



# Social Dreaming Together – Envisioning Decolonised Computer Science Education

Mawera Karetai

Te Whare Wānanga o Awanuiārangi  
Whakatāne, New Zealand  
[mawera.karetai@wananga.ac.nz](mailto:mawera.karetai@wananga.ac.nz)

Samuel Mann

Otago Polytechnic  
Te Pūkenga, New Zealand  
[Samuel.Mann@op.ac.nz](mailto:Samuel.Mann@op.ac.nz)

Dhammika Dave Guruge

Idea Services Ltd  
Tauranga, New Zealand  
[dguruge@me.com](mailto:dguruge@me.com)

Sherlock Licorish

University of Otago  
Dunedin, New Zealand  
[sherlock.licorish@otago.ac.nz](mailto:sherlock.licorish@otago.ac.nz)

Alison Clear

Eastern Institute of Technology  
Te Pūkenga, New Zealand  
[aclear@eit.ac.nz](mailto:aclear@eit.ac.nz)

## ABSTRACT

There is an increasing recognition that computing education and the profession of computing has failed indigenous learners around the world. ACM has responded to this through a focus on diversity, equity and inclusion. This Special Session progresses this work by bringing together diverse voices in panel and audience to look towards a decolonised future for CSEd. This Session integrates traditional methods of storytelling to provide context for a reframing of computing as a decolonising force. We start with sharing stories of the impact of colonised computing, then use these as motivation for envisioning the role and shape a transformation of computing education might take. The session concludes with an exercise on options for Indigenous communities and their allies such as ACM to form partnerships to empower Indigenous communities to work with industry and education to imagine a computing profession and CS education that positively contributes to thriving decolonised practice. This session is aimed at all who are interested in progressing the CS curriculum towards a thriving, equitable and inclusive CSEd experience for Indigenous and non-Indigenous learners.

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## POSITIONING OF SESSION LEADERS

Mawera Karetai (Kai Tahu, Kati Mamoe, Waitaha) has come to academia through a life of service to people, community and computing. Mawera uses pūrākau (story telling) as an indigenous ethnographic method for recording and protecting lived experience and knowledge.

Samuel Mann was raised in Cornwall, United Kingdom, before arriving in New Zealand age 12. He helped lead a previous national review of computing qualifications and is aware of the missed potential in that process.

Alison Clear (Tainui) was one of the first computing graduates in New Zealand. She is a leader in CSEd having developed curricula at local, national and international levels.

Sherlock Licorish hails from Guyana, and worked in IT roles across multiple international organisations. He advocates for inclusiveness in computing, and has demonstrated the value of diversity in his research, teaching and service roles.

Dhammika Guruge was born in Sri Lanka where he learned various disciplines in business management and has hired computing staff in several multi-national companies across South-East Asia.

Stating one's own positioning is a fundamental starting point for many Indigenous cultures and this cannot be relegated to a "bio" at the end. We honour that here. For all of us on a decolonisation journey we must acknowledge our own privilege and complicity, particularly those who represent colonisers.

## INTRODUCTION

As a large global computing professional association ACM is cognizant of the need to recognise the many different cultures of the world. More than 50% of its members are non-USA residents. It has recently created a Diversity, Equity and Inclusion Council to address many of these needs.

There are many calls for decolonising approaches to education [1]. In describing a clash of ideologies, Maringe et al. [2] argue that current curriculum in the Global South is a replica of what is taught in the Global North, with little, if any relevance to the

requirements of development in the local context. While much progress has been made, the STEM subjects have lagged behind [3]. There is very little prior research on decolonising Computer Science Education (CSEd), and little guidance as to a way forward for decolonising CSEd. (note we are using CS here to represent the “meta-discipline” of computing [4]).

We have a clear need to decolonise the CSEd curriculum. This will improve the outcomes for Indigenous communities and for a richer computing profession. This decolonisation needs to be done by the Indigenous communities themselves, led by Indigenous CS and CSEd practitioners, with assistance, where requested, from allies within the wider CSEd and CS communities.

The recent ACM/IEEE Computing Curricula report, CC2020 [4], as a global computing curricula report, recognises indigenous communities and diversity. In section 6.5.3 on Cultural Sensitivity and Diversity the report states “universal acceptance of global diversity is essential in all fields of endeavour, particularly in the computing field that is so diverse.” It further recognised the need for adaption of curricula by indigenous communities, “It is important to be aware that cultural similarities and differences do exist between people and the computing programs they represent”.

The ACM is clearly positioning itself as an ally in decolonisation. But it is not the role of a global body to do it – we need to “decolonise decoloniality” [2]. Spiller [5] describes the importance of having a vision of an island over the horizon. So, this special session is about shifting power bases – beginning to collaboratively develop a vision for not just decolonised CS and CSEd, but how it might come about.

This session is aimed at CS educators and researchers from all levels, and Indigenous educators whether in mainstream or immersive Indigenous education. We hope to engage with and provide value for all who are interested in progressing the CS curriculum towards a thriving, equitable and inclusive CSEd experience for Indigenous and non-Indigenous learners.

## OBJECTIVE OF SESSION

This session is one of storytelling and collaborative speculation - of “social dreaming together” [5].

The intended outcome is a sharing of stories (recognising the value of multiple ways of knowing) and a summary of discussions to circulate to participants. It suits a Special Session because of the need for wide engagement in collaborative visioning and purposefully bringing in other ways of knowing.

## OUTLINE OF SESSION

The session begins with appropriate welcome and acknowledgement. This is followed by sharing stories of the impact of the colonised CS curriculum - first from a small panel then small group discussions and report back.

Then a discussion activity on an overview of what decolonised CSEd might look like for different communities. Bring back to group for combined vision and insights.

Then a discussion on a way forward for this process. Recognising the desire to decolonise the decolonising, what mechanisms do people see or desire to progress this work?

The small group activities are intended to work for people in the room as well as remote participants (who can be grouped into breakout rooms should there be a lot of them). Coloured cards will gather and display insights (a collaboration tool will be used for remote participants).

	Duration
Welcome – led by local indigenous people/s.	10 minutes
Colonised CS/CSEd stories from panel	3 x 5 minutes
Colonised CS/CSEd stories discussion activity and report back (Sam)	7 minutes small group, 8 minutes report back
Visioning exercise on what decolonised CSEd might look like (Mawera)	7 minutes small group, 8 minutes report back
Exercise on a way forward (Alison)	7 minutes small group, 8 minutes report back
Close	5 minutes

## REFERENCES

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