Reflections on the Maple Conference 2020

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Abstract. I give a retrospective of the Maple Conference 2020, which was held as an online event in the week of November 2-6, 2020.

Additional Key Words and Phrases: Maple, MC2020

Recommended Reference Format:

Jürgen Gerhard. 2021. Reflections on the Maple Conference 2020. *Maple Trans.* 1, 1, Article 14173 (July 2021), 2 pages. <https://doi.org/10.5206/mt.v1i1.14173>

The Maple Conference 2020 (MC2020 for short) was very different from all previous Maple Conferences and Maple User Conferences. By far the biggest difference is that it was held fully online, due to the Covid-19 pandemic. I think all participants and organizers were sorry that a meeting in person, with its multiple benefits of social interaction, was not possible.

Despite this, the feedback has been overwhelmingly positive, and I would declare MC2020 a resounding success, for a number of reasons. First of all, we had participation from all over the world, more than 70 countries overall. Also, the total number of participants, independent of by which measure they are counted, was significantly higher than the year before. We attribute both of these statistics to the fact that the conference was being held online. Like for many other international conferences, the year 2020 has substantially changed the way such conferences will be held in the future. Even once traditional in-person meetings will be possible again, almost all of them will likely also allow remote participation in some form, and many new online-only conference series will be established.

I would like to particularly highlight two of the special sessions at the conference which were very non-traditional and innovative. The first is a panel discussion with the three social media influencers [Online Kyne](#), [Bobby Seagull](#), and [Tom Crawford](#). These highly enthusiastic mathematics instructors have embraced new media such as YouTube and TikTok in order to teach and engage science, mathematics and engineering students, and convey the power of and the fun in mathematics, and using mathematical software, very successfully, as manifested by their tens of thousands of followers.

The second special session was a virtual museum tour of the Tom Thomposon Art Gallery in Owen Sound, Canada. At a traditional conference, an in-person tour of the gallery would have been a pretty standard social event. Due to the confines of the pandemic, an in-person visit was not possible, so the museum offered a virtual tour. Assistant Curator Shannon Bingeman delivered a highly engaging guided tour through the museum, which was captured via video camera and streamed live to all the conference participants. Even being thousands of miles away, these were

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<https://doi.org/10.5206/mt.v1i1.14173>

able to ask questions and interact with the guide almost in the same way as if they were standing right beside her.

From the scientific perspective, I commend the three invited talks, on The Gömböc and the Shapes of Nature, by Dr. Gabor Domokos, on Bohemian Matrices: Past, Present and Future, by Dr. Juana Sendra Pons, and on Building the Right Tools for Math Education, by Maplesoft CEO Dr. Laurent Bernardin. The topics of the contributed talks varied widely, from differential equation solving to machine learning, from rigid body dynamics to firefighting systems, from tropical geometry to dynamical systems analysis, and from distance education to virus propagation modelling. Among my personal favourites were the talks on Rational Trigonometry using Maple, by Thomas Schramm, and on Understanding math concepts in music and vice-versa, by Gabriel Picioroaga.

The organizers decided on a conference format where only the invited talks and the special sessions were streamed live, while all regular talks were pre-recorded, and there was a 5-minute live session with questions and answers for each recorded presentation. This worked reasonably well, and had the advantage that participants could watch the pre-recorded presentations at their leisure, fast-forward if desired, and made it easy to select only the ones they were interested in. On the flip side, the Q&A sessions were not as engaging as when preceded immediately by a live streamed presentation. I have since attended other online conferences where all the regularly submitted talks were live, albeit much shorter than for a traditional conference, say 10 minutes of talk followed by 5 minutes of questions. Both formats are viable and have their advantages and disadvantages, and should be considered for future online conferences.

Organizing and participating in an online conference has been a very new experience for most of us, and MC2020 may not have run as smoothly as we may have hoped. However, granting everybody a little leeway for still being unfamiliar, overall things went very well.

I would like to conclude my retrospective by expressing my thanks and gratitude to the many Maplesoft staff members involved in the conference organization and in making it such a success, notably, Kathleen McNichol, Eithne Murray, and Rochelle Angyal. I would also like to thank the members of the program committee, the session chairs, and the “virtual table” hosts for providing their valuable services to the conference. My thanks go also to all the presenters at the conferences, who mastered the challenge of recording their presentation or delivering it via live-stream with flying colours. Finally, I would like to thank my Program Committee co-Chair, Rob Corless, whose professionalism, enthusiasm, and upbeat manner has made this a very fun collaborative experience. The proceedings of the Maple Conference 2020 have been published as [Volume 1414](#) of Springer’s Communications in Computer and Information Science series, ISBN 978-3-030-81698-8.