 2018

Wildlife detective turned STEM superstar and Australian Mathematical Sciences Institute (AMSI) BioInfoSummer (BIS) 2018 public lecturer Professor Rebecca Johnson is set to give Perth a taste of life in the southern hemisphere's only forensic DNA lab.

Locals can join her for a behind the scenes exploration of research at the Australian Museum Research Institute (AMRI) during a free talk at the University of Western Australia co-hosted by AMSI as part of its 2018 BioInfoSummer event.

The first female Director in AMRI's 191-year history, Professor Johnson will talk about life as Australia's leading wildlife forensic scientist and her team's world-leading research, including recent findings that a rare rock wallaby is still hopping in the Kimberley.

"With over 90,000 DNA samples and forensics and genomics capabilities our team has provided DNA analysis to support identification of the Kimberley rock-wallaby's ongoing existence on mainland Western Australian," explains Professor Johnson.

While no longer present in WA, the team's leadership of the international genomic project to map the koala genome has put the lab on the world stage. Research that is set to shed light on the mysteries of an Australian icon.

"This represents a world-first in de novo mammalian genome sequencing that will provide new insights into Koalas and their evolution. This an important step for conservation of one of our most beloved native animals," says Professor Johnson.

Passionate about engaging young Australians with science, Rebecca hopes the more unusual aspects of her research will attract WA school students to the event.

"Science and maths are not boring, I am constantly surprised at the directions my research takes me. We've tackled wildlife trafficking and the illegal rhino horn trade and I have even helped fight crime!"

Join Professor Johnson for the 2018 AMSI BioInfoSummer Public Lecture from 6pm, Wednesday, 5 December at the University of Western Australia, Crawley Campus. For more information and to register, visit bis.amsi.org.au/public-lecture/.

Sponsored by the Harry Butler Institute, this lecture is part of AMSI BioInfoSummer 2018 hosted by the University of Western Australia (Crawley Campus). Australia's leading bioinformatics and mathematical and computational biology training event exposes students, researchers and field professionals to cutting-edge discovery and technology in this fast-paced and exciting field.

AMSI Director Professor Geoff Prince said this year's program, including Professor Johnson's public lecture, reflected the broad application and need for bioinformatics and biostatistics to drive discovery in the age of big data.

"We are delighted to have Rebecca on board for this year's public lecture as part of our 2018 BIS program. Her work exemplifies the broad application of this field in understanding and protecting our wildlife," said AMSI Director Geoff Prince.

AMSI BioInfoSummer 2018 is jointly funded by the Department of Education and Training and the Australian Mathematical Sciences Institute, with support from the University of Western Australia, Murdoch University, Edith Cowan University, The Pawsey Supercomputing Centre, EMBL Australia Bioinformatics Resource, Decode Science, Australian Bioinformatics and Computational Biology Society.

COMMITTEES

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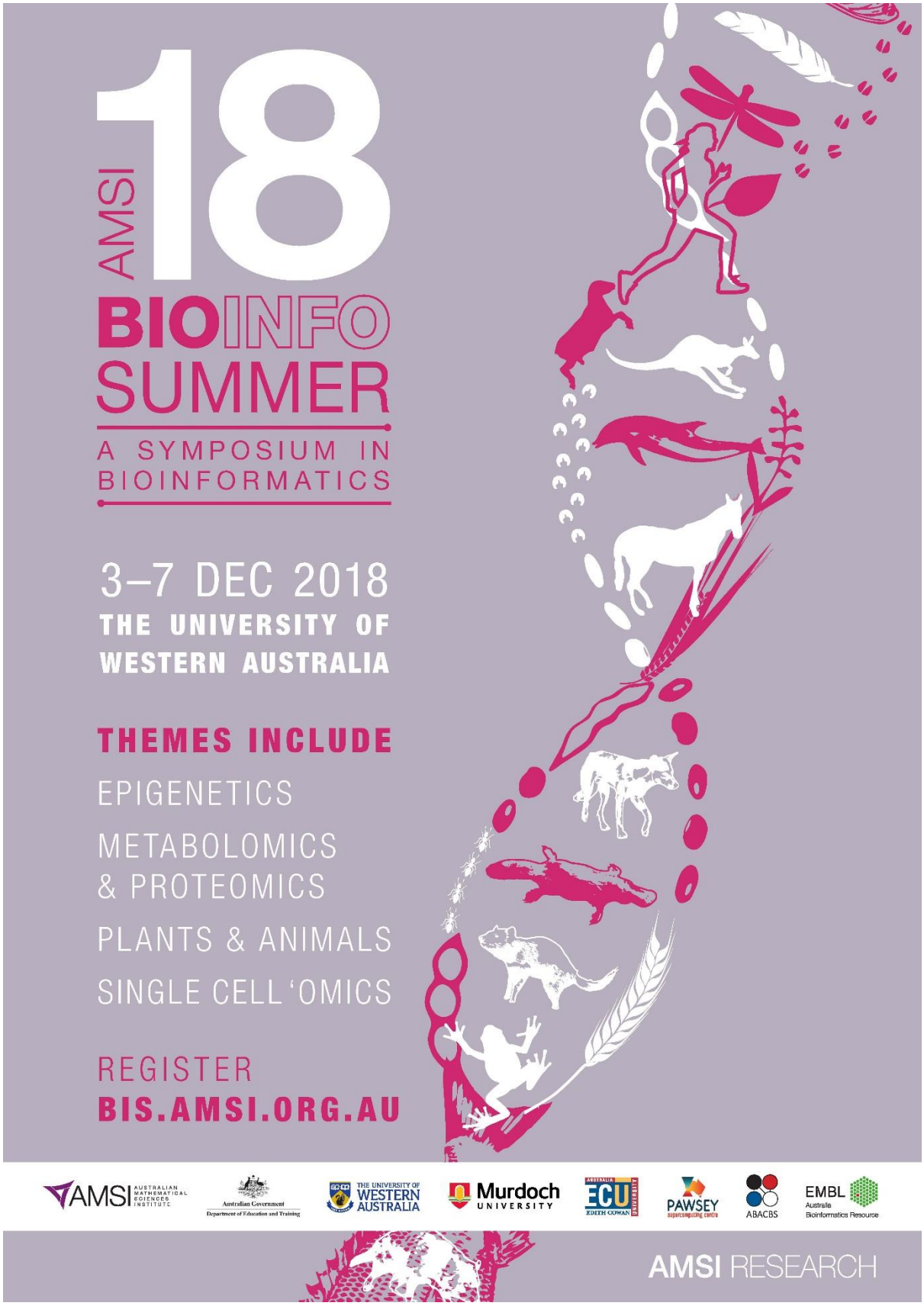
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