

# NEWSLETTER

## Welcome to 2020 From Your South Wales Region!



*IMechE President Elect Terry Spall will assume the office of President in May. Terry's involvement with the Institution goes back to the late 1980s when he was active in the Automobile Division centres in the North West and Birmingham. He has been a member of the Trustee Board for five years (up to 2014), Vice President for four years and has chaired both the Technical Strategy Board and Regional Strategy Board. He is also Chief Judge for the Formula Student Competition.*

within schools and colleges, working with our local industries to provide professional registration events and finally developing new relationships with other engineering institutions within the region for mutual benefit. Furthermore, we have expanded how we communicate with you, our members, including a new regional presence on Twitter and Facebook.

Welcome to the 2020 newsletter. For the year ahead, your committee has arranged a varied and interesting programme of events. These range from lectures on subjects as diverse as innovative production techniques from Toyota UK, using engineering techniques to detect arterial disease and a professional registration event for engineers who are considering applying for Chartered status. On a lighter note, we will be hosting the usual social events including our now-established “Members and Partners” evening in March and of course our Annual Dinner in May. This will be an enjoyable evening of excellent food, convivial company and an entertaining after-dinner speaker. This year we have Mike Bubbins who is a comedian and star of the BBC Wales comedy – The Tourist Trap. Hopefully we will see you there.

Whatever your interests, and with the increasing focus on Continued Professional Development for Engineers we are confident that there will be something in our programme for you. We have had a very successful 2019 in terms of attendance at our events. Join us for an interesting and informative 2020!

We still have some committee roles left to fill so if you want to get involved with the operation of the South Wales Region then please check our website and submit an application. The roles will be supporting the vision and strategy of our current chair Mr. Dave Harwood who took over in 2017. 2019 saw a number of members show enthusiasm for joining the committee and increasing the profile of the Region with local companies, which is great news as we look to the future.

In 2020, we are aiming to develop our activities in terms of working more closely with our local universities, expanding our promotion of engineering to the next generation within schools and colleges, working with our local industries to provide professional registration events and finally developing new relationships with other engineering institutions within the region for mutual benefit. Furthermore, we have expanded how we communicate with you, our members, including a new regional presence on Twitter and Facebook.

<https://nearyou.imeche.org/near-you/UK/South-Wales>

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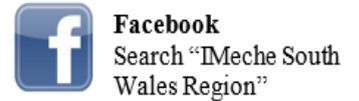
## Reviews – Past Events

### Groundwater Modelling in Cardiff Bay – 5<sup>th</sup> February 2019



Mr. David James of Cardiff Bay Harbour Authority came to talk to us about the Cardiff Bay Barrage and the modelling of the groundwater in and around Cardiff. In the early 1990's ground condition characterisation was initiated leading to layer and grade thicknesses via a standard ground penetration test. Boreholes were sunk around the Capital to monitor the groundwater levels. There were 236 boreholes initially with only 178 being in operation in 2019.

A groundwater protection scheme was put in place for 20 years and there has been no detrimental effect to the property and dwellings in the Cardiff Bay area.



Written and edited by  
Dr. Andrew Bayton

If you have any comments about this Newsletter or would like to contribute to future editions, then please do not hesitate to contact us.

South Wales Administration Team  
E: [swalesadmin@imechenearyou.org](mailto:swalesadmin@imechenearyou.org)

## The Next Generation of Polymer Production - 13<sup>th</sup> March 2019



We held our National Science & Engineering Week lecture in Swansea University. For our NSEW lecture the Region welcomed Mr Damian Walsh of AMGEN Cymru to speak about the Bryn Pica Eco Park located near Aberdare in the South Wales Valleys. The former open cast mine and land fill site has been transformed into a waste recycling and power generation facility. The site was last used as a land fill site in the 1990's and it originally held over 200kT of waste. This was reclaimed and the area sterilised and sealed prior to building the Eco Park with a view to recycling waste from several local authorities and generating power by means of an anaerobic digestion plant using food waste from the surrounding area.

Damian explained that the site currently recycles several difficult products such as nappies, paint, mattresses and plastic film. In addition to this it also recycles hard plastic, wood, metals and glass.

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## Technical Visit Cardiff Bay Barrage - 15<sup>th</sup> April 2019



The South Wales Region and the Institute of Water organised a joint visit following on from our excellent lecture in February on the same subject. Over 24 members from both organisations attended and were treated to a tour of the control room, the sluice gates and the locks area during the 2 hour tour.

We would like to thank Cardiff Bay Harbour Authority and the Institute of Water for helping us with this visit and we look forward to collaborating with them in the future.

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## The 17<sup>th</sup> Ian Hewardine Memorial Lecture – Innovations in Pipework Replacement – 19<sup>th</sup> November 2019



Every year we host a lecture in memory of one of our past Chairmen, Ian Hewardine who worked for the HSE in Cardiff for a number of years. This year we were joined by members of the Hewardine family and Ian's former colleagues for a lecture on the replacement of the scour valves and pipework at Talybont Reservoir in the Brecon Beacons. Mr Adam Bush (Dwr Cymru/Welsh Water) was the Project Manager for the project and gave a talk on the innovative techniques that had to be employed in order to achieve a successful and safe outcome for the project.

The audience heard about the adoption of syphons to keep customers in the supply of fresh water throughout a dry period in 2018. Additionally, they heard about the use of submersible vehicles to effect an isolation of the pipework allowing operatives to change valves and pipework safely whilst working at depth inside the dam's structure.

## Previews – Future Events

### Detecting Arterial Disease - A Combined Approach – 10<sup>th</sup> March 2020

This talk will provide an overview into how Arterial Stenosis is estimated to effect between 1% and 19% of the population. Current diagnostic techniques are expensive and invasive. This presentation demonstrates how the Medical and Engineering profession collaborate to detect arterial disease. In particular, by using a combination of physics based models of pulse wave propagation and machine learning classification algorithms novel non-invasive, inexpensive screening methods can be achieved.

**Venue:** Room B001, Engineering Central, Swansea University Bay Campus, Swansea, SA1 8EN

**Time:**

- Buffet 6.15pm,
- Lecture 7pm

**Book using Link:** <http://nearyou.imeche.org/near-you/UK/South-Wales/event-detail?id=17549>

Contact South Wales Administration Team at [swalesadmin@imechenearyou.org](mailto:swalesadmin@imechenearyou.org)



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### Beverley Humphreys - Members and Partners Social Evening – 20<sup>th</sup> March 2020

An especially warm invitation is extended to new members and their partners, together with old friends, for this evening of socialising. This year we have Welsh singer and broadcaster Beverley Humphreys. Beverley has a portfolio career as broadcaster, writer, singer and speaker – both entertaining and inspirational.

As High Sheriff of Mid Glamorgan Beverley has officiated and delivered motivational speeches at a variety of events from Citizenship Ceremonies, Police and Young People's Awards to WI meetings and Voluntary Action Groups. On

several occasions Beverley has been invited to be the main speaker at St David's Day banquets and celebrations in New York and Philadelphia.

Beverley Humphreys' singing career has not been confined to the operatic stage, although, after graduating from Cardiff University, that is where it began - as Rosina in "The Barber of Seville" for Welsh National Opera.

**Venue:** The Ballroom @ the Bear Hotel, 63 High Street, Cowbridge, Vale of Glamorgan, CF71 7AF

**Time:** 7.30pm

**Book using Link:** <http://nearyou.imeche.org/near-you/UK/South-Wales/event-detail?id=17363>

Contact South Wales Administration Team at [swalesadmin@imechenearyou.org](mailto:swalesadmin@imechenearyou.org)

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### Professional Registration – CEng Have you got what it takes? – 21<sup>st</sup> April 2020

Attendees will be able to learn all about the IMechE Professional Review Interview for CEng and IEng. The presentation will cover all aspects of the interview process, format, typical questions, mandatory questions and competencies covered. There will be opportunity to ask the presenter questions. This session is invaluable for anyone looking to become professionally registered in the future.

**Venue:** Holiday Inn, Junction 32 M4, Merthyr Rd, Tongwynlais CF 15 7LH

**Time:**

- Buffet 6.15pm,
- Lecture 7pm
- Informal discussion 8pm

**Book using Link:** <http://nearyou.imeche.org/near-you/UK/South-Wales/event-detail?id=17470>

Contact South Wales Administration Team at [swalesadmin@imechenearyou.org](mailto:swalesadmin@imechenearyou.org)



## The South Wales Region Annual Dinner – 22<sup>nd</sup> May 2020 - After Dinner Speaker – Mr. Mike Bubbins (BBC Wales’ - The Tourist Trap)

7.30 pm at Cardiff City Hall

This year we will be continuing with our usual format for the annual dinner on the evening of Friday 22<sup>nd</sup> May 2020 at our regular venue of Cardiff City Hall. Following the success of Ryan Jones in 2017, Lowri Morgan in 2018 and John Paul Davies in 2019 we are pleased to welcome **Mr Mike Bubbins** as our after dinner speaker. He is a popular and well known face on BBC Wales and is an established performer on the UK comedy circuit as well as regularly attending the Edinburgh Comedy Festival. His current work involves a lead role as Wyn in the BBC Wales comedy “The Tourist Trap”.



Mike is a former professional rugby player and PE teacher and lives in Barry with his partners and children. He has starred in the popular BBC series “The Unexplainers” alongside John Rutledge.

The Annual Dinner will again take place in the impressive Marble Hall. Just like last year the dress code is formal (dinner jacket and black tie).

The dinner costs £40 per head for Members and their family or guests and £24 per head for students. Remaining places are rapidly being taken up and note that booking is essential.

Following its successful use for the 2019 Annual Dinner, this year we are managing bookings online at the web address below.

If you are unable to use the online service, please contact The Administration Team on [swalesadmin@imechenearyou.org](mailto:swalesadmin@imechenearyou.org).

**Book using Link:** <http://nearyou.imeche.org/near-you/UK/South-Wales/event-detail?id=16797>



### Support your Region’s Universities at **Formula Student 2020**

Silverstone Circuit  
22<sup>nd</sup> – 26<sup>th</sup> July

[www.formulastudent.com](http://www.formulastudent.com)



## Regional Matters

### Notice of Annual General Meeting

Notice is hereby given that the 2020 Annual General Meeting of the South Wales Region of the Institution of Mechanical Engineers will be held on:

Date: Tuesday 12<sup>th</sup> May 2020  
Time: 6:00 for 6:15 p.m.

Venue: Holiday Inn Hotel  
Junction 32 M4, Merthyr Rd, Tongwynlais,  
CF15 7LH

Nominations for the Regional Committee, including the signature of the nominator and signed written consent of the nominee(s) should be sent at the earliest opportunity and before 12<sup>th</sup> April 2020 to:

Mr Andrew Hall, Secretary, IMechE South Wales Region

Email: [swalessec@imechenearyou.org](mailto:swalessec@imechenearyou.org)

After the list of nominations by the Committee has been presented at the meeting, any member of the Branch/Region who is a Corporate Member of the Institution shall be entitled to add to the list a candidate for election to any or each of the offices to be filled, by causing to be delivered to the Chairman at the meeting nominations signed by him as nominator, together with the written consent of his nominees. Any additions shall be confined to the offices of the Committee for which the nominations have been made by the Committee.

**Please note that a technical lecture at 7pm will follow The Annual General Meeting.**