NEWSLETTER

Society of Crystallographers in Australia and New Zealand

SCANZ President's Report

Dear SCANZ colleagues,

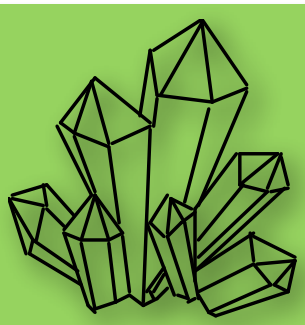
It is with enormous joy and honour that I have been nominated and elected President of this great society. SCANZ has a long history and has had researchers of huge calibre contribute as simple members or via its executive body, council or its commissions to the development of research in Oceania and worldwide. I feel that instead of at "the shoulders of giants" I am just "at their feet", but I will do my best to contribute positively to our community.

The full list of the new Executive and Council elected at the last Business Meeting is as follows:

President: David Aragao (VIC)
Vice-President: Megan Maher (VIC)
Secretary: Jack Clegg (QLD)
Treasurer: Brendan Abrahams (VIC)
Past President: Chris Ling (NSW)
Councillor: Suzanne Neville (NSW)
Councillor: Charlie Bond (WA)
Councillor: Helen Maynard-Casely (NSW)

The current members of the Nominations Committee are:
Joanne Etheridge (VIC)
Brendan Kennedy (NSW)
Mitchell Guss (NSW)

In addition, Peter Czabotar (VIC) continues as Newsletter Editor and Michael Parker (VIC) as ANCCr Representative.



http://scanz.iucr.org/

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SCANZ President's Report

I can't start this report without thanking my recent predecessors Alice Vrielink - past president and now leaving the executive council – for her generous contributions. One contribution that I want to mention is that under Alice's leadership we revamped the idea of commissions that had been disbanded 30 years ago. In the last few years a commission to set the terms of reference and later an education commission were created.

The current members for the Education Committee are:
Jade Forwood (NSW)
Mary Christie (NSW)
Jason Price (VIC)

Although we are all volunteers, we need to accept that the executive council and the council can't be responsible alone for keeping this society alive. We all can and should contribute. Rest assured we the elected members are here to help grow your ideas into positive outcomes. If you have ideas join forces with your colleagues, put a proposal together and we are more than happy to be approached. Who knows more commissions can be created and more outcomes can be generated!

I also want to thank Chris Ling who now moves to the past president role in the council. His role will be very much appreciated, particularly his always sensible advice in areas that started under his presidency namely, the equity policy for SCANZ and its conferences where we now have Helen Maynard-Casely and Jenny Martin on the IUCr committee for equity, but also on the move to a different model of managing SCANZ finances. On the latter the SCANZ Council has resolved to change the way the 1987 Fund investment is managed. Our shareholdings are still unbalanced towards a single company creating some risk and this should be addressed. But more importantly, while most of the shares we own are valuable, the dividends are low, so we are maximising our holdings long term but not our useable operating income. The bread and butter of a society is the regular activities it produces and those are inherently linked to the regular income it can produce. A good model could be to try and keep operational costs funded by membership fees and use the income from the 1987 Fund for strategic initiatives inside what this fund has always been used for, for example to help education and training funding at a higher level for the SCANZ crystallography school, promote science with more invited speakers at Crystal meetings, respond to the growing demand for Maslen scholarships and also do more on promoting our field to the general public. To these ends, Council has resolved to engage a professional financial manager for the 1987 Fund. We are still seeking quotes/proposals for this but have already obtained tax and financial advice as well as recovered control of the SCANZ ABN. The Secretary will email all members early this year requesting their input on those proposals before a decision is made. Note that all decisions concerning the fund (e.g., what fraction of each company shared to hold) will still need to be signed off by Council (constitutionally and hence legally), although the Trustees will continue to be the immediate point of contact in the interests of impartiality and a long-term perspective.

Recently we ran a very successful crystallography school (14-19 January 2019). It was held at The University of Queensland and was one of the biggest we have run with ~70 participants selected. David Turner and Jack Clegg were the chairmen of a larger organizing committee that we thank for their efforts. This continues a tradition of training in Crystallography that we are proud of.

SCANZ has endorsed the Bryan M. Craven Scholarship with a $5k donation to the Pittsburgh Diffraction Society. This will fund a non-American student to attend the ACA Course with strong preference given to those from New Zealand or Australia. The final awardee will be chosen with input from the SCANZ President. The award total will be up to $1,500 depending on travel needs. The next one will be at Northwestern University, June 23-30, 2019 and the deadline for applications is March 31st, 2019. Special thanks to Mark Spackman & Alice Vrielink, but specially to Pat Craven to have followed the late Bryan's request.

In the last year we re-engaged with Science Technology Australia (STA) by sending two of our members to Science Meets the Parliament 2018 and also actively participating in STA activities. Of note is that STA has now a draft template for its member societies to use to build their own equity policies if they wish and we are looking at this as part of the policy that we had already decided to include for our conferences. One of the biggest initiatives of STA in recent years is creating a body of Superstars of STEM. After the great success in 2017 the Superstars for 2019 have been recently announced by the Minister for Industry, Science and Technology, the Hon Karen Andrews MP. We congratulate all those nominated in particularly those that are

our members and encourage our members to support them on their endeavours. Finally, as part of the engagement with STA, SCANZ endorsed the effort by STA to end the ARC delay that we had in 2018 and we will continue to monitor and defend, when possible, the important role of Research and Science in society.

We are actively working on improving the design and structure of our website (https://scanz.iucr.org) and expect that early this year it will be a better tool for interactions with our online visitors. Watch this space.

I could not end this report without a special thanks for the enormous effort that Ted Baker, Chris Squire and Kurt Krause put into organizing the AsCA 2018 / Crystal 32. With more than 450 delegates and a vibrant list of speakers it was a huge success. We also thank all the others involved in the organization including the programme committee, the poster juries, etc. Without them this would not have been possible. In the near future, our joined effort with our Kiwi colleagues will be to increase the membership numbers as they have become incredibly low in New Zealand. If you are reading this from New Zealand please help us in this endeavour.

For reference the next Crystal meeting (Crystal 33) will be held in the Easter of 2020 and we will announce the location in due time. Meanwhile, I expect 2019 to be the year that the organization of the IUCr2023 increases pace. I will be working with Michael Parker and other members of the organizing committee to arrange the bidding and selection of our partner PCO that will share the journey with us until 2023. We would also appreciate members to continue spreading the word, particularly with international colleagues and collaborators. We intend to have a 1-page slide to show in any conference where you are an invited speaker.

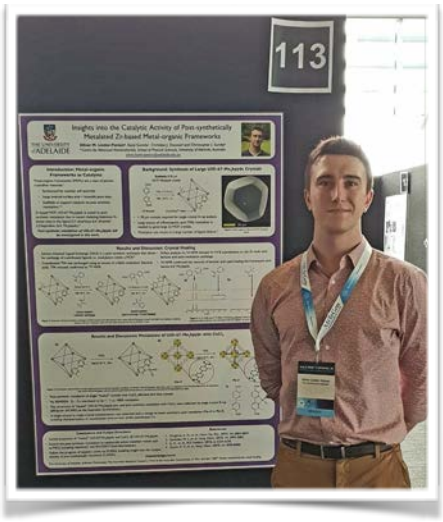
Wishing you a productive science year in 2019, good luck with grant writing if you have that task. Feel free to contact me by email, twitter or any other form. I am here to serve you all the best I can. That's all from me.

David Aragão
SCANZ president

Photos from the 2019 SCANZ Crystallography School

AsCA 2018/ Crystal 32 Maslen Scholarship Reports

Dear SCANZ committee,



From the 2nd to the 5th of December 2018 I was able to attend the AsCA 2018/Crystal 32 Society of Crystallographers Australian and New Zealand (SCANZ) conference held in Auckland. I would like to thank the SCANZ committee for organizing this meeting, for giving me the opportunity to present a portion of my PhD project in poster form and for the award of the Maslen Scholarship which payed for my flights and conference attendance.

I had an amazing time at the AsCA 2018/Crystal 32 SCANZ conference, it was an eye-opening experience to so many interesting crystallographic techniques. I come from a materials synthesis and characterisation background working with metal-organic frameworks (MOF's), so it was great to see a broad range of fields that require crystallographic techniques for characterization. The most interesting work in my opinion was in the field of protein crystallography, particularly I am fascinated by how much structural information can be garnered from crystals that diffract so poorly (relative to what I have previously dealt with in regard to metal complexes). I was particularly taken with the techniques required to crystallise proteins in order to get more information, for example crystallising them with higher order packing in order to take a protein which solves in P1 to one that solves in C222 purely from crystallisation conditions. I think this exposure to different fields within the umbrella of crystallography will benefit my career aspirations to no end.

I was able to present a portion of my PhD project as a poster at the second poster session, this was a great opportunity for me to present my work to researchers both inside and outside my field of research. I had insightful questions about my work from different perspectives, and I am grateful to have had this opportunity.

This conference gave me a platform to network with like minded researchers and as such was a great benefit to my career from making valuable connections within the SCANZ community. I would like to thank again the SCANZ committee for giving me an opportunity to attend the AsCA 2018/ Crystal 32 meeting and for the generous Maslen Scholarship. I would also like to thank my supervisors Christopher Sumby, Christian Doonan and Kenji Sumida for their ongoing support.

I look forward to the next meeting and I hope that the experience is just as good as Crystal 32.

Oliver Linder-Patton

University of Adelaide

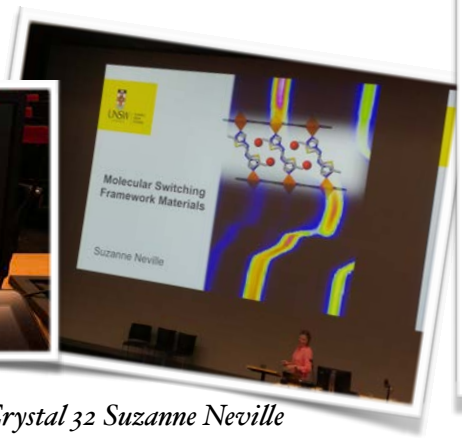
Rising Star Winners: Kate Smith, Moazzam Naseer, Yuka Deguchi, Sanchari Bamenerjee, Katrina Zenere and Matthias Fellner

The AsCA 2018/Crystal 32 conference was held at the University of Auckland, New Zealand, from 2nd to 5th December 2018. Unfortunately, we were presented with some rather cold and rainy weather upon arrival, but the sun did make an appearance during the week. The conference program was devoted to high quality oral and poster presentations ranging from topics in chemical crystallography, structural biology, crystal engineering, materials science, synchrotron and neutron techniques, and applications of cryo-electron microscopy. The plenary and keynote talks were inspiring and showcased the phenomenal research currently being conducted around the world. I was fortunate enough to be selected to give a talk for the Rising Star Symposium, which was both scary and exciting as it was my first time presenting in such a large lecture theatre. Although it was the afternoon of the last day of the conference, the audience were very engaging, and it was a pleasure to present my work to them. The social events were also a highlight, including the conference dinner which was held at the Auckland War Memorial Museum, where we had a lovely view of the city during sunset.

I would like to thank SCANZ for awarding me the Maslen scholarship, as well as the organising committee for giving me the opportunity to attend the AsCA 2018/Crystal 32 conference to present my work during the Rising Star Symposium. The conference not only gave me a glimpse of the diverse work of the SCANZ community but also enabled me to make valuable connections with other researchers from around the world. Overall, it was an enjoyable week and I look forward to the next SCANZ conference.

Katrina Zenere

School of Chemistry,
The University of Sydney



Mathieson Medallist from Crystal 32 Suzanne Neville

Bragg Medallist from Crystal 32 Mitchell Guss with SCANZ President David Aragao

The conference dinner, held at the Auckland War Memorial Museum, had spectacular views of the city and harbour.

I recently attended the AsCA 2018/CRYSTAL 32 meeting that was held in Auckland, New Zealand. This was my first trip to New Zealand and I cannot wait to return and further explore the land of the long white cloud.

The conference program began on Sunday the 2nd of December and in the first part of the day I attended the lipidic cubic phase workshop, where I learnt more about this crystallisation technique. I also found out about the serial crystallography facilities at the Australian Synchrotron and got some hands-on experience with preparing a serial crystallography crystallisation experiment.

The official meeting began with some general interest talks about the history and future of crystallography, which nicely set the scene for the rest of the conference. For me, one of the highlights of the meeting was Susan Lea's plenary talk about the work her lab has done on the type 3 and type 9 secretion systems. As well as presenting some incredible cryo-EM structures, she emphasised the importance of crystallography in solving future biological problems. I also really enjoyed the SCANZ Bragg Lecture given by Mitchell Guss and the Rising Star session showcased some outstanding early career researchers.

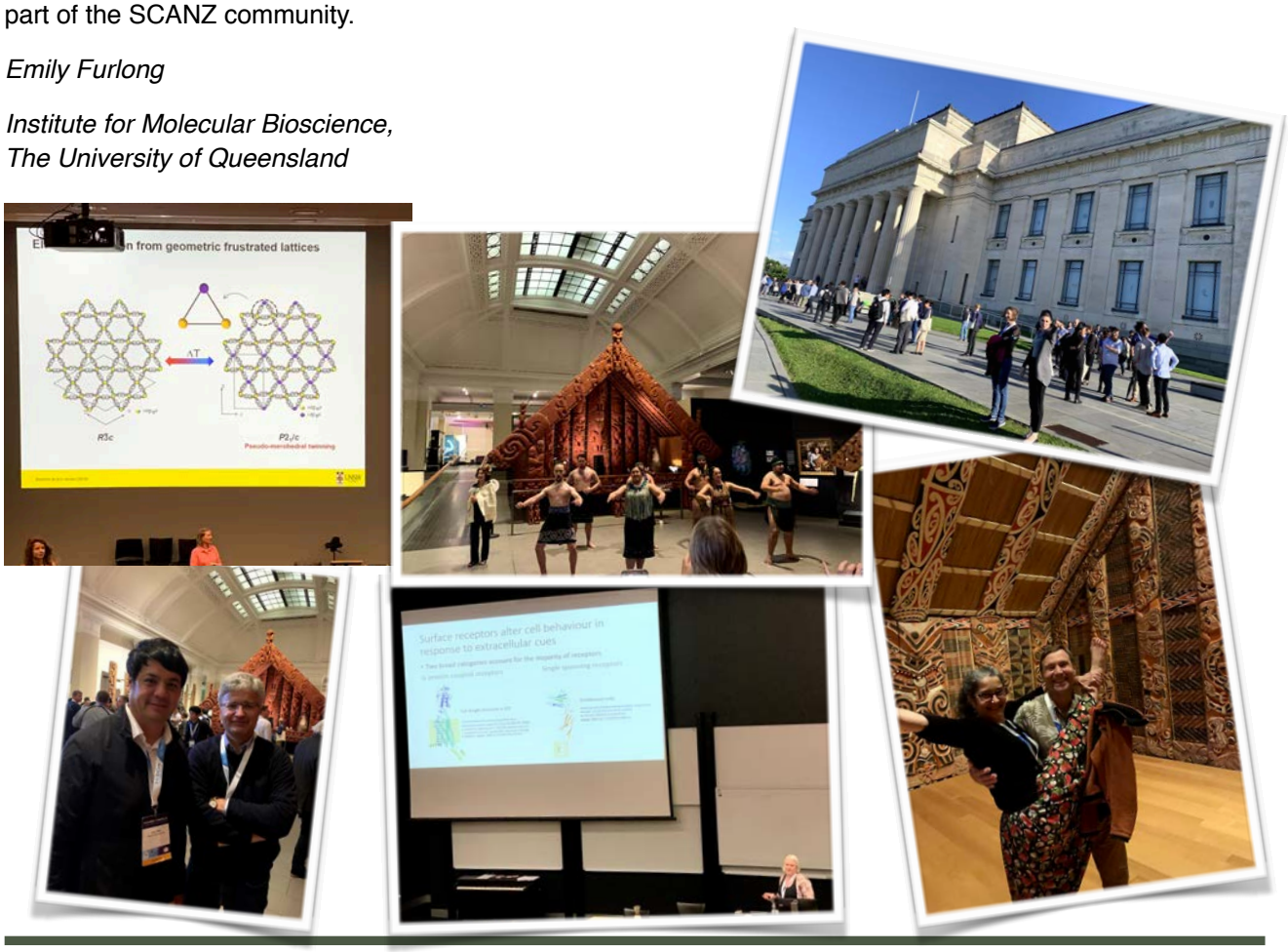
On the Tuesday of the conference I gave a talk in the "hot structures (biology)" session and this was a wonderful opportunity for me to share and discuss my PhD work with others. I also attended the conference dinner that night, which to my delight, was held in the Auckland War Memorial Museum and included a Māori cultural performance.

I always feel a little sad when conferences end and this one was no exception. The organising committee put together a fantastic program and I thoroughly enjoyed the scientific content as well as meeting and reconnecting with members of the AsCA and SCANZ community.

Finally, I would like to thank the SCANZ committee for awarding me a Maslen Scholarship to attend AsCA 2018/CRYSTAL 32. These awards are a fantastic way to support students and significantly enhanced my PhD experience by allowing me to travel to crystallography schools and conferences. I feel so lucky and proud to be part of the SCANZ community.

Emily Furlong

Institute for Molecular Bioscience,
The University of Queensland



Science Meets Parliament 2018

I am a second-year PhD student from Bostjan Kobe's group at the University of Queensland. I would like to thank SCANZ very much for providing me with the opportunity to attend 'Science meets Parliament 2018 (SmP2018)', held from 13 to 14 February 2018, at the National Gallery of Australia and Parliament of Australia.

My experience of SmP2018 has been very rewarding, especially, I have got a unique opportunity to interact with Australis's top scientists, technologists, policy-makers, journalists, and a range of outstanding science, technology, engineering and mathematics (STEM) professionals. I would consider those two days so engrossing that it is hard to pick only a few highlights for SCANZ newsletter.

On Day 1, opening address was delivered by the Australia's Chief Scientist, Dr. Alan Finkel, who advised on four things (i.e., rigor and integrity, long-haul, effective communication, and maintenance and renovations) for a 'happy-marriage' between science and the Parliament. Later, Chief Executive of CSIRO, Dr. Larry Marshall focused on the importance of science in reshaping our future, and socializing research to create an innovation-driven ecosystem around the universities for solving Australia's national challenges. The CEO of BioMelbourne Network, Dr. Krystal Evans discussed the importance of networking in science. It was really interesting to listen to her experience of 'Discoveries Need Dollars' campaign that propelled around the country (because of strong networking) to protect funding for medical research in Australia. Senator the Hon Michaelia Cash, Minister for Jobs and Innovation (represented the Prime Minister), and Opposition Leader, the Hon Bill Shorten, MP, were the keynote speakers at the Gala Dinner in the Great Hall of Parliament House. Senator Cash reminded that scientists and lawmakers need to work together to pave Australia's future prosperity. Hon Bill Shorten emphasized on the importance of funding basic research and acknowledged that post-docs are vital to the research industry, and they deserve more supports for their career growth and aspirations. Both speakers also outlined the importance of gender diversity in science and delineated their policies and visions for the future of Australia's science.

On Day 2, I had a face-to-face meeting with Mr. Rowan Ramsey, MP, for more than 20 minutes, and we discussed the prospects my PhD project. As my project is focusing on fragment-based drug design, I had an opportunity to explain my project by means of popular science. I also tried to convey the message- 'how structural biology can solve the riddles of many communicable and non-communicable diseases in near future'. I was really impressed by his interest and many questions on the drug-designing pipeline. I outlined that structural biology research demands a great deal of resources and time to bring sustainable benefits to health and medicine. I also exemplified how ground-breaking

Mandatory selfie with other SCANZ colleagues in front of multi-coloured donut-board at the National Gallery of Australia

discovery from the WEHI in 1980s had led to the development of a lifesaving anti-cancer drug, Venetoclax (after decades of unremitting efforts, the drug just got approved in 2017 in Australia). As a delegate of SCANZ, I tried to resonate with Dr. Finkel's advice that we cannot afford to set a low bar for structural biology research. Later, Mr. Ramsey kindly arranged a short-visit for us to see around parliament house, and his secretary escorted us for the visit. We also attended the day's Parliament question time and watching the Parliament debate in the House of Representatives was a worthwhile experience.

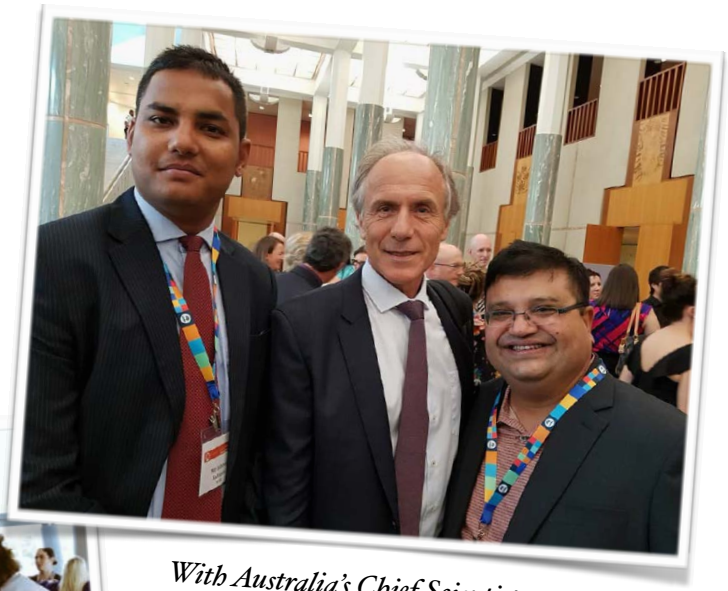
Overall, SmP2018 has been a new exploration for me and helped me to understand a broader picture of science-policy and the importance of science communication to convey the effective message to the non-experts by not exaggerating or trivializing the facts. It also helped me to understand the prospects and challenges of transforming our structural biology research from the bench-to-bedside. I will treasure this experience for a lifetime, and I have attached a few photos from the event.

A big thanks to SCANZ again for supporting me to attend SmP2018, and I would also like to give appreciation to my supervisor, Prof. Kobe, and his group for their encouragement.

Kind Regards,

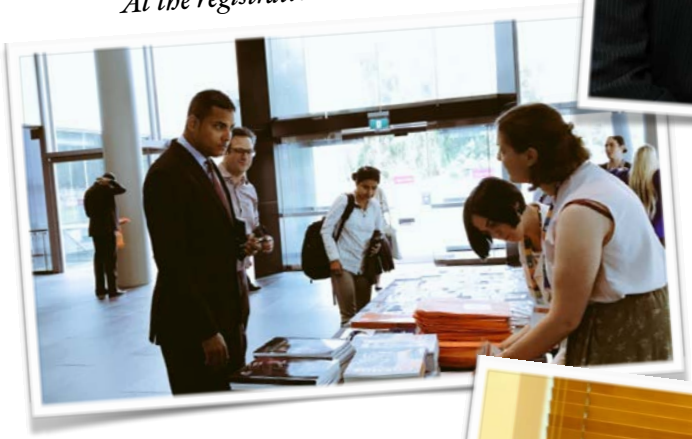
Md Habibur Rahaman

The University of Queensland



With Australia's Chief Scientist, Dr. Finkel

At the registration desk



With Mr. Ramsey, MP (right) and other STEM colleagues at the Parliament of

Photos from AsCA 2018/ Crystal 32

SCANZ Committees

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FIRST ANNOUNCEMENT

Dear colleagues,

We warmly invite you to the 16th Conference of the Asian Crystallographic Association (AsCA2019) will be held at the University Town, National University of Singapore, Singapore on 17-20 December, 2019 and crystallographic workshops on December 16, 2019.

The AsCA2019 serves to showcase the fast developments of crystallography in this region. We are anticipating more than 400 delegates from Asian countries. This will provide a platform for those working in these areas to present their most recent research findings and to exchange ideas on the most frontier research topics in crystallography. It aims to organize a number of scientific sessions devoted to various research fields of crystallography, crystallographic workshops, flash presentations by graduate students, sessions for young faculty researchers and a 'Rising Star' session featuring young scientists. The scientific scope of AsCA2019 will cover all important aspects of crystallography-related areas, including crystal growth/crystallization, synchrotron, neutron & electron diffraction, structural biology, bioinformatics, chemical crystallography, crystal engineering, materials and polymer science, pharmaceuticals, electron microscopy, and much more.

As you might know, the first Asian Crystallographic Association conference (AsCA'92) was held in Singapore in November 1992 organized by late Prof. Koh Lip Lin, Department of Chemistry. Thus AsCA comes home to Singapore after 27 years!

We heartily welcome you to Singapore to participate in this conference along with your students, postdocs colleagues, and other members. Please mark the conference dates in your calendar to be with 400+ crystallographers in Singapore! You may also consider spending Christmas holidays with your family members in Singapore!

Yours sincerely,

JJ Vittal

Chair, Local Organizing Committee, AsCA 2019

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