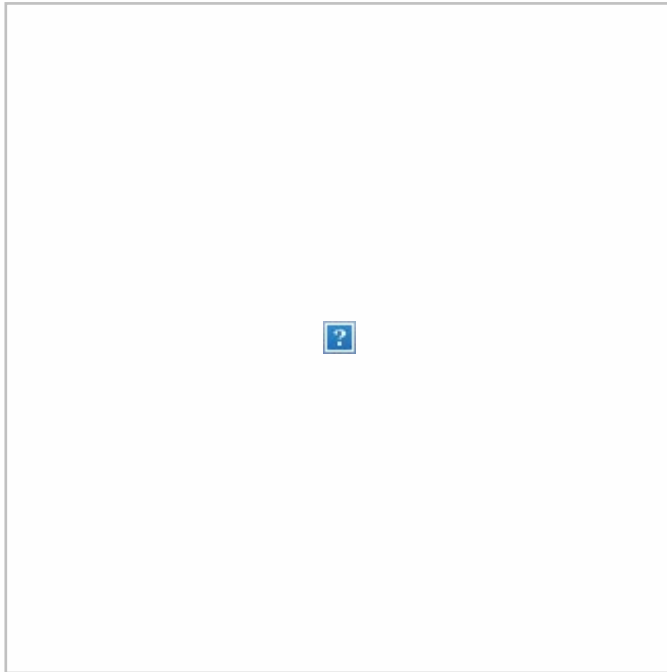


From: [SSA Biostatistics and Bioinformatics Section](#)
To: eo@statsoc.org.au
Subject: SSA Biostatistics & Bioinformatics Newsletter
Date: Thursday, 8 October 2020 8:43:07 AM

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SSA Biostatistics & Bioinformatics Newsletter

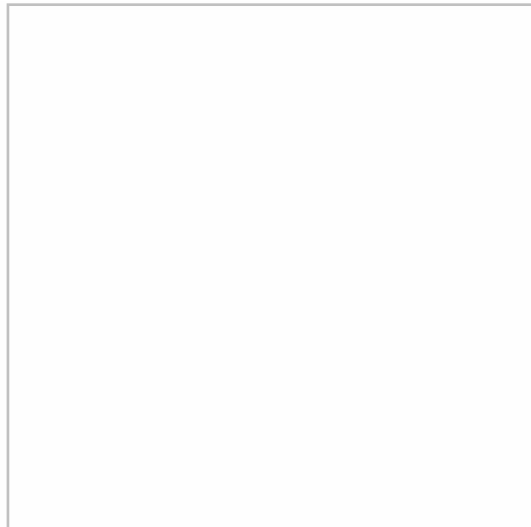
Q3 2020

Welcome to our third newsletter of 2020!

The Biostatistics and Bioinformatics section committee hope you, your family, and your friends are keeping well. Spring has arrived and we hope you have been able to enjoy some sunny days. We wish to shout out to our mailing list members in Victoria for their patience, sacrifice, and resilience shown to successfully control the second wave.

We are pleased to announce an online version of last year's workshop on statistical consultancy. Two half-day workshops will be held in October, co-hosted with the SSA Statistical Consulting Network. For those with an interest in bioinformatics, Prof Melanie Bahlo will be presenting a webinar on genetic data analyses methods

organised by our section mid-October.

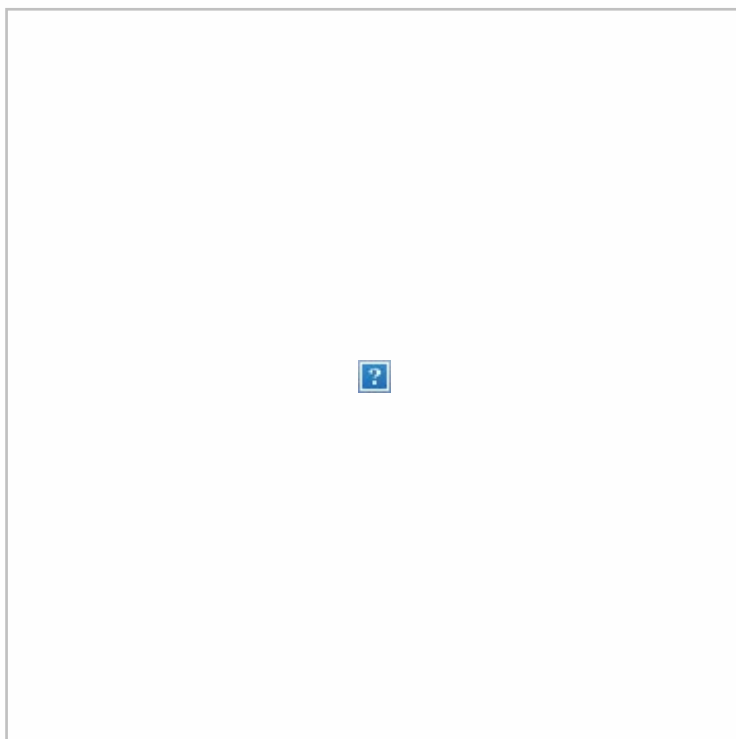


In addition, this newsletter contains updates on our mentoring program pilot, COVID-19 resources related to trials, interesting podcasts, and upcoming SSA or other events. Finally, World Statistics Day will be held on October 20. This day is celebrated every five years since 2010 and we hope you will celebrate this day together with the SSA.

If you have any ideas to support you better during these challenging times, please let us know, we are there for you!

The SSA Biostatistics and Bioinformatics section committee

Statistical Consultancy Workshop



We are going online with our workshop on statistical consultancy!

Together with the Statistical Consulting Network, we are pleased to offer the following joint workshops:

The **first** half day of the workshop will cover:

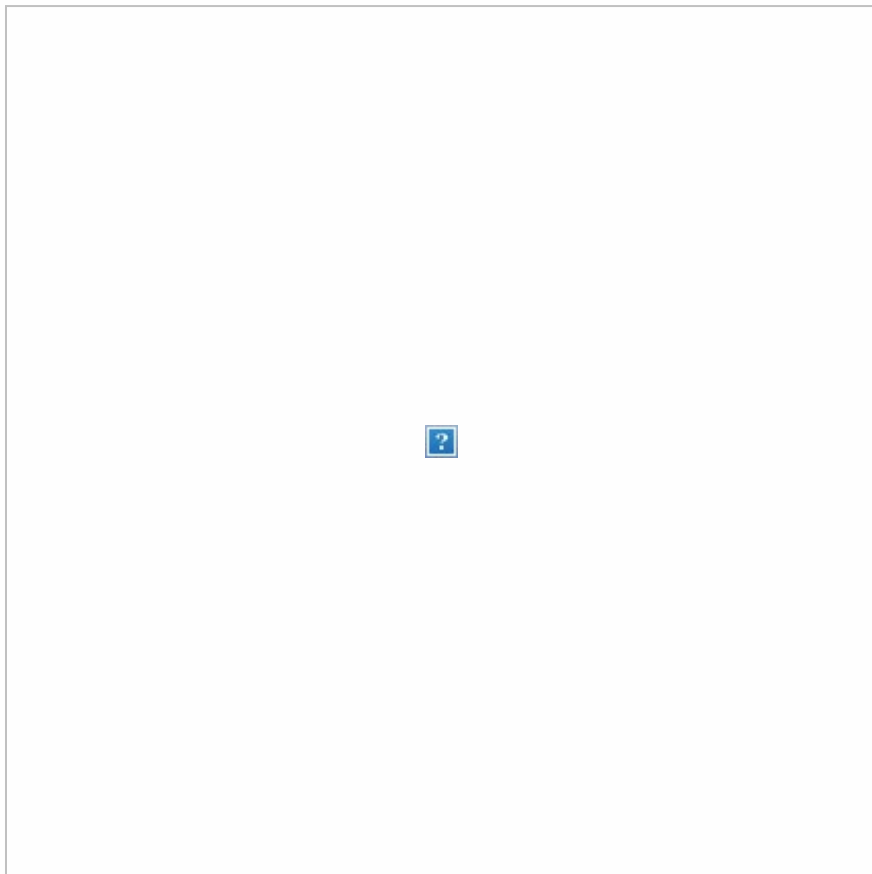
Getting started with statistical consultancy - Establishing a client base, an operational model and a team

16 October 2020 from 10:00 AM - 13:00 PM AEDT via Zoom.

This half day workshop is designed to provide participants with an understanding and tips of some of the key considerations involved in setting up and running a statistical consultancy from within a university environment: covering a range of topics including funding and operational models, reaching and securing clients, building and funding a team.

Presenters: A/Prof Jason Ferris (University of Queensland), Dr Anne Bernard (QCIF Bioinformatics, Queensland), Prof Julie Simpson (University of Melbourne)

Register here: statsoc.org.au/event-3986877



The **second** half day of the workshop will cover:

Essential skills for statistical consultancy - Project management, timelines and communication

22 October 2020 from 10:00 AM - 13:00 PM AEDT via Zoom.

This half day workshop is designed to provide participants with an understanding of some of the key skills involved in biostatistical consultancy, covering a range of topics including how to run consultancy projects from start to finish, managing projects, and communication skills.

Presenters: A/Prof Susan Donath (Murdoch Children's Research Institute), Dr Emily Karahalios (University of Melbourne/Monash University), Dr Karen Lamb (University of Melbourne)

Register here: statsoc.org.au/event-3986878

SSA Biostatistics & Bioinformatics section mentoring update



We are now more than halfway through our pilot mentoring program and conducted an anonymous mid-program survey in July to see how our mentors and mentees were getting on, particularly with the impact of COVID-19 on their lives and careers. More than ever, we feel our members could benefit from the support of mentors to help navigate careers in these uncertain times.

Although some of our pairs were unable to continue in the pilot program (e.g., due to challenges coordinating meetings), 8 of our 10 pairs remained in the program to the halfway point, with 7 mentees and 8 mentors responding to the mid-program survey. We asked mentees to rate the quality of mentoring they were receiving in the program and were delighted to see that all mentees reported high or very high quality (options 4 or 5 on a 5-point scale ranging from 'very low' [1] to 'very high' [5]). In addition, all mentees reported a high level of enjoyment (options 4 or 5 on a 5-point scale ranging from 'not at all' [1] to 'very much' [5]). Keep up the good work, mentors! The mentors all responded that their mentee had high or very high engagement in the mentoring program (options 4 or 5 on a 5-point scale ranging from 'very low' [1] to 'very high' [5]) and almost all (7/8) reported a high level of enjoyment (options 4 or 5 on a 5-point scale ranging from 'not at all' [1] to 'very much' [5]) in the program.

We really appreciate the time both mentors and mentees have put into participating in this program and value their honest responses to our surveys. We note that some concerns were raised about the impact of the pandemic on both mentors and mentees ability and time to participate in the program, as well as the relevance of some advice that mentors would typically offer that may not be possible during a pandemic (e.g., international collaborative work trips, conference presentations!). However, we are very happy to see that the mentees are enjoying the support from their senior mentors. We are using the information from these surveys to help inform a larger program in 2021, either through the Biostatistics & Bioinformatics Section or (hopefully) in the SSA more broadly so watch this space if you are interested in participating.

If you want any further information about the mentoring program, please feel free to contact Karen Lamb at klamb@unimelb.edu.au.

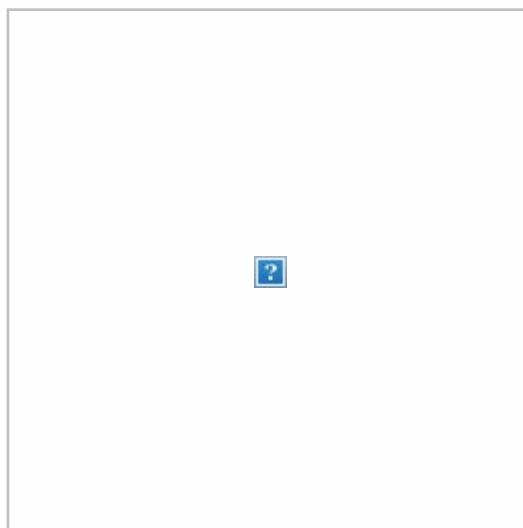
SSA webinars and events

Inferring genetic relatedness to identify disease-causing variants and selection signals

This webinar will be held on the 14th of October and presented by Prof Melanie Bahlo (The Walter and Eliza Hall Institute of Medical Research). This webinar may be of particular interest to bioinformaticians and will be moderated by our section committee member and bioinformatician Alysha De Livera. Register [here](#).

Belz Lecture on World Statistics Day (20th October)

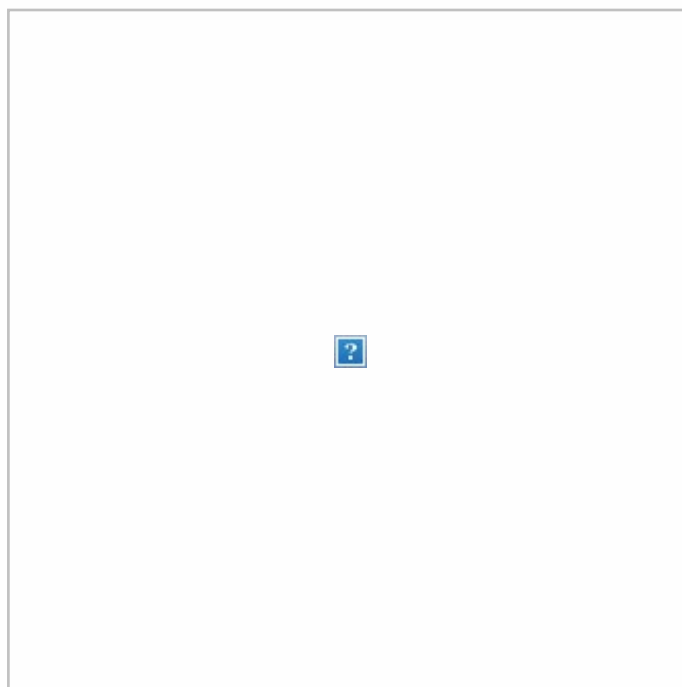
The 20th of October will mark the **World Statistics Day 2020**. This years theme is "Connecting the world with data we trust". You can celebrate with us by joining the **annual Belz lecture**, "Trust in Official Statistics", which will be followed by a Q&A.



Presenter Teresa Dickinson is the Deputy Australian Statistician at the Australian Bureau of Statistics (ABS), where her responsibilities include leading the 2021 census. In this lecture, she will explore the concept of trust in relation to official statistics produced by the government: Can we trust the ABS to keep our personal census data secure? As a passionate believer in the power of data to improve lives, Teresa will talk about both trust in the statistics produced and trust in statistical institutions.

All upcoming SSA webinars and events can be found [here](#). Our section is planning to host a webinar with Prof Jean Yang (University of Sydney) in December, more information will become available [here](#).

Biostatistics and COVID-19



Biostatistics in the news

Biostatisticians recently got a plug in the ABC when discussing the important role of Data Safety Monitoring Boards when assessing the safety of new treatments, like COVID-19 vaccinations. In her ABC article, Kelsie Iorio notes that “Biostatisticians are crucial components of DSMBs, as they determine whether any adverse effects are likely to be related to the vaccine trial or not.” More details can be [found here](#).

Meanwhile, an interesting article by the BBC mentioned the challenge in understanding exponential growth, and the propensity for people to be susceptible to the “exponential growth bias”, which makes it difficult to explain the threat posed by COVID-19. People much more naturally think of growth in linear terms and this can lead to an underestimation of the risk of COVID-19. The full article by David Robson can be [found here](#).

In a [Guardian article](#), Professor Sir David Spiegelhalter from the Winton Centre for the Public Understanding of Risk in Cambridge, defends the efforts of statisticians during the COVID-19 pandemic. In his article, Spiegelhalter discusses the way politicians have used numbers in their decision making and states that “*Numbers may not measure what you think they may be measuring, but they are rarely completely wrong.*” He acknowledges the culpability of statisticians in aiding public understanding, or misunderstanding, of their risk, stating “*People tend to have an exaggerated sense of their vulnerability to Covid-19, and I admit that statisticians must take some responsibility for not communicating a realistic idea of the risks. Partly this is a problem with averages – just saying that around 1% of people die after catching the virus can be misleading when this average figure disguises a huge variability, estimated to range from around 20% in the very old and frail, to roughly one in 50,000 for schoolchildren.*” but argues that overall, he thinks statisticians have done a good job in the COVID-19 crisis. Spiegelhalter has a recently [published article](#) in the BMJ discussing the need to use “normal” risk to help improve understanding the dangers posed by COVID-19. This article focuses on the risks of dying from COVID-19 and compares this to the risk of death from all causes each year to aid in transparent communication.

Resources for biostatistician dealing with COVID-19 trial disruptions

Although in the midst of worrying about the impact of the COVID-19 pandemic on ourselves, our friends and families, colleagues and people in our communities back in March, a Twitter post reminded us of the implications of COVID-19 on our biostatistical workloads.



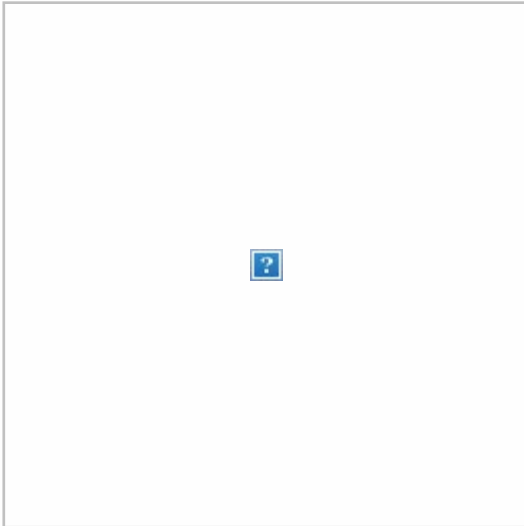
This led to some of our committee members frantically planning for the unavoidable disruptions to clinical trials caused by COVID-19. As you would expect, many statisticians had an opinion on how these disruptions could be handled, leaving us wondering which option to choose. Thankfully, some people posted some useful resources in the Twitter thread for us to look into.

We have provided some resources for biostatisticians and triallists in our previous two newsletters. Further resources can be found below and may be helpful for members who are facing challenges handling the impact of the pandemic on their own trials.

- The NHMRC released a [guidance document](#) for institutions, Human Research Ethics Committees, researchers and sponsors for trials during COVID-19.
- The Industry Working Group “Estimands in Oncology” provided [an article](#) on ‘Assessing the Impact of COVID-19 on the Clinical Trial Objective and Analysis of Oncology Clinical Trials – Application of the Estimand Framework’ in the journal *Statistics in Biopharmaceutical Research*.

If you have any resources you want to share with our SSA Biostatistics & Bioinformatics Newsletter members, or any COVID-19 biostatistics related news items you want to share, please contact [Karen Lamb](#) and we will add these to future newsletters.

Meet our mailing list



Name: Ben Harrap

Where do you currently work? Part-time at the Peter Doherty Institute for Infection and Immunity, and part-time PhD student at the Indigenous Health and Epidemiology Unit at the Melbourne School of Population and Global Health – full-time working from home though!

What field do you associate with, biostatistics or bioinformatics (or both)? Biostatistics.

What are your background studies in and how did you join this field? My undergraduate degree was actually a Bachelor of Arts majoring in psychology, but my master's degree was in biostatistics. It's been a couple of years since finishing my master's so I've been working jobs here and there, but in March I decided it was time to go back to study and started a PhD.

I ended up in statistics because I was more interested in the design of experiments and how data is gathered and interpreted than I was in the field of psychology itself. Realising that was what led me to the master's degree and here I am!

Why did you want to work in this field? Biostatistics was one of the few fields that combines my interest in experiment design and data with my desire to do work that has a positive impact on people's lives. It also helped that Julie Simpson was very friendly and welcoming when I enquired about the master's course at the University of Melbourne (thanks Julie!).

What is the most exciting concept/idea upcoming in your work or field? I'm not sure it's exciting, but I'm really fascinated by the changing opinion on how p-values, confidence intervals, and estimation in general should be used, especially comparing how statisticians talk about it compared to non-statistician researchers.

If you didn't pursue biostatistics and/or bioinformatics, what would have been your alternate career? If I had gone with my original plan I would've ended up doing clinical psychology, but if I had to switch careers now I'd want to try out science communication or beer brewing!

Want to be featured in the next member profile?

We are always in need of more member profiles. Its a great way to get some exposure to our >300 readers. If interested, please contact [Nicole De La Mata](#).



Podcasts



A range of biostatistics and bioinformatics blogs and podcasts have been listed in our [previous newsletters](#). Here we will be highlighting a couple of podcasts that might interest our mailing list readers.

The Bioinformatics Chat

The bioinformatics chat is produced by Roman Cheplyaka, a Ukrainian software developer and bioinformatician. The 50 episodes, to date, cover computational biology, bioinformatics, and next generation sequencing. The episodes are available [here](#).



University of Oxford, Department of Statistics

The Department of Statistics at Oxford has a range of podcasts including in computational statistics and statistical methodology, applied probability, bioinformatics and mathematical genetics. All episodes [available here](#).



Everything Hertz

Co-hosted by Dr Dan Quitana and Dr James Heathers, this podcast is by scientists, for scientists. It has over 100 episodes that discuss methodology, scientific life and bad language. All episodes [available here](#).



Do you have a favourite statistical podcast or blog?

If you would be happy to provide a brief overview of your favourite statistical podcast or blog to feature on our mailing list, please contact [Alysha De Livera](#) with the details.

Featured articles

Can confidence intervals be interpreted?

Naimi, A.I. and Whitcomb, B.W., 2020. *American Journal of Epidemiology*



In any statistical analysis, we compute the point estimate (e.g. mean, regression coefficient and so on) and express uncertainty around this point estimate using the confidence interval. However, there is a long standing confusion around interpreting these confidence intervals. For example, we have conducted a logistic regression and estimated the odds ratio, with a point estimate of 1.15 and a corresponding confidence interval of 1.02 to 1.31. Some common misinterpretations of confidence interval include “there is a 95% probability that the true odds ratio lies between 1.02 and 1.31 in this example” or we are “95%

confident" the true values lies between 1.02 and 1.31. [Naimi and Whitcomb's paper](#) provides details on interpreting the confidence intervals in plain English.

Recent publication that you'd like to share?

We love learning about all things related to biostatistics and bioinformatics. If you have a recent publication (your own or other) that you'd like to have featured in our newsletter, please contact [Nicole De La Mata](#) with the details.

Other upcoming events

While there is generally a range of other events of interest for our biostatisticians and bioinformaticians, the schedule of events have been substantially impacted by the COVID pandemic and many events have been cancelled. Please always check out the conference website to ensure you have the latest information on the conference. On the other hand, this has led to the creation of many virtual events that are often more affordable and accessible.

International Population Data Linkage Network Conference 2020

Virtual conference, 1st-13th Nov 2020

The Australian Bioinformatics and Computational Biology Society

Virtual conference, 24th-26th Nov 2020

Statistical Consulting Network 2020 Meeting

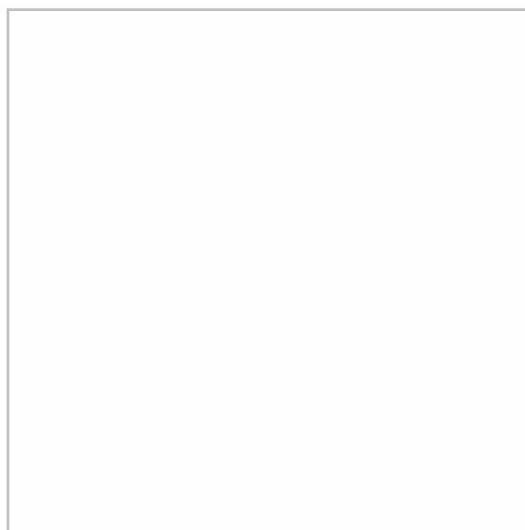
Virtual conference, 7th-9th Dec 2020

If you would like to advertise any upcoming biostatistics or bioinformatics events to our mailing list, please contact one of our co-Chairs, [Sabine Braat](#) or [Jaimi Greenslade](#)

Closing comments

Our Section Committee is interested in biostatistics and bioinformatics and we are committed to assisting you with your career in biostatistics or/and bioinformatics. We are interested in hearing from our members, especially regarding ideas for future events, presentations, webinars or workshops held by the SSA Biostatistics & Bioinformatics section. We are interested in hearing about our members and how

they became involved in biostatistics or bioinformatics.



Please contact us via our section co-Chairs, either [Sabine Braat](#) or [Jaimi Greenslade](#) regarding these or any other related queries.

If your colleagues would like to receive this newsletter, they can sign up via [mailchimp](#)

To view previous newsletters please see our [section's webpage](#).

Social media

We encourage all our members to follow our activities on our social media account links below. We actively promote upcoming events, job opportunities and relevant material. Our online community is growing with over 719 followers on Facebook and 490 on twitter. If you have any material you would like us to promote on our social media outlets or share with the fellow members, please let [Sabine Braat](#) know.



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