UniSQ College Research Newsletter #3– 2022

Dear Colleagues,

Welcome to the third **USQ College Research Newsletter** for 2022. These periodic newsletters will contain updates from the Research activity in the College, including exciting opportunities and reasons to celebrate! We also have a new section for you to invite colleagues to join you on research projects or to promote projects you are editing which we have called, *Call for Collaborators or Contributors.*

1. Grants

 Angela Windsor and academics from Southern Cross University College have been successful in obtaining an external competitive grant of up to $8000 from University English Centres Australia (UECA) to investigate integrated assessments in direct entry university English language programs. Led by Ms Zoe Hancock – ELP Manager SCU College, the cross-institutional team will be preparing a systematic literature review on the topic: "*Toward Person-Centred and authentic assessments: Enmeshing Employability Skills in ESL Direct Entry University Integrated Assessment Tasks".* The team will be providing details about the project in a video at the next UECA Assessment Symposium 2022 - Assessment Practice in a Changing World - to be held online from the 18th of October 2022. Well done Angela!
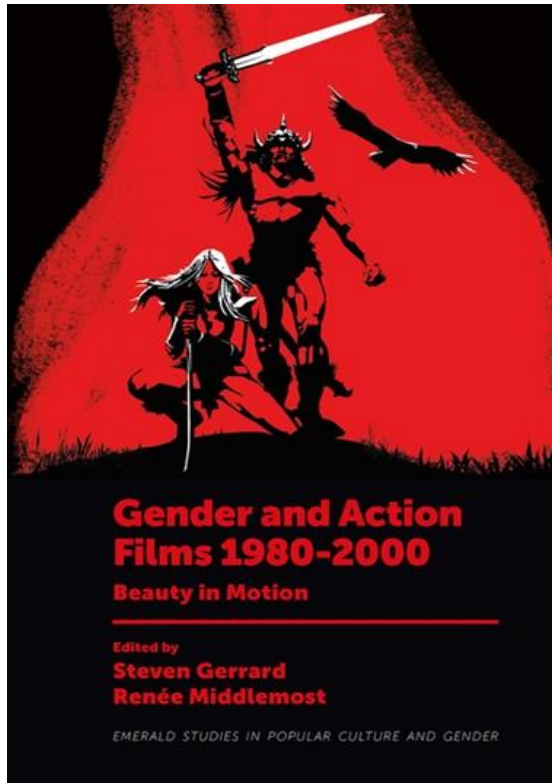
2. Recent and forthcoming publications

Congratulations to College colleagues on their recent and forthcoming publications across a host of disciplines.

These publications are critical to our academic endeavour and to USQ's research culture. In 2022 we have set a goal of 20 Q1 or equivalent items and we are getting there!

Dr Naomi Ryan has a co-edited book due out in November, *Deconstructing Doctoral Discourses Stories and Strategies for Success,* edited by Deborah L. Mulligan, Naomi Ryan and Patrick Alan Danaher. The book presents real world stories of successful strategies for doctoral students and supervisors told from the coal face. It covers the narratives of doctoral study and supervision from beginning to beyond.

https://link.springer.com/book/9783031110184

Associate Professor Susan Hopkins has produced further publications including a Q1 article and Q1 equivalent book chapter in the College's research theme of humanities and popular culture:

Susan Hopkins (2022) "Rihanna's empire of pain: sexualised violence and the black Madonna", *Celebrity Studies*, DOI: 10.1080/19392397.2022.2115706 (Scimago ranked Q1)

Susan's most recent book chapter titled "From Total Recall to Last Action Hero(ine): Sex, Violence and Sharon Stone in the 1990s" has also been accepted into the forthcoming international edited collection in cultural studies due out in November, *Gender and Action Films 1980-2000: Beauty in Motion.*

Gender and Action Films 1980-2000
Beauty in Motion

Edited by
Steven Gerrard
Renée Middlemost

EMERALD STUDIES IN POPULAR CULTURE AND GENDER

Dr Ana Stevenson has published "Screening Women's History in the Film *Suffragette* (2015): Between Intersectional Feminist Activism and Historical Memory," *Women's History Review*, Special Edition: "Mobilising Affect, Trauma, Memory: The Politics of Gendered Memory and Gendered Silence," eds. Sharon Crozier-De Rosa and Vera Mackie (*ahead-of-print* 2022).

Check for updates

Forecasting Daily Flood Water Level Using Hybrid Advanced Machine Learning Based Time-Varying Filtered Empirical Mode Decomposition Approach

Mehdi Jamei[1] · Mumtaz Ali[2,5] · Anurag Malik[3] · Ramendra Prasad[4] · Shahab Abdulla[5] · Zaher Mundher Yaseen[6,7,8]

Dr Shahab Abdulla and his colleagues have published in *Water Resources Management* on "Forecasting Daily Flood Water Level Using Hybrid Advanced Machine Learning Based Time-Varying Filtered Empirical Mode Decomposition Approach."

Dr Shahab Abdulla has also been accepted for publication in the Q1 journal *IEEE Intelligent Transportation Systems Magazine* on "Detecting distorted vehicle licence plates using novel pre-processing methods with hybrid feature descriptors."

Shahab and his colleagues have also been accepted into the *IEEE Access* journal with "Developing Smart Self Orienting Solar Tracker for Mobile PV Power Generation Systems." Yousif R. Al-Saadi, Monaf S. Tapou, Areej A. Badi, **Shahab Abdulla**, Mohammed Diykh.

Developing Smart Self Orienting Solar Tracker for Mobile PV Power Generation Systems

Yousif R. Al-Saadi[1], Monaf S. Tapou[1], Areej A. Badi[1], Shahab Abdulla[2], Mohammed Diykh[2,3,4]

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[3]University of Thi-Qar, Education College for Pure sciences, computer sciences department, Iraq
[4]Information and Communication Technology Research Group, Scientific Research Centre, Al-Ayen University, Iraq

Dr Mumtaz Ali has also recently published a very impressive number of Q1 articles outlined below. Learn more about our new colleague and prolific research leader Mumtaz Ali in the researcher profile section of the newsletter below!

Mumtaz Ali (2022) Designing a Multi-Stage Expert System for daily ocean wave energy forecasting: A multivariate data decomposition-based approach, Applied Energy, DOI: https://doi.org/10.1016/j.apenergy.2022.119925 in Scimago ranked Q1 journal.

Mumtaz Ali (2022) Air quality monitoring based on chemical and meteorological drivers: Application of a novel data filtering based hybridized deep learning model, Journal of Cleaner Production, DOI: https://doi.org/10.1016/j.jclepro.2022.134011 in Scimago ranked Q1 journal.

Mumtaz Ali (2022) Coupled online sequential extreme learning machine model with ant colony optimization algorithm for wheat yield prediction, Scientific Reports, DOI: https://doi.org/10.1038/s41598-022-09482-5 in Scimago ranked Q1 journal.

Mumtaz Ali (2022) Forecasting Daily Flood Water Level Using Hybrid Advanced Machine Learning Based Time-Varying Filtered Empirical Mode Decomposition Approach, Water Resources Management, DOI: https://doi.org/10.1007/s11269-022-03270-6 in Scimago ranked Q1 journal.

Mumtaz Ali (2022) Experimental and computational assessment of wetting pattern for two-layered soil profiles in pulse drip irrigation: Designing a novel optimized Bidirectional deep learning paradigm, Journal of Hydrology (Accepted) in Scimago ranked Q1 journal.

3. Conferences, awards and presentations

Members of USQ College have been actively presenting at academic conferences and at events which demonstrate the wider community impact of our work.

Victoria (Tori) Wilson has produced several impressive outputs and achievements across multiple categories of conferences, presentations and awards.

Tori presented her PhD research on trauma-informed TESOL at the Paris Conference on Education on 16th June. Her full conference paper, Liberty, Equality, Fraternity: Trauma-informed English language teaching to adults, was published in the proceedings, found at the link below.

https://papers.iafor.org/submission63834/

Invited to present at Tasmanian TESOL's PD forum, on 5th September, **Tori** also presented a seminar titled English language learners and trauma informed learning. She was also an invited speaker at the English Australia Mental Health SIG Symposium, Brave New World, 3-4th August. She presented Human Informed TESOL: Lessons from trauma-informed practice that help all learners.

Tori was also shortlisted for the English Australia Innovation Award for her work in trauma-informed TESOL which led to a UniSQ news story here:

https://www.unisq.edu.au/news/2022/09/english-australia-innovation-award

Congratulations on these many achievements Tori!

Congratulations also to **Shahab Abdulla**, Mohammed Diykh, Sarmad Alkhafaji, Siuly Siuly and Atheer Y. Oudah for their paper "7448 - An Intelligence Model for Blood Pressure Estimation from Photoplethysmography Signal " which has been accepted for presentation at the *HIS 2022 conference.*

Rand Ameen Azeez, Sarmad Alkhafaji, Mohammed Diykh, **Shahab Abdulla** and Siuly Siuly have also had their paper "3304 - ECG Signals Classification Model Based on Frequency domain Features Coupled with Least Square Support Vector Machine (LS-SVM)" accepted for presentation at the *HIS 2022 conference.*
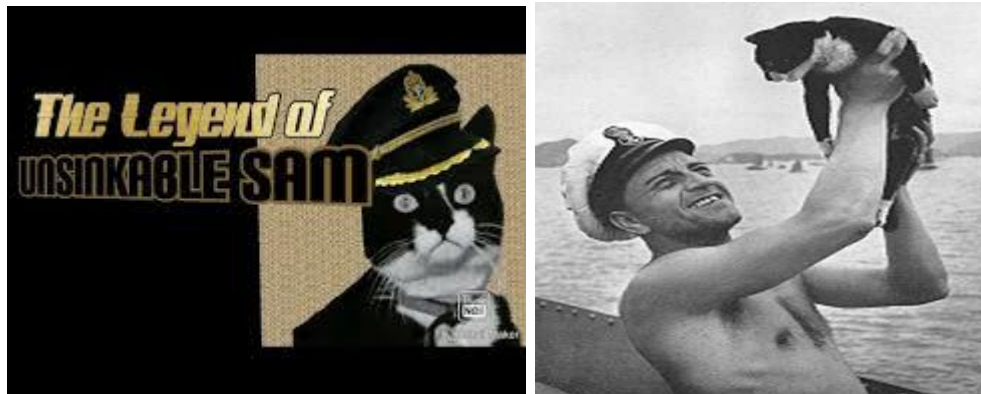
Well done Shahab!

4. Newsmakers, community engagements and successes

In early September, UniSQ College was represented at a public event as part of the Ipswich City Council's *Galvanized: A Festival of Heritage.* **Dr Ana Stevenson** joined historian and writer Toni Risson and Picture Ipswich digital archivist Melanie Rush for the community workshop "Chasing Our Past: Writing History." The panel discussed their experiences of writing history and reflected on strategies for getting started when sharing research about local and family history.

https://www.discoveripswich.com.au/event/galvanized-a-festival-of-heritage/

Marcus Harmes on Unsinkable Sam the WW2 cat & other commentary:

Associate Professor Marcus Harmes has continued his interesting and engaging radio broadcasts - recent topics have included "*Unsinkable Sam the WW2 cat"* (pictured above) who survived three shipwrecks and in other news, the "1750 Calendar Riots." Image sourced from YouTube: https://www.youtube.com/watch?v=gaubIwr8wd8

Associate Professor Susan Hopkins was named in an article titled "Queensland's brightest research minds receive funding to tackle educational challenges" in *The Sector* on July 29th 2022.

5. Researcher Profile

Welcome to **Dr Mumtaz Ali**

Dr Mumtaz Ali is a leading AI and cross-disciplinary researcher in Knowledge & Data Engineering, Deep Learning, Machine Learning, Artificial Intelligence (AI), Advance Fuzzy, and Decision Support Systems.

Mumtaz holds a PhD in Applied Mathematics (Data Science) awarded with the Award of Excellence in Doctoral Research, MPhil & MSc in Mathematics, BSc in Computer Science & Mathematics. Dr Ali's research has a focus on Agriculture, renewable energy, environment, and engineering domains. Dr Ali has received Excellence in Research, University & School Student Publication Awards.

Dr Ali has received a PhD degree from the University of Southern Queensland, Australia, Master of Philosophy and Master of Science from Qaid-e-Azam University, Islamabad, Pakistan and Bachelor of Science from University of Peshawar, Pakistan. Dr Ali has also received competitive fellowships including Postdoctoral Research Fellowship in Data Science and Alfred Deakin Postdoctoral Research Fellow from Deakin University, Australia. Dr Ali has been an invited expert on Editorial Boards for Elsevier, Springer, IEEE and IGI. He has supervised more than 8 HDR students and has graduated 7 Master students/research thesis, three of whom received Distinctions, and Excellence in Master's Research. Dr Ali worked in projects receiving funding (~A$700000) from sources such as Deakin University, Australia and University of Southern Queensland, Australia. He has recognized in the list of the world's top 2% scientists for the years 2019 & 2020 by Stanford University, USA. He has achieved over 70 research publications co-authored with national and international scientists. His publications are cited ~400 times, h-index 38 and SciVal Field-Weighted Citation Index 3.69 placing him among top cited researchers globally!

6. HDR Completions and Activities

In 2022, UniSQ participated in the Virtual Three-Minute Thesis (3MT) Asia-Pacific Competition. Training has been facilitated by **Professor Marcus Harmes** assisted by **Dr Barbara Harmes. Professor Ian Wells** was one of the four member judging panel.

The competition supports doctoral students' capacity to effectively explain their research in three minutes, in a language appropriate to a non-specialist audience.

This year was UniSQ's inaugural Virtual 3MT competition, where the overall winner as chosen by our panel of judges, will go on to represent UniSQ at the 3MT Asia Pacific competition. The third award is the People's Choice award and gives the UniSQ community the opportunity to cast votes for your favourite presentation.

The winners of UniSQ's inaugural Three Minute Thesis (3MT) Competition have now been announced and well done to first place winner Dinuki Seneviratne, second place winner

Hannah Churton, and People's Choice winner Khaled Mohammed Saifullah. Dinuki will now go on to represent UniSQ at the 3MT Asia Pacific Competition with her thesis *Aboriginal traditional bush remedies incorporated into hydrogels – Potential treatment for chronic wounds in remote communities* – good luck Dinuki!

Presentations from UniSQ College included **Kathryn Burke's** three minute thesis titled "Understanding transition from care in North Queensland" (Kathryn is supervised by Dr Naomi Ryan) and Ph.D. researcher, **Farina Riyaz** (below pictured) who is supervised by a team including Shahab Abdulla, Ravinesh Deo and Susan Hopkins.

The topic of Farina's Three Minute Thesis was "Next Generation Image Classification for Intelligent Transportation Systems utilising Quantum Machine Learning" – well done on these excellent presentations!

Jacqueline Honeywood (pictured left) graduated with a Masters of Professional Studies (Research) with a thesis titled "Evaluation of the Culturally and Linguistically Diverse Recruit Preparation Program within the Queensland Police Service." She was co-supervised by **Professor Marcus Harmes** and **Dr Naomi Ryan** (pictured right).

Daniel Dusza, an EdD student supervised by Professor Shirley O'Neill, **Assoc. Prof. Jonathan Green and Dr Heejin Chang** has received the USQ Award of Excellence in Doctoral Research for achieving the highest possible result for a Higher Degree by Research thesis examination. Daniel's thesis was titled "Learning Romaji Before English in Japan: A Study of Orthographic Depth and Interference at the Phoneme and Letter Level in 5th Grade Writing." He graduated on 22 August, 2020.

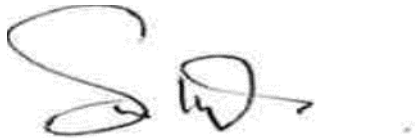### 7. Call for Collaborators or Contributors

Ana Stevenson, managing editor of *VIDA: Blog of the Australian Women's History Network*, is calling for new contributors as part of a new series:

Vera Mackie and Sharon Crozier-De Rosa, "Gender, Emotions, and the Colours of Protest," *VIDA: Blog of the Australian Women's History Network*, ed. Ana Stevenson, 8 August 2022:
[Gender, Emotions, and the Colours of Protest | Australian Women's History NetworkAustralian Women's History Network (auswhn.org.au)](http://www.auswhn.org.au)

Find out more ☞ http://www.auswhn.org.au/blog/colour-series/

*Stay tuned for the next Research newsletter in 2022 and congratulations to all our wonderful researchers! We welcome **all** contributors and contributions from the College team for the next Research Newsletter coming soon, so please send any items not yet mentioned to **Susan Hopkins and Marcus Harmes** for future Newsletter mentions. Don't forget our call for contributors and collaborators section if you are looking for help on a research project and we welcome suggestions and feedback for new sections or categories of research activity reporting. Well done team!*