

Hazelab Newsletter –Imperial College London

July 2020 – February 2020

Hello! Welcome to another news update from Hazelab at Imperial College London. For more follow us on twitter @ImperialHazelab, visit our [website](#) or watch our [video](#).

New arrivals

We welcome our recent PhD student arrival, Rikesh Amin, who has joined us to study modern approaches to modelling fires in tall timber buildings. His research is co-funded by Arup and EPSRC. Also, Matthew Bonner, after submitting his thesis in December, has started on as a Postdoctoral staff and is now working on expanding his database of façade fire tests.



Watercolour of Queen's tower at Imperial College by Harry.



Welcome to Rikesh Amin, our newest PhD student!

We also welcome four new undergraduate students to Hazelab: Leonardo Caracci, Olivia Keatley, Nikolaos Kalogeropoulos and Hannah Nevill. Leonardo is working on analysing data from the London Fire Brigade in order to identify the fire risk to London citizens and how this has changed over time. Olivia is studying how different modelling techniques can be used to predict the thermal and mechanical response of mass timber buildings. Nikolaos and Hannah will be researching the coupling of wildfire spread, and pedestrian and vehicle evacuation models as part of the interdisciplinary and international NFPA WUI-NITY project.

Graduating Students

Eirik and Han passed their viva examinations in November and Matt passed his in February - congratulations, new doctors of fire! Eirik's thesis was intitled "Experimental Investigation of the Effects of Soil and Environmental Conditions on Smouldering Wildfires". His external examiner was Dr Nuria Prat from Pau Costa Foundation in Spain and his internal examiner Dr Ravii Vaidyanathan. Han thesis "Computational study of self-heating ignition and smouldering combustion of carbon-rich porous media" was examined by Dr Soraia Pimenta lecturer at Imperial College and Prof Ali Rangwala from WPI. Matt submitted his thesis "A Top-Down Approach to Understand the Fire Safety of Building Facades Using Standard Test Data" and was examined by Dr Juan Hidalgo from University Queensland and Dr Catrin Davis from ICL; this was a 6-hour examination that left Matt hungry for more. Agung has submitted his thesis 'Experimental study of smouldering wildfires, suppression and transition to flaming' and will be having his viva soon!



Eirik's viva examination.

Han's viva examination

Departures

We bided goodbye to Eirik who joined the Arup fire team in London as a graduate engineer. Postdoc Fahid took a position as lecturer at the Teesside University, congrats on this important step! Postdoc Yuqi moved back to China and started a new job at the Sichuan Fire Research Institute of Ministry of Emergency Management. Han will be moving to Hong Kong in spring to start a fellowship at the Polytechnic University. They will be all truly missed.

Conferences

Dwi, Han, and Eirik presented their work at the Combustion Symposium. Matt presented a summary of his thesis at the SFPE Annual virtual Conference. Heidari presented the results from experiment X-Two at the SiF conference in December. Finally, in February, Guillermo gave two introductory courses during the Pyrolife ITN course on wildfires and smouldering fires, which are now both available on [YouTube](#)!

Awards

Guillermo has been elected Fellow of the Combustion Institute, class of 2021. This lifetime honorific title is for members of the international combustion community recognized by their peers as distinguished for outstanding contributions to research. The Combustion Institute is the largest international scientific society on combustion science and technology with over 5,200 members.

Matt received a SFPE Student Scholar Award during the SFPE Annual conference. He wrote a witty song for the occasion and sang it at the award ceremony. Watch the [recording](#)!

Eirik was awarded the Dr Ashraf Ben El-Shanawany Memorial Prize. The prize is awarded for outstanding achievement in research, public outreach, and innovation with focus on safety. We are proud of Eirik and honoured for this medal.

Francesca was awarded a student research grant from the SFPE Foundation. The money will be used to partially fund large-scale experiments that will be running at ITB Poland in spring/summer 2021. These experiments will investigate the mechanical performance of curtain wall facades exposed to non-uniform heating from fire.



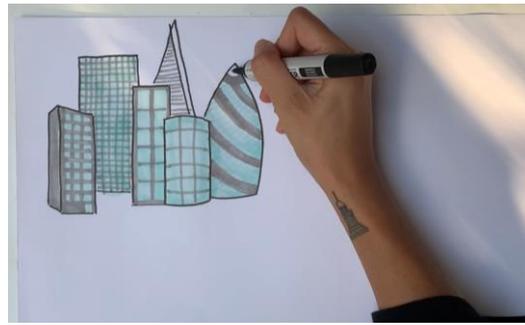
Matt giving his acceptance speech/song at the SFPE annual virtual conference.

SFPE Greater London Student Chapter

The SFPE Greater London student chapter has announced the winner of [Flash Points](#) 2020 edition in November, Laura Schmidt won the competition with her video “Char fall-off and the Burning of Engineered Timber.” Matt and Francesca received an honourable mention for their outstanding videos. “Why Are Skyscrapers Burning More Frequently” by Matt, “Fire Safety of Glass Facades” by Francesca, and all the other video submissions are available on the chapters [YouTube channel](#).



Flash Points competition logo



Francesca's video submission for Flash Points

Matt wrote a cover of Billy Joel's "We didn't start the fire" and it has become an anthem for the chapter which we play at the beginning of all our webinars. To listen to the [song](#), visit our website, you won't regret it!

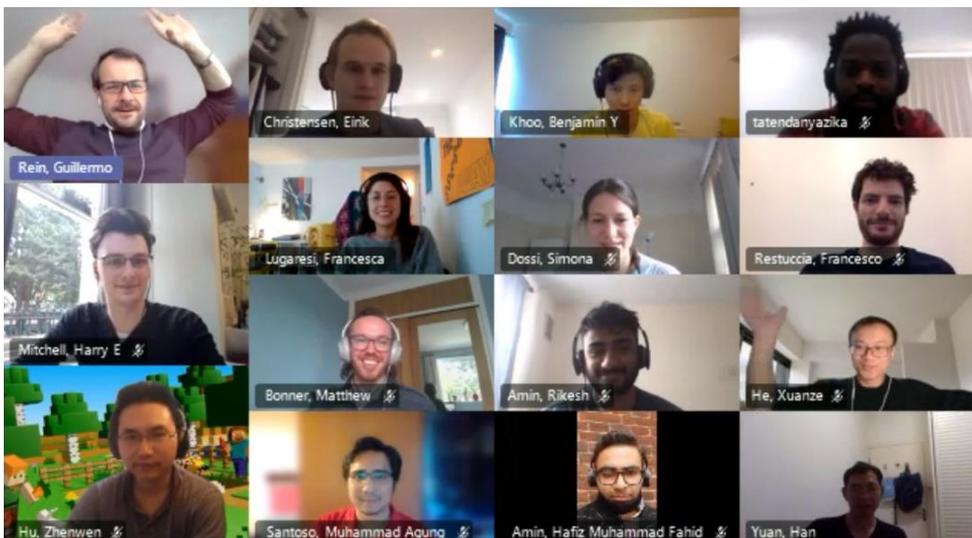
The chapter's monthly publicly available fire science webinars continue:

- Prof Carlos Fernandez-Pello of University of Berkley gave a talk on wildland fire spotting.
- Dr Antonio Cicione from Stellenbosch University presented on fire dynamics in informal settlements.
- Prof Yuji Nakamura from Toyohashi University of Tech gave a fascinating talk on fire in microgravity.
- Our dear friend Wojciech Węgrzyński from ITB Poland shared with us his knowledge about wind and fire modelling.
- Hazelab alumni Nils Roenner now working at BASF shared his work on digital transformation of R&D.

Sign up to our mailing list by emailing sfpelondonstudentchapter@gmail.com for further updates!

Outreach

An article on [WIRED](#) explored peat land zombie fires and featured Dwi's cellular automata model that simulates smouldering fire flame spread. Guillermo gave a talk to friends of Imperial summarising Hazelab's most recent research. He also gave a talk to Hong Kong Polytechnic University (HKPU) and Oil, Petrochemical and Energy Risks Association (OPERA) about lithium ion batteries and their fire risks. Recordings of these talks are available on our [website](#).



Virtual group meeting

That's everything from us for now – we look forward to seeing you at the IAFSS virtual conference!

Written by Francesca Lugaresi