

Ioan Webber Gower College Swansea, EESW Student of the Year Runner-up 2019

From Gower College Swansea, Ioan Webber participated in the EESW project in 2018-2019 with his four friends. They worked in collaboration with TATA Steel in Port Talbot. TATA tasked the team with analysing the thermal losses through their high-temperature steam mains at their power generation plant. The team were also asked by the company to create a report outlining recommendations for insulating materials. Additionally, they were asked to explore thermodynamic cycles in which the plant used, give a brief overview of the insulating materials, and generate CAD models to back up heat-loss calculations.



Ioan Webber (second from right) and the team being awarded the 'Best Overall Team Performance' at the EESW Awards Event

Ioan's role in the group was to produce the sections on the Rankine cycle and look at the losses from a thermodynamic point of view. He also created the CAD simulations using finite element analysis which they used to support the calculations in the report. These also acted as great visual aids and made up a large part of the team's visual presentation when presented at EESW's Big Bang Fair.

Ioan explained how the EESW Project helped him realise his interests and what areas he would like to pursue in higher education. He said "Before doing the STEM project I wasn't totally sure what path I wanted to take after my A-levels.



I enjoyed the sciences, but this was the first real opportunity that I had been given to properly apply what I had learned, and it's part of what's driven me to study engineering. I also found that doing that project helped when applying to university, especially when writing my personal statement and during the interviews, wherein each interview I was asked to talk about the work that I had done."

Ioan is now studying Engineering at Cambridge University and is hoping to either go into research or to work in an industry where he can explore the more practical side of Engineering.

Ioan Webber

**Ioan Webber Coleg Gŵyr Abertawe,
Ail yng nghystadleuaeth Myfyriwr y Flwyddyn EESW 2019**

Cymerodd Ioan Webber ran ym mhrosiect EESW gyda phedwar ffrind yn 2018-2019 pan oedd yn fyfyrwr yng Ngholeg Gŵyr Abertawe. Buont yn gweithio gyda chwmni TATA Steel ym Mhort Talbot. Y dasg a osodwyd i'r tîm gan TATA oedd dadansoddi'r colledion thermol drwy'r prif gyflenwad stêm tymheredd uchel yn y gwaith cynhyrchu pŵer. Hefyd, gofynnodd y cwmni i'r tîm lunio adroddiad yn amlinellu argymhellion ar gyfer deunyddiau inswleiddio. Yn ogystal, gofynnwyd i'r tîm archwilio cylchoedd thermodynamig yn y gwaith, rhoi trosolwg cryno o'r deunyddiau inswleiddio, a chynhyrchu modelau CAD i gefnogi cyfrifiadau colli gwres.



Ioan Webber (Ail o'r dde) a'r tîm yn derbyn gwobr 'Perfformiad Tim Cyffredinol Gorau' yn ystod Digwyddiad Gwobrau EESW

Rôl Ioan yn y grŵp oedd cynhyrchu'r cydrannau ar gyfer y cylch Rankine ac astudio'r colledion o safbwyt thermodynamig. Hefyd, fe aeth ati i greu'r efelychiadau CAD gan ddefnyddio dadansoddiad elfen terfynol a ddefnyddiwyd i gefnogi'r cyfrifiadau yn yr adroddiad. Roedd y rhain yn gymhorthion gweledol gwych hefyd ac yn rhan bwysig o gyflwyniad gweledol y tîm yn ystod Ffair Big Bang EESW.

Esboniodd Ioan sut oedd Prosiect EESW wedi ei helpu i wireddu ei ddiddordebau a dewis y meysydd yr hoffai eu dilyn mewn addysg uwch.



Ioan Webber

Dyweddodd "Cyn cymryd rhan ym mhrosiect STEM doeddwn i ddim yn siŵr pa lwybr roeddwn i eisiau ei ddilyn ar ôl fy astudiaethau Safon Uwch. Mwynheais y gwyddorau, ond hwn oedd y tro cyntaf i mi gael cyfle go iawn i ddefnyddio beth roeddwn wedi'i ddysgu, ac mae'n rhan o'r rheswm pam wnes i ddewis astudio Peirianneg. Hefyd, roedd y ffaith fy mod i wedi cwblhau'r prosiect yn gymorth wrth wneud cais i fynd i'r brifysgol, yn enwedig wrth ysgrifennu fy natganiad personol ac yn ystod y cyfweliadau, pan ofynnwyd i mi siarad am y gwaith roeddwn wedi'i wneud."

Mae Ioan yn astudio Peirianneg ym Mhrifysgol Caergrawnt ar hyn o bryd ac mae'n gobeithio camu ymlaen i'r maes ymchwili neu weithio mewn diwydiant lle bydd yn gallu archwilio ochr fwy ymarferol Peirianneg.