2019

GRADUATION CEREMONIES

THE UNIVERSITY OF ADELAIDE

THE UNIVERSITY
of ADELAIDE

CHANCELLOR'S
Welcome

On behalf of the University of Adelaide may I offer sincere congratulations to you, our new graduates.

You have joined a distinguished community of University of Adelaide alumni that spans the globe.

As a graduate of the University of Adelaide you hold a degree that is recognised and valued around the world. Our graduates have gone on to be pioneers and leaders in many fields – from science, medicine and engineering, to law, the social sciences and the performing arts. They have won Nobel Prizes, distinguished themselves in politics and the arts, and helped to improve the lives and wellbeing of countless communities.

The University of Adelaide is committed to providing an inspiring university experience and producing talented and skilled graduates. I hope that your skills and the friendships that you have made will endure throughout your life.

You should be proud today of your achievement in completing your studies, which is the first step on what I trust will be a satisfying and exciting career.

I would also take this opportunity, on behalf of the University, to thank those who have supported you and, in many cases, have made it possible for you to be here today.

You will always remember the University of Adelaide, and I hope you will consider it a significant part of your life, not just the past few years while studying, and not just today but forever. I encourage you to join our network of alumni and enjoy the benefits of a long association with your University.

My congratulations to you all.

Rear Admiral the Honourable Kevin Scarce
AC CSC RAN (Rtd)
Chancellor

Message from the
VICE-CHANCELLOR AND PRESIDENT

Congratulations on graduating from one of Australia's leading universities.

This ceremony marks the culmination of years of study that now place you into lifelong membership of the University of Adelaide alumni – a group spread across all corners of the globe.

And you follow in the footsteps of extraordinary individuals, including some who have redefined the world as we know it, and many others who are changing their communities for the better each day. Your University of Adelaide degree will open doors to new, transformational opportunities.

Today is about celebrating your achievements with family, friends, members of staff and fellow graduates. I strongly encourage you to maintain those professional connections you have made here: many of them will stay with you for life.

Use your knowledge wisely, be bold and generous in the way you share ideas with others, and always be open to learning.

Well done: you go forward today with the warmest wishes of the University of Adelaide community.

Professor Peter Rathjen
BSc (Hons) (Adel), DPhil (Oxon), Hon DLitt (Tas)
Vice-Chancellor and President

The University of Adelaide
GRADUATION TRADITIONS

ACKNOWLEDGEMENT OF COUNTRY

Ngadlurlu Kaurna miyurna tampinthi. Parna yarta mathanya Wama Tarntanyaku.

University of Adelaide Kaurna yartangka yuwanthi – Tarntanyangga (North Terrace), Waitengga, Thebartonilla, Roseworthyngga kuma. (Lit. the University of Adelaide stands on Kaurna land in Adelaide (North Terrace, Waite, Thebarton and Roseworthy.)

We acknowledge the Kaurna people past and present, the original custodians of the Adelaide plains and the land on which the University of Adelaide campuses are built.

COAT OF ARMS

The University of Adelaide's coat of arms was granted to the University by the College of Arms, London, in 1925. It is the official symbol of the University and the stamp which ratifies every degree parchment bestowed by the University.
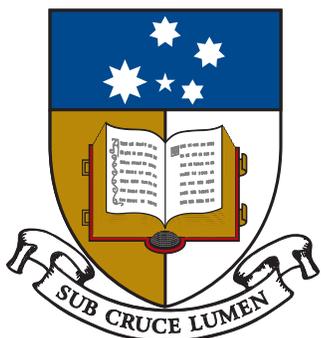
The crest or shield displays an open book and five stars; one of eight, two of seven, one of six and one of five points – representing the Southern Cross. A scroll containing the University's Latin motto sits directly below the shield; Sub Cruce Lumen, meaning 'The light (of learning) under the (Southern) Cross'.

BONYTHON HALL

Bonython Hall is the University of Adelaide's "great hall". It was built in the years of 1933-1936 using a generous donation of over £50,000 from renowned public benefactor Sir John Langdon Bonython.

Planned construction of Bonython Hall was surrounded in controversy. Colonel William Light, Surveyor-General for the City of Adelaide, had an original vision to extend Pulteney Street north towards North Adelaide. The Adelaide City Council was keen to see his plans carried out.

Following much debate, it was City Alderman and lawyer George McEwin who was able to convince the City Council of the University's master plan and evolving architectural beauty. Further, he pointed out that the City Council had no legal prerogative to construct roads on the private property of the University.

Consequently construction of the great hall began. This proved a critical juncture in the University's history - resulting in the University of Adelaide expanding to become one of the most picturesque campuses in the country today.

Today, Bonython Hall is home to all onshore graduation ceremonies and a number of official University events, including the annual Carols on Campus event in December.

ABOUT THE ORGAN

The organ in Bonython Hall was installed in 2002. Made in England to a tonal design by the leading Dutch firm Johannus Orgelbouw, it uses custom-built speakers to reproduce digital recordings of individual organ pipes with the acoustic qualities of a piped instrument. The four manual instrument is the largest of its type in Australia.

UNIVERSITY MACE

Thousands of years ago the Mace, a heavy club weighted at one end, was used as a blunt weapon in battle. In the sixteenth century the Mace came to be used more ceremonially – representing a symbol of protection of the King. Today, the Mace is celebrated as a symbol and warrant of office, particularly of royal or ecclesiastical office, and of institutions deriving authority from the Crown or Church.

The University of Adelaide Mace was designed by Mr I. Milward Grey of the School of Fine Arts, North Adelaide, and was made under his personal supervision by an Adelaide firm of silversmiths.

The Mace is 24 inches in length and is made of silver gilt throughout. Seventy-three ounces, just over 2kg, of metal was used in its manufacture. The Mace head forms an orb, representing the world, and features a book, a symbol of learning, and a design of gum leaves on matted ground. On either side of the orb, the University's Coat of Arms is featured along with the motto: *Sub Cruce Lumen*.

The University Mace was first carried by President of the Students Council, K H Boykett, at a Jubilee procession at St Peter's Cathedral in 1926, marking the 50th anniversary since classes first commenced.

The traditional role of the Mace Bearer in the University of Adelaide graduation ceremony is to protect the Chancellor, meaning the bearer of the Mace always precedes the Chancellor in the academic procession.

ACADEMIC DRESS

Academic dress, including the full-length robe, hood and classical headwear, dates back to the medieval 12th and 13th centuries in Europe when universities, as we know them today, were developing.

The regalia were originally worn daily by university scholars for reasons of warmth and to reflect their status in society. The sense of purpose and propriety evoked by formal academic dress has ensured the tradition has been preserved over the centuries.

In contemporary times, academic dress is largely reserved for graduation ceremonies and formal university events.

Gown

University of Adelaide graduates wear black gowns in the Cambridge style, with the exception of:

• Professional Doctorate and PhD candidates whose gowns are black and faced with scarlet

• Higher Doctorate and Doctor of the University candidates who wear scarlet gowns faced respectively with the colour of their discipline or ultramarine blue.

Hood

Professional Certificate and Sub-bachelor graduates do not wear a hood.

Other graduates wear a black hood that displays a colour representative of their discipline area, except that:

• Postgraduate coursework candidates wear a black hood lined in white

• Research masters wear a black hood lined in scarlet

• PhD, Higher Doctorate and Doctor of the University candidates wear a scarlet hood lined in scarlet.

Headwear

Graduates receiving a Professional Certificate, Sub-bachelor Certificate or Diploma, Bachelor, Honours, Graduate Certificate or Diploma or Masters qualification wear a black trencher cap or mortarboard.

Graduates receiving a Professional Doctorate, PhD, Higher Doctorate, Doctor of Medicine or a Doctor of the University wear a bonnet of black velvet.

*Creative Arts
and Architecture*
Cendre Green

Business
Helvetia Blue

*Engineering and related
technologies*
True Purple

Health Sciences
Eosin Pink

*Natural and
Physical Sciences*
Primuline Yellow

*Society, Culture
and Education*
Pale Violet Grey

Information for
GUESTS

The following information is provided to ensure the comfort, safety and enjoyment of everyone attending the ceremony. Please take a moment to read before the ceremony commences.

GENERAL

Toilets are located at the entrance to the hall, downstairs from the foyer.

A water cooler for your use can also be found in the foyer.

Please supervise babies and young children at all times. If they are disturbing other guests, please take the opportunity to relocate to the foyer.

Please switch off or silence mobile phones for the duration of the ceremony.

APPLAUSE

Guests are invited to applaud each graduate as they are presented on stage.

PHOTOGRAPHY

Guests are welcome to take photographs during the ceremony. However, you are requested not to disrupt the ceremony by leaving your seat or using flash photography.

Professional photographers will take a photograph of each graduate as they are presented on stage. These photographs will be available immediately after the ceremony from GFP Graduations, who will be temporarily located on the Goodman Lawns.

Alternatively graduates can order their stage photos online after the ceremony.

SAFETY AND EMERGENCY

For safety reasons guests may not enter the galleries upstairs or sit on the steps in the balcony area.

Emergency exits are marked on the plan below. Please note your nearest exit.

The emergency assembly point is on Goodman Lawns, west of the hall.

If it becomes necessary to evacuate Bonython Hall, an announcement will be made. Follow the directions of the Ushers, exit the hall and move to the assembly point. Guests in wheelchairs should exit the hall via the eastern entrance.

ADDITIONAL INFORMATION

Student Ushers in white shirts can provide further information and assistance.

The ceremony will last around 70 minutes.
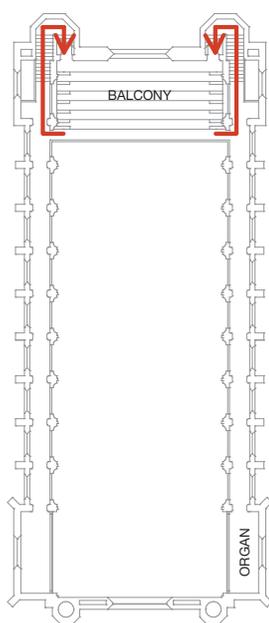
South gallery level
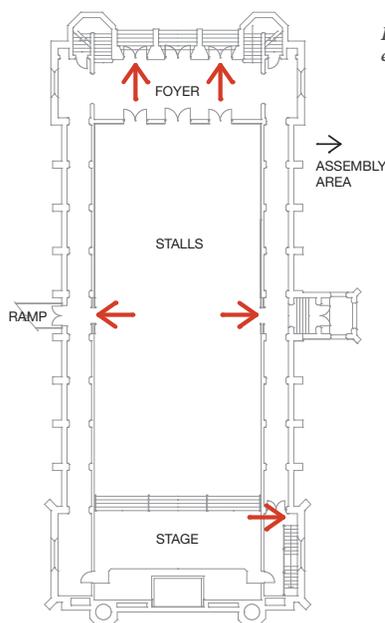
Ground floor

Bonython Hall emergency exits

Order of PROCEEDINGS

Before the ceremony, music will be played on the Bonython Hall Organ by Haowei Yang (Student in the Elder Conservatorium of Music)

JS Bach: Schmücke dich, o liebe Seele and L Vierne: Carillon de Westminster

THE ACADEMIC PROCESSION *(please stand)* will enter Bonython Hall.

Trumpet Voluntary by Jeremiah Claire, arr. Iveson, performed by the Elder Conservatorium Brass Ensemble.

• Marshals
• Doctorates in all Faculties/Schools
• Heads of Affiliated Colleges
• Academic and Graduate Staff
• Executive Deans and Heads of Schools
• Senior University Officials
• The Valedictorian
• The Orator
• The Vice-Chancellor
• The Mace Bearer
• The Chancellor

THE NATIONAL ANTHEM to be sung by
Charlotte Kelso DipA, BA/BMus(Clas).

Australians all let us rejoice, For we are young and free;
We've golden soil and wealth for toil, Our home is girt by sea;
Our land abounds in nature's gifts Of beauty rich and rare;
In history's page, let every stage Advance Australia Fair.
In joyful strains then let us sing, Advance Australia Fair.

Guests to be seated

WELCOME BY THE CHANCELLOR
Rear Admiral the Honourable Kevin Scarce AC CSC RAN (Rtd)

**THE OCCASIONAL ADDRESS** to be given by
Professor Hugh Possingham FNAS FAA

THE MACE BEARER THANKS THE ORATOR
Ms Eleanor Audrey Day will thank the orator

CERTIFICATION STATEMENT by the
Vice-Chancellor Professor Peter Rathjen
BSc (Hons) (Adel), DPhil (Oxon), Hon DLitt (Tas)

PRESENTATION OF AWARDS by Faculty/School

VALEDICTORY ADDRESS given by Mr Tobin Max South

CLOSING REMARKS given by the Rear Admiral
the Honourable Kevin Scarce AC CSC RAN (Rtd)

THE ACADEMIC RECESSION *(please stand)* The academy will leave Bonython Hall in reverse order to that of entry, followed by the new graduates. During the recession, the organist will play *CM Widor: Toccata from Symphony No. 6.*

Guests are requested to remain standing while
the procession is leaving Bonython Hall.

Presentation of AWARDS

Conferral of the
HONORARY DEGREE

Presented by the Vice-Chancellor and President
Professor Peter Rathjen BSc (Hons) (Adel), DPhil (Oxon), Hon DLitt (Tas)

Doctor of the University (honoris causa)
Professor Hugh Possingham FNAS FAA

Faculty of
ENGINEERING, COMPUTER AND MATHEMATICAL SCIENCES

Presented by the Executive Dean of the
Faculty of Engineering, Computer and Mathematical Sciences,
Professor Anton Middelberg BE (Hons), PhD, MA, FIChemE, FTSE

To the Degree of Bachelor of Mathematical Sciences

Joshua Nicholas Bean...Applied Mathematics and Statistics

Alexander Robert Bennett .... Applied Mathematics

Nikky Gleeson .... Statistics and Applied Mathematics

William Jarvis Jordan...Applied Mathematics and Statistics

Andrew Jonathon Martin ....Applied Mathematics and Statistics

Curtis William Murray .... Pure Mathematics

Giorgio Ross Profiris .... Statistics

Henry Maxwell Stuklis .... Applied Mathematics

Grace Eilish Murphy Wright......................... Statistics and Applied Mathematics

To the Degree of Bachelor of Mathematical Sciences (Advanced)

Patrick James Bowe

Joshua Mitchell Dent

Lachlan Paul Keen

Vince Laurendi

Miriam Catharina Slattery

Riley David Snoswell

Stuart Benjamin Teisseire

To the Degree of Bachelor of Mathematical and Computer Sciences

James William Beck .... Statistics and Pure Mathematics

Alisha Kaye Child................................ Statistics and Applied Mathematics

Chelsea Nicole Dyer .... Statistics

Nikolaos Flabouris......................... Computer Science

Scarlett May Groom-Ransom.................................... Computer Science and Statistics

Lily Molly Chapman Harris......................... Statistics

George Yu-Feng Mao.................... Computer Science

Kieran Emmett O'Loughlin .... Applied Mathematics and Pure Mathematics

Nuala Janet O'Neill .... Applied Mathematics

Leigh Charmain Palmer.................................... Applied Mathematics

Muhamad Khairul Bin Shahabuddin .... Computer Science

Tobin Max South.. Applied Mathematics and Statistics

Maxwell James Standen .... Computer Science

Alan James Stoate.................................. Computer Science

Archana Venkata Vadakattu......................... Computer Science

Michael Bradley Vincent .... Computer Science

Brent John Williams .... Computer Science

To the Degree of Bachelor of Computer Science

Kostantinos Nicholas Bakoulis

Trent Robert Bowden

Jiaqi Cao

Jennifer Lei Cheung

Lei Feng

Teng Wei Gan

James Gaskell

Yaojie Geng

Joshua Petrus Groot

Runqi Guo

William Brett Hingston

Trek Reynell Hopton

Julius Albert
William Klaebe .... Computer Science

Andrew Peter Lelos

Yu-Wen Lin

Thuy Gia Lu

Sean Zachary Owen Marciniak

Jarred Connor McEvoy

Bale Jackson Tanoai O'Connell

Victor Daniel Overduin

Joel Andrew Pearson

Vincent Jean Portella

Scott William Ramsay

Brittany Anne Reid

Nicholas Peter Robertson

Linlin Song .... Computer Science

Zhuojian Tan

Thien Tran

Jordan Chang Yi Trieu Lor

Chaoran Wang

Wenxin Wang

Zhenghui Wang

Bowen Yang

Hideki Yoshinaga

Zhái Yǒngān

Chao Zhang

Yang Zhao

Charles Jonathon Zyzniewski

To the Degree of Bachelor of Computer Science (Advanced)

Naomi Li-Mei Chan

Roland Lloyd Croft

Martin John Davis

Abdul Mohsi Jawaid

Matthew Michael Kelly

Ryan Matulick

Sioli Tiafau O'Connell

Christo Adonis Pyromallis

Jack Donald Richardson

Seyed Farbod Taghizadeh Motlagh

Hin Tran

To the Honours Degree of Bachelor of Mathematical Sciences

Ryan Thomas Brown .... Statistics

Saranzaya
Magsarjav .... Applied Mathematics

To the Honours Degree of Bachelor of Mathematical and Computer Sciences

Eleanor Audrey Day .... Statistics

Adam
Hugh Hamilton......................... Applied Mathematics

Samuel George
Andrew Rogers.. Statistics

Michael John Sandford................................. Statistics

To the Honours Degree of Bachelor of Engineering

Markus James Andersons	Software Engineering
Matthew Joseph Astachnowicz	Computer Systems Engineering
Benjamin James Axford	Software Engineering
Lachlan Joshua Bateman	Electrical and Electronic Engineering
Julius Christian Postanes Bullas	Electrical and Sustainable Energy
Isaac Burgess	Electrical and Electronic Engineering
Matthew Jay Mitchell Burrows	Electrical and Electronic - Avionics
Zhi Cao	Electrical and Electronic Engineering
Jiawei Chen	Electrical and Electronic Engineering
Shi Yik Chin	Electrical and Electronic Engineering
Paul Citti	Electrical and Electronic Engineering
Christian Colombo	Electrical and Electronic Engineering
Sasha Meriam De Vries	Electrical and Electronic Engineering
Munirah Taliah Devries	Electrical and Electronic Engineering
Ding Guànmù	Electrical and Electronic Engineering
Sandul Fernando	Telecommunications
Nikolaos Flabouris	Computer Systems Engineering
Huey Min Gan	Software Engineering
Xing Yang Gan	Electrical and Electronic Engineering
Jacob Christopher Joseph Gonzalez	Software Engineering
Edward Burton Gray	Electrical and Electronic Engineering
Jaskirat Singh Grover	Software Engineering
Hanchao Guo	Electrical and Electronic Engineering

Sam Edwin Haberman.............................. Electrical and Electronic Engineering

Xue Yan Han.......................... Electrical and Electronic Engineering

Boqi Hu .... Electrical and Electronic Engineering

Carl David Kassebaum................................... Software Engineering

Matej Kepeski................................. Electrical and Electronic Engineering

Alex Paul Kiddy............................ Electrical and Electronic Engineering

Dennis David Kimtai.......................... Electrical and Electronic Engineering

Tsz Fung Lam............................. Electrical and Electronic Engineering

Jake Lane .... Software Engineering

Samuel Andrew Lewis........................... Software Engineering

Binhao Li............................... Electrical and Electronic Engineering

Pei Ying Lim .... Electrical and Electronic Engineering

Xinlei Liu.............................. Electrical and Electronic Engineering

Joshua Loh............................... Software Engineering

Blake Alastair Luetkens .... Electrical and Electronic Engineering

Alexander Albert John Makarowsky ....Telecommunications

Josh Matthew Maloney .... Software Engineering

Jack Harry Mansfield............................... Electrical and Electronic Engineering

George Yu-Feng Mao.......................... Electrical and Electronic Engineering

Robert McAuley............................... Electrical and Electronic Engineering

James William McManus................................... Software Engineering

David Cameron McQueen............................... Electrical and Electronic Engineering

Mitchell Lewis Mickan.................................. Electrical and Electronic Engineering

Lindsay John Millard.................................. Electrical and Electronic Engineering

Nathan Misaghi................................. Electrical and Electronic Engineering

Alwin Kai Ng................................... Electrical and Electronic Engineering

Nuala Janet O'Neill................................... Electrical and Electronic Engineering

Jacob Maynard Parker .... Electrical and Electronic Engineering

Ovini Amaya Dewmin Perera...................... Electrical and Electronic Engineering

Michael Pfeiffer.................................. Electrical and Electronic Engineering

Denton Phosavanh .... Software Engineering

Jessica Phuong .... Software Engineering

Hamish Christopher Pratt................................... Software Engineering

Jonathon James Redding .... Software Engineering

Kaifeng Ren........................... Electrical and Electronic Engineering

Mohammad Idrees Rezai .... Software Engineering

Matthew Reginald Kevin Roylance .... Electrical and Electronic Engineering

Lucas David Sargent-Mackay...................... Electrical and Electronic Engineering

David Christopher Scavarelli .... Software Engineering

Muhamad Khairul Bin Shahabuddin .... Electrical and Electronic Engineering

Narayan Shanmuganathan.................................. Computer Systems Engineering

Chengjun Shao...................................... Electrical and Electronic Engineering

Inderbir Singh .... Electrical and Electronic Engineering

Maxwell James Standen.................................. Electrical and Electronic Engineering

Pouria Sterling .... Software Engineering

Takudzwa Blessing Taziva .... Computer Systems Engineering

Yasasa Saman Bandara Tennakoon .... Electrical and Sustainable Energy

Sam Thomas.......................... Electrical and Electronic Engineering

Bradley Scott Pearce Thompson .... Electrical and Electronic Engineering

Dillon John Thyer .... Software Engineering

Joseph Anthony Tripodi .... Software Engineering

Archana Venkata Vadakattu.............................. Electrical and Electronic Engineering

Michael Bradley Vincent .... Electrical and Electronic Engineering

Bruk Fekadu Waldron .... Electrical and Electronic Engineering

Han Wan .... Sustainable Energy Engineering (Electrical)

Qiuyang Wang .... Electrical and Electronic Engineering

Ziyuan Wang.......................... Electrical and Electronic Engineering

Maxwell James Weppner .... Electrical and Electronic Engineering

Brent John Williams................................ Electrical and Electronic Engineering

Wong Tin Yan ....Telecommunications

Zheng Xu .... Electrical and Electronic Engineering

Zhouyajie Xu............................Telecommunications

Yao Yuan .... Electrical and Electronic Engineering

Hosoo Yoon........................... Electrical and Electronic Engineering

Kevin Zhao.. Software Engineering

To the Honours Degree of Bachelor of Computer Science

Brock
Angus Campbell ....Computer Science

Kevin Dang ....Computer Science

Benjamin
Brian Morris.................................Computer Science

Yu Tian ....Computer Science

To the Degree of Master of Software Engineering

Ngoc An Do

Junwei Li

Qiaoyang Luo

Phan Huy Nguyen

Qiming Shao

Tam Minh Phan

Xiyu Zhang

To the Degree of Master of Computing and Innovation

Nikhil Bisne

Yiran Chen

Wei Cui

Devi Sambasiva Rao Goli

Mingjie Han

Sohaib Irshad

Fengshan Jing

Mahmoodreza Korehi

Jiaying Li

Yuqi Li

Zhengjian Li

Bowen Liu

Jingdie Liu

Xiaojie Lu

Yunqing Qi

Yu Qin

Li Qiu

Yuqing Sha

Min Su

Ruoxi Sun

Ziheng Tan

Kexin Tong

Guanhua Wang

Ziyan Wang

Xin Wei

Zheng Xu

Aojie Yang

Hao Zhang

To the Degree of Master of Computer Science

Nicholas Eric Manser

Xiangkang Pan

Lujun Weng

Suraj Yathish

To the Degree of Master of Engineering (Electronic)

Hanzhi Gao

Chengcheng Mao

Hongwen Qu

Sayyed Samir Ali

Chenyuan Wang

To the Degree of Master of Engineering (Electrical)

Yihan Cao

Pu Cheng

Guixi Deng

Jonathon Michael Harvey

Junxi Liu

Majing Si

Muhammad Shahzad Siddique

Lanbo Song

Junbang Tian

Yixiao Zhang

Qingyu Zhu

To the Degree of Master of Philosophy

Samuel Drew Collins

For a thesis entitled: A Novel FR 13 Risk Assessment of Corrosion of Pipeline Steel in De-aerated Water

Thesis abstract: In steady-state processing there are naturally occurring random fluctuations in parameter values about a set mean. These are not sufficient to be considered transient, as a random change in one is off-set by a change in another - with this the output remains seemingly steady.

A research program was undertaken to gain unique insight into how naturally occurring fluctuations in steadystate processes can be transmitted and impact in progressively complex processes.

Microbiologically Induced Corrosion (MIC) a globaly significant corrosion problem was selected as a stringent test. Results highlight that MIC is a combination of successful and failed operations.

Leslie George Jenkinson

For a thesis entitled: Approaches to Fines Production in the Walloons Subgroup, Surat Basin, Queensland

Thesis abstract: In this study, the root causes for fines generation is characterised in coal seam gas wells in the Jurassic Walloons Subgroup (WSG), Surat Basin, Queensland, Australia. The Basin has, in places, exceptional coal permeabilities and pre-perforated liners are historically the standard completion strategy. Fines production appears to be a result of unusual fluid, rock interaction, leading to a deterioration and disaggregation of interburden rocks. Importantly results do not support classic 'geomechanical' fines generation. The results presented here underpin strategic changes in well completions which aim to minimise fluid-interburden contact.

Afshin Karami

For a thesis entitled: Development of effective antimicrobial nanocomposites / nanomaterials

Thesis abstract: Microbial infections have a long history of causing serious illnesses for human and animals. The presence of harmful bacteria, especially on the surface of the objects and equipment in hospitals, causes many mortalities for ill patients and is a major global challenge. The metal and metal oxide nanoparticles (NPs) such as Ag, Cu and TiO2 NPs have proven to be effective in killing the bacteria through various mechanisms. This research project is focused on synthesizing of effective nanocomposites/ nanomaterials with novel characteristics such as rapidness, multi-mode mechanisms and induction in the visible light range.

Angus Hamilton Lewis

For a thesis entitled: Inference of Markovian-regime-switching Models with Application to South Australian Electricity Prices

Thesis abstract: Markovian-Regime-Switching (MRS) models are commonly used for modelling economic timeseries. In electricity pricing, it is common to specify independent regimes, which further complicates the analysis. We can think of these models as a collection of autoregressive processes of order one, where only one process is observed at each time and which one is observed is determined by a (hidden) Markov chain. Until this thesis, there were no computationally-feasible likelihood evaluation and maximisation algorithms, and limited discussions of Bayesian methods, for such models. In this thesis we address these issues and use our methods to investigate the South Australian electricity market.

Yang Shi

For a thesis entitled: Reinforcement of Natural Rubber using Nanostructured Carbon Materials

Thesis abstract: The performance of natural rubber is mainly related to the types and amounts of fillers. New Carbon nanomaterials were employed as fillers to modify natural rubber with high-performance in this study. After modified by various approaches, the carbon nanomaterials showed good compatibility with natural rubber matrix. It was found that the optimized mass ratio of modified carbon nanotubes to natural rubber is 1:3, while that of modified graphene to rubber is 1:1. Furthermore, when carbon nanotubes and graphene are employed as fillers simultaneously, the synergistic effect occurs to increase mechanical properties of rubber materials.

To the Degree of Doctor of Philosophy

Dr Hassan Ali Mohsin Al-Saadi

For a thesis entitled: Probabilistic Hosting Capacity and Risk Analysis for Distribution Networks

Thesis abstract: The thesis presents several novel methods. The first novelty is the development of a new probabilistic model for estimating the solar radiation incident on residential roofs which is compatible with Australian meteorological conditions. The second is the development of new probabilistic approach called ""probabilistic hosting capacity"" to estimate the hosting capacity of distribution networks. The third one is the utilization of sparse grid technique in handling the uncertainty computations. The last contribution is the new assessment method for quantifying the risk of connecting a large number of correlated DGs into the distribution networks.

Dr Nathan John Anderson

For a thesis entitled: Effects of the Troposphere upon Radio Communications and Implications for Weather Measurement

Thesis abstract: This research uses VHF radio waves to estimate the refractive index of air over a tropospheric propagation path. This is accomplished by accurately measuring the timing of a terrestrial broadcast signal over a path. Methods are developed for making the required measurements by means of a passive bistatic radar setup with a static and cooperative target. Importantly, this research develops novel techniques to relate the propagation of radio waves from weather data. These techniques are important in their own right to identify true propagation paths.

Dr Haneen Reda M Banjar

For a thesis entitled: Personalized Medicine Support System for Chronic Myeloid Leukaemia Patients

Thesis abstract: Despite the remarkable increase in the survival rate of Chronic Myeloid Leukemia (CML) patients treated with first-generation Tyrosine Kinase inhibitors (TKI), some patients discontinued therapy due to intolerance, resistance or progression. These patients may benefit from the use of second-generation (TKI). This research aims to improve the ability to manage CML disease and support physicians in treatment selection by developing a personalized medicine support system that includes two models: a prognostic model and a predictive model to predict molecular response to TKI. Our findings suggest that the system provides treatment recommendations that could help improve overall healthcare for CML patients.

Dr Zhenxi Huang

For a thesis entitled: Metrics and Special Kõhler Geometry on the Moduli Spaces of Higgs Bundles and Hitchin Systems

Thesis abstract: Understanding the special Kahler metric and hyper Kahler metric of Hitchin systems is one of the interesting research topics in geometry. In the beginning of my thesis, we computed and gave explicit formulas for some Hitchin systems.

In the thesis, we also derived a new formula for the Donagi-Markman Cubic which plays a key role in the study of complex Lagrangian fibrations.

In the end, we study the relation between the Donagi-Markman Cubic and topological recursion. Then we conclued that the special Kahler metric of the Hitchin base can be computed by one fibre of the Hitchin system.

Dr Ba Dung Le

For a thesis entitled: Community Detection in Complex Networks

Thesis abstract: This thesis consists of two main parts. The first part presents the meta-LPAm+ algorithm, an efficient algorithm for detecting communities in networks based on modularity optimization. Meta-LPAm+ basically has three iterative steps. The first and second steps propagate labels of nodes, following a greedy search and a guided search respectively, over the network and the third step merges communities to maximize modularity.

The second part presents the GLFR benchmark, a benchmark for evaluating community detection algorithms with heterogeneous community mixing fractions and outliers. GLFR has parameters to control the variation in community mixing fractions and the number of outliers.""

Dr Huu Minh Le

For a thesis entitled: New Algorithmic Developments in Maximum Consensus Robust Fitting

Thesis abstract: This thesis makes several contributions in the algorithms for consensus maximization, which is crucial for the task of robustly estimating the set of parameters of a geometric model in many computer vision applications. The first contribution is a new guided sampling algorithm, which is based on LP-type problems and Monte Carlo Tree Search. The second part contributes a new branch-and-bound algorithm that solves for the globally optimal Mobius transformation. Finally, this thesis proposes two deterministic algorithms, one is based on Frank-Wolfe and the other is based on Alternating Direction Method of Multipliers (ADMM) to approximately optimize the maximum consensus problem.

Dr Suwichaya Suwanwimolkul

For a thesis entitled: Adaptive Markov Random Fields for Structured Compressive Sensing

Thesis abstract: Compressive sensing (CS) has underpinned recent developments in signal compression and acquisition systems. Recent progress in CS has attempted to further reduce the measurements by employing signal structures.

This thesis presents a novel structured sparsity model, namely, adaptive Markov random field (MRF) to flexibly capture and adapt for different signal structures. New signal recovery methods are developed to effectively estimate the parameters and the underlying graph of the MRF, given measurements. We present theoretical analysis and extensive experimental results to demonstrate the performance improvement with the adaptive MRF and application to wearable sensor-based human activity recognition.

Dr Nguyen Khoi Tran

For a thesis entitled: A Reference Architecture and a Software Platform for Engineering Internet of Things Search Engines

Thesis abstract: The Internet of Things Search Engines (IoTSE) supports human users and software systems to detect and retrieve the content generated by networked sensors and actuators in the Internet of Things. This thesis aims at proposing the reference architecture and the software infrastructure to support leveraging prior components and architectural patterns in engineering IoTSE instances. The key contributions of this thesis include a reference architecture that describes the constituting components and architectural patterns of an IoTSE instance, and software infrastructure that supports utilizing the reference architecture in developing reusable, composable IoTSE components and engineering IoTSE instances from those components.

Dr Peng Wang

For a thesis entitled: Long-Term Memory for Cognitive Architectures: A Hardware Approach Using Resistive Devices

Thesis abstract: This thesis describes a new hardware memory design optimised for long-term memories in cognitive architectures. The memory performs parallel knowledge search and supports cognitive processing operations in memory. Using resistive devices instead of transistors in the memory cells improves area density by over an order of magnitude compared to CMOS implementations. The cognitive processing operations are achieved by approximating well-established cognitive activation functions using resistive devices. An experimental memory scheme of spreading activation using hyperdimensional representations is proposed, which shows the new memory's ability of contextual knowledge retrieval for some recognition tasks.

Dr Chamara Saroj Weerasekera

For a thesis entitled: Deeply Learned Priors for Geometric Reconstruction

Thesis abstract: This thesis investigates image-based priors and features learned via deep learning methods for dense geometric reconstruction of scenes.

Traditional dense 3D reconstruction techniques rely on handcrafted priors and features to ""fill in"" parts of 3D maps supported by limited or less-informative data. In order to model reconstructions more accurately, our work proposes image-dependent learned priors incorporating single-view surface normal and depth predictions by Convolutional Neural Networks (CNNs). Additionally, we design and learn an efficient CNN to predict visual features best suited for multi-view pixel matching, an integral component of visual SLAM (Simultaneous Localisation and Mapping) and structure from motion algorithms.

Additional AWARDS

Faculty of ARTS

To the Diploma in Languages

Naomi Li-Mei Chan

Alex Paul Kiddy

Riley David Snoswell

Faculty of THE PROFESSIONS

ADELAIDE BUSINESS SCHOOL

To the Degree of Bachelor of Finance

Christian Colombo

Edward Burton Gray

Xue Yan Han

Lucas David Sargent-Mackay

Narayan Shanmuganathan

Inderbir Singh

Takudzwa Blessing Taziva

Bradley Scott Pearce Thompson

THE UNIVERSITY MEDAL

Presented by the Vice-Chancellor and President Professor Peter Rathjen BSc (Hons) (Adel), DPhil (Oxon), Hon DLitt (Tas)

Brock Angus Campbell

Eleanor Audrey Day

Alexander Albert John Makarowsky

Your
ALUMNI COMMUNITY

As a graduate of the University of Adelaide,
we welcome you to the alumni community.

Our alumni have a history of shared experiences and memories, understood by those who came before you, those who studied with you and those who will soon join the alumni community.

As part of the University family, you receive professional support throughout your career, access to lifelong learning and a community to share and celebrate your achievements.

Being part of our alumni community unlocks access to a range of opportunities including:

BENEFITS

Enjoy access to a range of alumni benefits and services including complimentary Barr Smith Library membership for a year after you graduate, after-hours parking permits, travel insurance and much more. For more information visit ua.edu.au/alumni/benefits

NETWORKS

Alumni Networks help alumni connect with each other and the University with opportunities for career development and collaboration. Continue your connection and interaction with other alumni and the University by attending one of our alumni network events. Find out about upcoming network events: ua.edu.au/alumni/networks

PUBLICATIONS

We offer a range of diverse and informative publications to keep you informed of the latest news and events across the University.

Enjoy reading our biannual magazine lumen for uplifting stories of the work and lives of alumni, and stay updated with the latest University news in our monthly Alumni e-News. Read the latest edition of lumen at ua.edu.au/alumni/lumen

REUNIONS

Alumni Reunions provide the opportunity for all alumni – students and staff alike – to revisit the people and places that made their time at the University of Adelaide unique. Find an upcoming reunion at ua.edu.au/alumni/reunions

ALUMNI COUNCIL

As an alumnus, you have the right to vote or nominate members for the Alumni Council which represents the global alumni community's views. The Alumni Council commits to supporting a dynamic and relevant alumni program, for the mutual benefit of alumni and the University.

AWARDS

Our alumni's influence on the world stage is profound, from their efforts advancing the common good to inspiring others to think innovatively and creatively. We are proud to celebrate and acknowledge these achievements each year through an array of alumni awards.

MAKE A DIFFERENCE

A gift to the University directly supports students and researchers in realising their potential. Student scholarships are a priority, so that our best and brightest will not miss out on the transformative influence of a tertiary education because of their financial circumstances. Contributions towards cutting-edge, high-impact research ensure that we can tackle the most challenging problems of our time.

We value support in all forms, no matter how big or small. Your gift will have a lasting impact.

To find out how you can support the University, please visit ua.au/give or call +61 8 8313 5800.

KEEP IN TOUCH

Updating your details online ensures you stay connected with the University wherever you are in the world. Update your details at: ua.edu.au/alumni/reconnect

Find out more about our alumni program:

T: +61 8 8313 5800
E: alumni@adelaide.edu.au
W: www.adelaide.edu.au/alumni