



**The Patient and Population Health and Informatics (PPHI) seminar series presents:**

**Bob Laramée**

Visualization of Public Healthcare Data  
Delweddu Data Gofal Iechyd Cyhoeddus

Department of Computer Science, Swansea University

**Wednesday 6<sup>th</sup> November, ILS1 Seminar Room, 12.30-1.30pm (lunch from 12.15)**

**Dydd Mercher, 6<sup>th</sup> Medi, Ystafell Seminar ILS1, 12:30-1:30pm (gyda cinio o 12:15)**

The Medical School at Swansea University is outstanding at collecting and archiving healthcare data and has been doing this for several years now. However, parallel to this success, the Medical practitioners face the same crisis that the entire computing world does. With the rapid advancement of big data storage technologies and the ever-decreasing costs of hardware, our ability to derive and store healthcare data is unprecedented. However, a large gap remains between our ability to generate and store large collections of complex, time-dependent data and our ability to derive useful information and knowledge from it. Data visualization leverages our most powerful sense, vision, in order to derive knowledge and gain insight into large, multi-variate data sets that describe complicated and often time-dependent behavior. This talk provides a glimpse into the vibrant world of data visualization and some very special techniques specifically designed for complex, multi-variate healthcare data.

Robert S. Laramée received a bachelor's degree in physics, cum laude, from the University of Massachusetts, Amherst (ZooMass) in 1997. In 2000, he received a master's degree in computer science from the University of New Hampshire, Durham. He was awarded a PhD from the Vienna University of Technology (Gruess Gott TUWien), Austria at the Institute of Computer Graphics and Algorithms in 2005. From 2001 to 2006 he was a researcher at the VRVis Research Center ([www.vrvis.at](http://www.vrvis.at)) and a software engineer at AVL ([www.avl.com](http://www.avl.com)) in the department of Advanced Simulation Technologies. Currently he is an Associate Professor at Swansea University (Prifysgol Cymru Abertawe), Wales in the Department of Computer Science (Adran Gwyddor yfrifiadur). His research interests are in the areas of big data visualization, visual analytics, and human-computer interaction. He has published more than 90 peer-reviewed papers in scientific conferences and journals and is Conference Co-Chair of EuroVis 2014, the premiere conference on data visualization in Europe. For more information, please visit: <http://cs.swan.ac.uk/~csbob/>

Mae Ysgol Feddygaeth Prifysgol Abertawe'n rhagorol o ran casglu ac archifo data gofal iechyd, ac mae wedi bod yn gwneud hyn ers sawl blwyddyn bellach. Fodd bynnag, ochr yn ochr â'r llwyddiant hwn, mae'r ymarferwyr meddygol yn wynebu'r un argyfwng â gweddill y byd cyfrifiadura. Wrth i dechnolegau storio data mawr ddatblygu'n gyflym ac wrth i gostau ein caledwedd ostwng yn barhaus, mae ein gallu i gasglu a storio data gofal iechyd yn well nag erioed. Fodd bynnag, mae bwlch yn parhau rhwng ein gallu i gynhyrchu a storio casgliadau mawr o ddata cymhleth sy'n ddibynnol ar amser a'n gallu i gywain gwybodaeth ddefnyddiol ohono. Mae delweddu data yn manteisio ar ein synnwyr mwyaf pwerus, ein golwg, er mwyn meithrin gwybodaeth a dealltwriaeth o setiau data mawr ac aml-amryweb, sy'n disgrifio ymddygiad cymhleth sydd yn aml yn ddibynnol ar amser. Mae'r sgwrs hon yn rhoi cipolwg ar fyd cyffrous delweddu data a rhai technegau arbennig iawn, a ddyfeisiwyd yn benodol ar gyfer data gofal iechyd cymhleth ac aml-amryweb.

Derbyniodd Robert S Laramée radd baglor mewn ffiseg â theilyngdod gan Brifysgol Massachusetts, Amherst (ZooMass) ym 1997. Yn 2000, derbyniodd radd meistr mewn cyfrifiadureg gan Brifysgol New Hampshire, Durham. Dyfarnwyd PhD iddo gan Brifysgol Technoleg Vienna (Gruess Gott TUWien), Awstria, yn y Sefydliad Graffeg Gyfrifiadurol ac Algorithmau yn 2005. Rhwng 2001 a 2006, bu'n ymchwilydd yng Nghanolfan Ymchwil VRVis ([www.vrvis.at](http://www.vrvis.at)) ac yn beiriannydd meddalwedd yn AVL ([www.avl.com](http://www.avl.com)) yn yr adran Technolegau Efelychu Uwch. Ar hyn o bryd, mae'n Athro Cysylltiol ym Mhrifysgol Abertawe, Cymru, yn yr Adran Gyfrifiadureg. Ei ddiddordebau ymchwil yw delweddu data mawr, dadansoddeg weledol a rhyngweithio rhwng pobl a chyfrifiaduron. Mae wedi cyhoeddi mwy na 90 o bapurau a adolygwyd gan gymheiriaid mewn cynadleddau a chyfnodolion gwyddonolac ef yw Cyd-gadeirydd Cynhadledd EuroVis 2014, y brif gynhadledd