

# Wrexham Glyndwr University

Rae Earnshaw

# Overview

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- Owain Glyndwr
- Role at Glyndwr University
- School of Art, Design and Media
- Research
- Centre for the Creative Industries
- Centre for Ultra Realistic Imaging
- Solar Energy Research
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# Background of Prof Earnshaw

- University of Leeds – Russell Group
- Illinois Institute of Technology – private University, Chicago. IITRI
- Northwestern Polytechnical University, Xian, China
- George Washington University – private University – downtown DC – close by White House and NSF – Foggy Bottom – Dept of Electrical Eng and Computer Science
- 4 books with Professor Rogers at US Naval Academy, Annapolis, USA
- University of Bradford, Professor of Electronic Imaging
- <http://www.bradford.ac.uk/ei/electrical-engineering-and-computer-science/staff-profiles/profile/?u=raearnsh>
- Glyndwr University, Professor of Creative Industries

# Glyndwr University, Wales



3 min Welcome Video –

<https://www.youtube.com/watch?v=eOnnfsFesKs>

6 min Campus Tour Video -

<https://www.youtube.com/watch?v=2MayabeF5ew>

The image shows a screenshot of a web browser displaying the Wikipedia article for Glyndŵr University. The browser's address bar shows the URL [https://en.wikipedia.org/wiki/Glyndŵr\\_University](https://en.wikipedia.org/wiki/Glyndŵr_University). The page title is "Glyndŵr University" and it includes a search bar and navigation tabs for "Article" and "Talk".

**WIKIPEDIA**  
The Free Encyclopedia

**Glyndŵr University**  
From Wikipedia, the free encyclopedia

*"NEWI" redirects here. For the software component architecture in computer science, see Newi.*

**Glyndŵr University** (Welsh: *Prifysgol Glyndŵr*, Welsh pronunciation: [pri:v'æsgol glin'du:r]) is a British university with campuses at **Wrexham**, **Northop** and **St Asaph** in north-east **Wales**; and at **Kingston-upon-Thames**, **London**. It offers both undergraduate and postgraduate degrees, as well as professional courses. GU had 8,405 students in 2013/14.

Formerly known as the North East Wales Institute of Higher Education (NEWI), it was granted full university status in 2008 after being a member of the **University of Wales** since 2003. The university is named after the medieval Welsh prince **Owain Glyndŵr**,<sup>[3]</sup> who first suggested the establishment of universities throughout Wales in the early 15th century.<sup>[4]</sup>

**Contents** [hide]

- History
- Campuses
  - Wrexham
- Academic profile
  - International links
- Administration
- Companies
- Student life
  - Accommodation

**Glyndŵr University**  
Prifysgol Glyndŵr

**Motto** *Hyder trwy Addysg* (Welsh)

**Motto in English** Confidence through Education

**Established** 1887, as Wrexham School of Science and Art, 2008 as Glyndŵr University

**Endowment** £18,000 (2013)<sup>[1]</sup>

**Chancellor** Trefor Jones CBE

**Vice-Chancellor** Professor Graham Upton

**Students** 8,405 (2013/14)<sup>[2]</sup>

**Undergraduates** 7,100 (2013/14)<sup>[2]</sup>

**Postgraduates** 1,305 (2013/14)<sup>[2]</sup>

**Location** Wrexham, Wales, UK  
53.054°N 3.006°W

**Campus** Urban

# Owain Glyndwr



W Owain Glyndwr - Wikipedi... x +

https://en.wikipedia.org/wiki/Owain\_Glyndwr

Donate to Wikipedia  
Wikipedia store

Interaction

- Help
- About Wikipedia
- Community portal
- Recent changes
- Contact page

Tools

- What links here
- Related changes
- Upload file
- Special pages
- Permanent link
- Page information
- Wikidata item
- Cite this page

Print/export

- Create a book
- Download as PDF
- Printable version

Languages

- العربية
- Български
- Brezhoneg
- Català
- Čeština
- Cymraeg
- Deutsch
- Español
- فارسی

**Owain Glyndwr** (Welsh pronunciation: [ˈoʊain gljɪnˈduːr]; c. 1349 or 1359 – c. 1415), or **Owen Glendower**, was a **Welsh** ruler and the last native Welshman to hold the title **Prince of Wales** (*Tywysog Cymru*). He instigated a fierce and long-running but ultimately unsuccessful revolt against the **English** rule of **Wales**.<sup>[1]</sup>

Glyndwr was a descendant of the Princes of **Powys** through his father **Gruffydd Fychan II**, hereditary *Tywysog* of **Powys Fadog** and Lord of **Glyndyfrdwy**, and of those of **Deheubarth** through his mother Elen ferch Tomas ap Llywelyn. On 16 September 1400, Glyndwr instigated the **Welsh Revolt** against the rule of **Henry IV of England**. The uprising was initially very successful and rapidly gained control of large areas of Wales, but it suffered from key weaknesses – particularly a lack of artillery, which made capturing defended fortresses difficult, and of ships, which made their coastlands vulnerable. The uprising was eventually suppressed by the superior resources of the English. Glyndwr was driven from his last strongholds in 1409, but he avoided capture and the last documented sighting of him was in 1412. He twice ignored offers of a pardon from his military nemesis, the new king **Henry V of England**, and despite the large rewards offered, Glyndwr was never betrayed to the English. His death was recorded by a former follower in the year 1415.


Glyndwr is portrayed in **William Shakespeare**'s play *Henry IV, Part 1* as a wild and exotic man ruled by magic and emotion.<sup>[2]</sup> With his death Owain acquired a mythical status along with Cadwaladr, Cynan and **Arthur** as the hero awaiting the call to return and liberate his people.<sup>[3]</sup> In the late 19th century the **Cymru Fydd** movement recreated him as the father of **Welsh nationalism**.

**Contents** [hide]

- Early life
- Siblings
- Welsh revolt 1400–1415

**Owain Glyndwr**

*Prince of Wales*  
*Lord of Glyndyfrdwy and of Cynllaith Owain*



**Prince of Wales**

<b>Reign</b>	1404 - c. 1415
<b>Predecessor</b>	Owain Lawgoch
<b>Hereditary Prince of Powys Fadog</b>	
<b>Predecessor</b>	Gruffydd Fychan II
<b>Successor</b>	Maredudd ab Owain Glyndwr
<b>Born</b>	c. 1349
<b>Died</b>	c. 1415
<b>Spouse</b>	Margaret Hanmer
<b>Issue</b>	See children
<b>House</b>	House of Mathrafal
<b>Father</b>	Gruffydd Fychan II
<b>Mother</b>	Elen ferch Tomas ap Llywelyn

# Role at Glyndwr University

- Part-time Professor of Creative Industries and Interactive Systems (0.2FTE), 2012-15
- Honorary Visiting Professor, 2015 -

# Former North Wales School of Art and Design





# Former North Wales School of Art and Design



# Formerly North Wales School of Art and Design

The screenshot shows a web browser window with the URL [www.glyndwr.ac.uk/en/Campusesandfacilities/NorthWalesSchoolofArtandDesign/](http://www.glyndwr.ac.uk/en/Campusesandfacilities/NorthWalesSchoolofArtandDesign/). The navigation menu includes: STUDY WITH US, STUDENT LIFE, INTERNATIONAL, BUSINESS, COMMUNITY, RESEARCH, and ABOUT US. The breadcrumb trail reads: You are here: Home > Campuses and facilities > North Wales School of Art and Design.

**Left Sidebar:**

- Campuses
- Education
- Sport
- Glyndwr University Racecourse Stadium
- Health
- Student bar
- Techniquest Glyndwr
- Entertainment
- Food and drink
- Oriel Sycarth Gallery
- Second Language Learning Centre

**Main Content Area:**

## Art and Design - Regent Street

The North Wales School of Art & Design is situated in a magnificent Victorian building, located in the town centre and converted into studios.

The building, on Regent Street, offers facilities and workshops for all the art areas offered at Glyndwr University.

The School contains its own art shop selling materials at prices well below those offered elsewhere. Inspirations Café offers you the chance to enjoy food and drink in convivial surroundings.

It has developed its own artistic culture, obvious as soon as you enter the building. Murals and exhibitions show the remarkable talent that exists in art and design at Glyndwr University and add to the relaxed feel at Regent Street.

- Click [here](#) to see some of examples of the great work by our current and former students on the [BA \(Hons\) Design: Animation, Visual Effects and Game Art](#) course.
- You can also see our 2015 students' final year degree show [here](#).
- See some of our [BA \(Hons\) Design: Illustration, Graphic Novels and Children's Publishing](#) students' work by viewing the gallery [here](#).
- Watch some of our past [BA \(Hons\) Fine Art](#) students talk about their experiences on the course [here](#).

**Below are all our art and design courses that are available here at Glyndwr University:**

**Right Sidebar:**

- TALK TO US** 01978 293439
- chat with US LIVE** (with a photo of a staff member and a "CLICK HERE" button)
- how to apply** (with a checkmark icon)
- Print this page** (with a printer icon)
- QAA** (Quality Assurance Agency logo)
- Register for UPDATES** (vertical text)

**Bottom Left:**

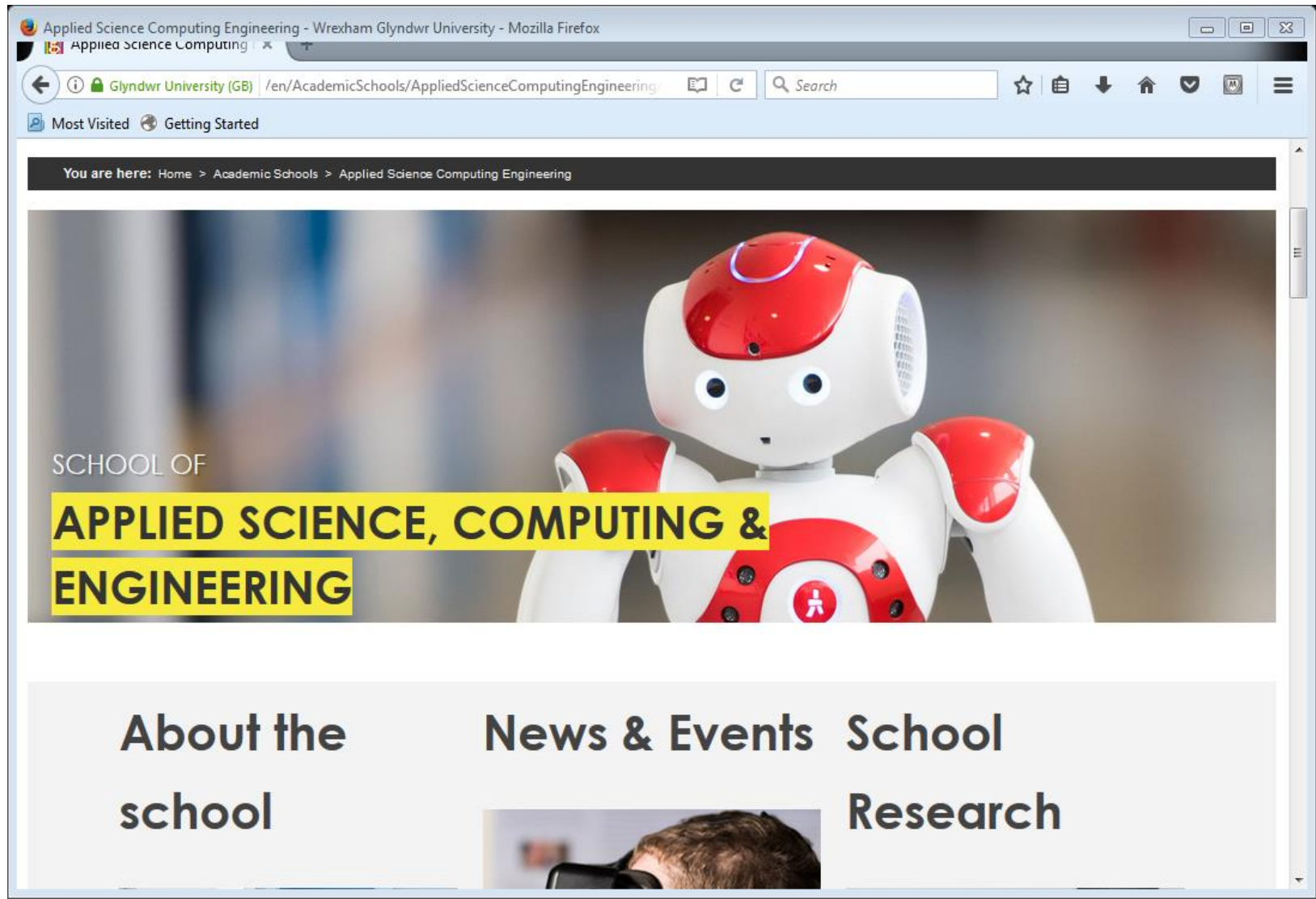
**get in touch**

Full Name \*

E-mail \*

# School of Applied Science, Computing & Engineering

<https://www.glyndwr.ac.uk/en/AcademicSchools/AppliedScienceComputingEngineering/>



Applied Science Computing Engineering - Wrexham Glyndwr University - Mozilla Firefox

Applied Science Computing

Glyndwr University (GB) /en/AcademicSchools/AppliedScienceComputingEngineering

Most Visited Getting Started

You are here: Home > Academic Schools > Applied Science Computing Engineering

SCHOOL OF  
**APPLIED SCIENCE, COMPUTING &  
ENGINEERING**

**About the school**

**News & Events**

**School Research**

# Research

<https://www.glyndwr.ac.uk/en/research/>

The screenshot shows a Mozilla Firefox browser window displaying the Glyndwr University Research website. The browser's address bar shows the URL <https://www.glyndwr.ac.uk/en/research/>. The website features a large hero image of a scientist in a white lab coat looking through a microscope. A pink circular graphic on the left contains the text "OUR RESEARCH". Below this, there are three smaller images: a man in a library looking at books labeled "REPOSITORY", a stack of papers labeled "RESEARCH REPORT", and a woman speaking at a microphone. At the bottom, there are three columns of text: "Research Degrees", "Work with us", and "Seminars and events".

Research - Wrexham Glyndwr University - Mozilla Firefox  
research - wrexham glyndwr  
Glyndwr University (GB) <https://www.glyndwr.ac.uk/en/research/> Search  
Most Visited Getting Started

**OUR RESEARCH**

**REPOSITORY**

**RESEARCH REPORT**

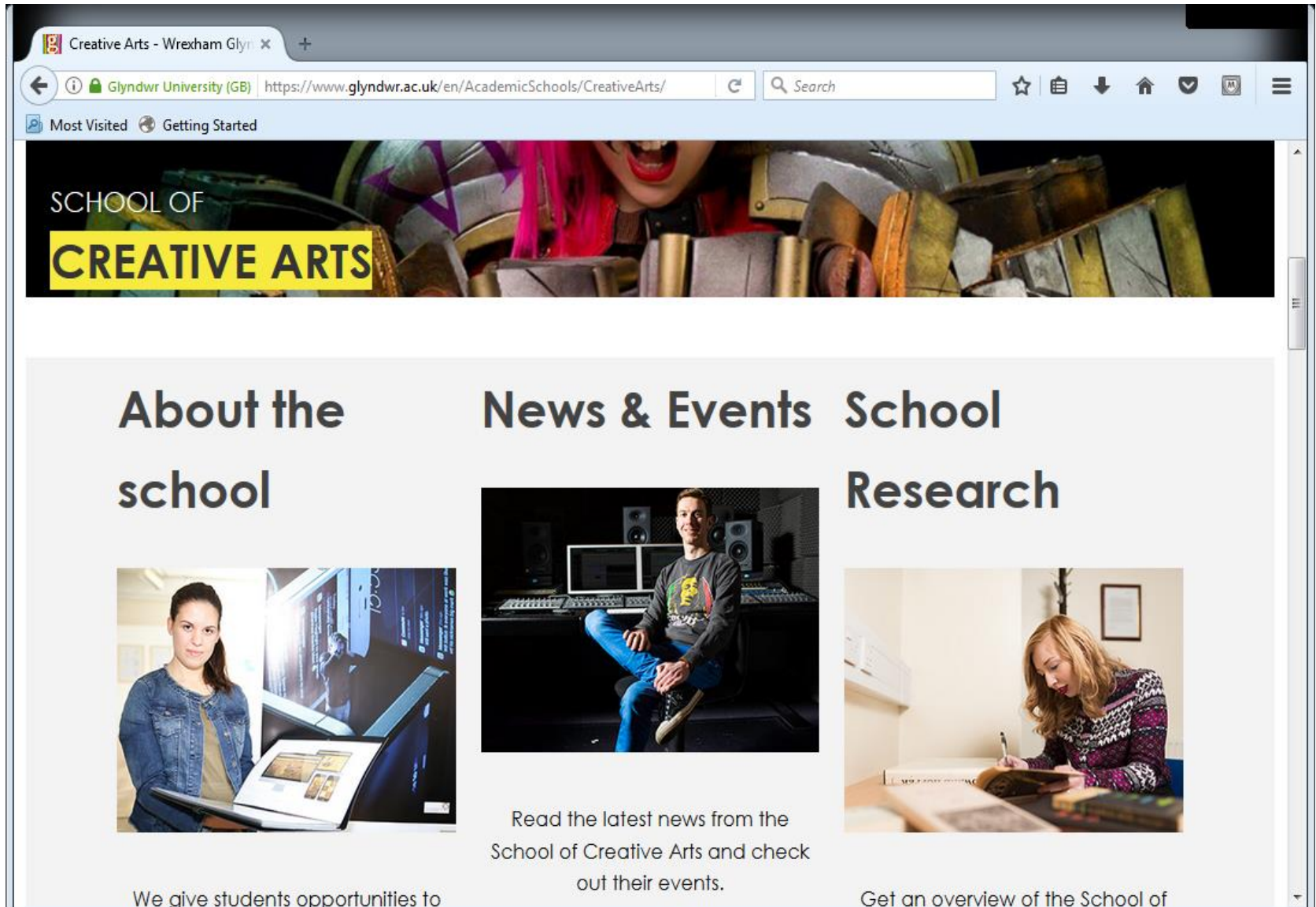
**Research Degrees**

**Work with us**

**Seminars and events**

# School of Creative Arts


<https://www.glyndwr.ac.uk/en/AcademicSchools/CreativeArts/>



The image shows a browser window displaying the website for the School of Creative Arts at Glyndwr University. The browser's address bar shows the URL <https://www.glyndwr.ac.uk/en/AcademicSchools/CreativeArts/>. The page features a large banner image with the text "SCHOOL OF CREATIVE ARTS" overlaid. Below the banner, there are three main navigation sections: "About the school", "News & Events", and "School Research". Each section includes a representative image and a brief description.


**SCHOOL OF CREATIVE ARTS**

**About the school**




We give students opportunities to

**News & Events**



Read the latest news from the School of Creative Arts and check out their events.

**School Research**



Get an overview of the School of

<http://www.glyndwr.ac.uk/en/campusesandfacilities/CentrefortheCreativeIndustries/>  
<http://conferencevenues.glyndwr.ac.uk/Wrexham/CentrefortheCreativeIndustries/>

Glyndwr University - Centr... x +

www.glyndwr.ac.uk/en/campusesandfacilities/CentrefortheCreativeIndustries/

Search

You are here: [Home](#) > [Campuses and facilities](#) > [Centre for the Creative Industries](#)

Campuses

Education

Sport

Glyndwr University  
Racecourse Stadium

Health

Student bar

Techniquest Glyndwr

Entertainment

Food and drink

Oriel Sycharth Gallery

Second Language Learning  
Centre



## Centre for the Creative Industries

Reflecting the growing importance of the creative industries to the economic development of the region, Glyndwr University's £5m Centre for the Creative Industries is a modern environmentally-friendly building designed to be sympathetic to the campus's existing buildings.

The centre provides a focal point for creative industries activity, promoting greater interdisciplinary collaboration and involving subjects as diverse as art and design, computing and engineering.

The centre provides a hub for the development of a creative industries culture and also provides a stimulus to the development of private and spin-out businesses associated with the creative industries. Within the university it helps curriculum development and the introduction of further innovative teaching methods.

The centre was officially opened by Carwyn Jones, First Minister of Wales on Thursday, March 31 2011

It has become the new home of BBC Cymru Wales in Wrexham, strengthening the BBC's presence in north east Wales and providing new production facilities for its staff, guests and contributors.

The centre features state-of-the-art TV and radio studios, 3D workshops, design studios, IT suites, Apple training suites and post-production audio and visual facilities.



[View more pictures of the Centre for Creative Industries](#)



<http://www.glyndwr.ac.uk/en/AboutGlyndwrUniversity/Newsandmediacentre/Newsarchive/Pressreleases2011/FirstMinisterofWalestoopen5mCentrefortheCreativeIndustries/>

The screenshot shows a web browser displaying the Glyndwr University website. The browser's address bar shows the URL: <http://www.glyndwr.ac.uk/en/AboutGlyndwrUniversity/Newsandmediacentre/Newsarchive/Pressreleases2011/FirstMinisterofWalestoopen5mCentrefortheCreativeIndustries/>. The website header features the Glyndwr University logo (PRIFYSGOL glyndwr UNIVERSITY) and social media icons for Facebook, Twitter, YouTube, Instagram, and Google+. A navigation menu includes links for STUDY WITH US, STUDENT LIFE, INTERNATIONAL, BUSINESS, COMMUNITY, RESEARCH, and ABOUT US. A breadcrumb trail reads: You are here: Home > About Glyndwr University > News and media centre > News archive > Press releases 2011 > First Minister of Wales to open £5m Centre for the Creative Industries. The main content area displays the article title: **First Minister of Wales to open £5m Centre for the Creative Industries**, dated 31 March 2011. The article text states: **Carwyn Jones, First Minister of Wales, will today officially open a new £5m centre dedicated to supporting the creative industries.** The article continues: **The Centre for the Creative Industries at Glyndwr University in Wrexham will provide students from disciplines such as art and design, media, and computing with access to cutting edge training and development facilities.** It also mentions: **It will also become the new home of BBC Cymru Wales in Wrexham, strengthening the BBC's presence in north east Wales and providing new production facilities for its staff, guests and contributors.** A quote from First Minister Carwyn Jones is provided: **First Minister Carwyn Jones said: "With Wrexham hosting two major cultural and creative events this year, the National Eisteddfod and its own Year of Culture, now is the perfect time to launch such an important and creative facility.** The article concludes with: **"This new Centre for the Creative Industries supports our drive to position Wales as a modern creative economy, able to compete successfully on the UK and world stage. The creative industries make a vital contribution to our economy, and are one of the six sectors of particular promise identified in the Economic Renewal policy we published last year.** A final quote from the First Minister is partially visible: **"I am also pleased that the building will be home BBC Cymru in Wrexham, a great example of the University working collaboratively with an established institution."** A left-hand navigation menu lists various site sections: Who we are, Fundraising, Partner Colleges, Sustainability, Education for all, News and media centre (highlighted), Latest news, Social Media, News archive, Photos and videos, Experts directory, Contact us, University newspaper, Job vacancies, Governance, Freedom of information, Aerial footage, and Graduation.

# Dance of Life Mural - by Muriel Eldridge

<https://www.glyndwr.ac.uk/OrielSycharthGallery/Exhibitions/PastExhibitions/DanceofLifeMuralbyMildredEldridge/>  
<https://www.glyndwr.ac.uk/tour/facilities/>

University: Glyndwr | Adresse... x +

www.glyndwr.ac.uk/tour/facilities/ Search

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**University:** Glyndwr  
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**Telephone:** 01978 293439

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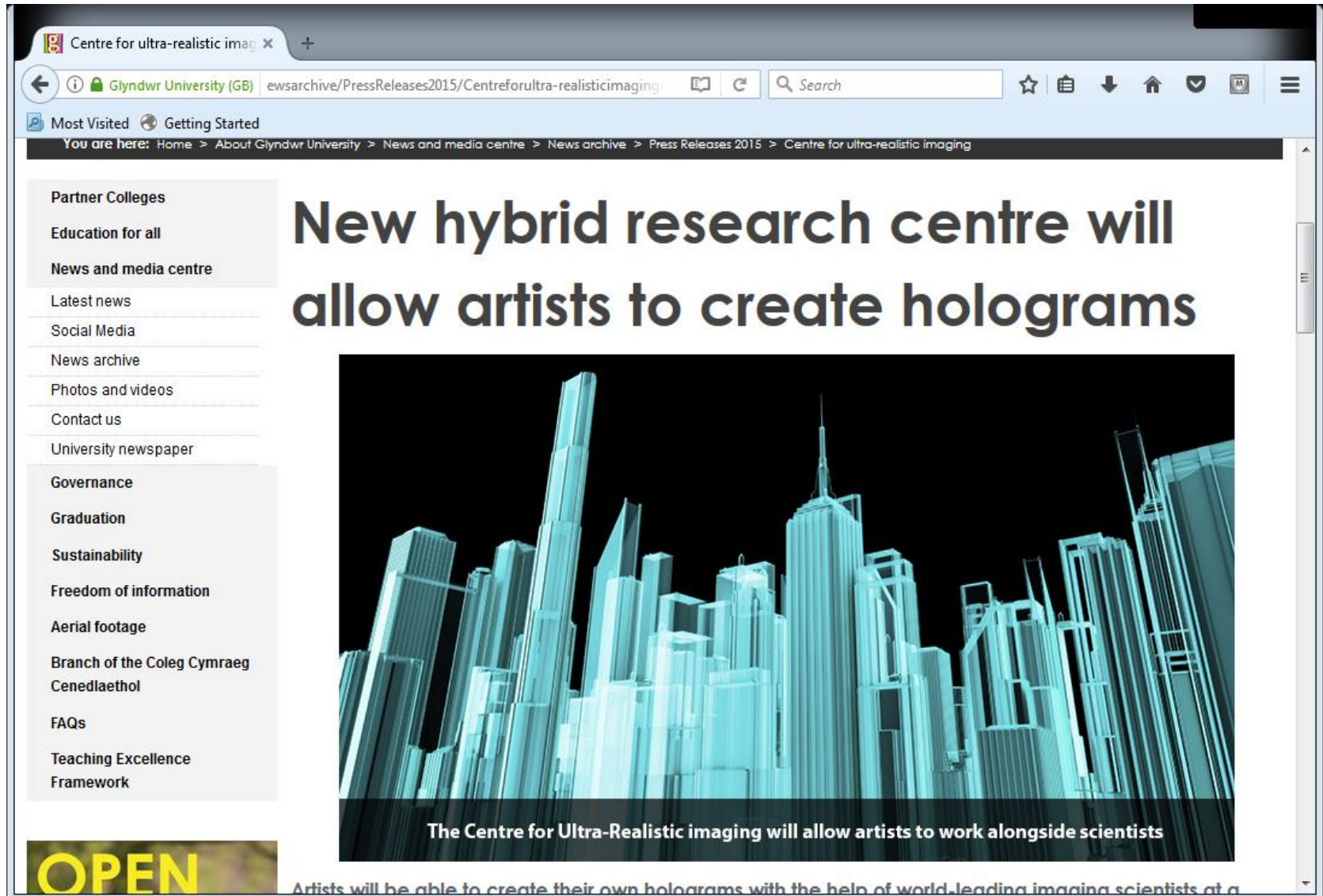


# Dance of Life – 2 min video

- <http://www.bbc.co.uk/news/uk-wales-11951846>
- <http://www.bbc.co.uk/blogs/wales/entries/08b7a712-10cf-3a8d-bf48-a6d81eed01d0>
- <http://www.walesonline.co.uk/lifestyle/showbiz/mildred-elsie-eldridge-celebrating-woman-2513949>
- <https://www.rjah.nhs.uk/RJAHNHS/files/3d/3d68282b-3eb1-4296-9e91-0d400bf6e639.pdf>

# Centre for Ultra-Realistic Imaging

<https://www.glyndwr.ac.uk/en/AboutGlyndwrUniversity/Newsandmediacentre/Newsarchive/PressReleases2015/Centreforultra-realisticimaging/>



The image is a screenshot of a web browser displaying a news article. The browser's address bar shows the URL: <https://www.glyndwr.ac.uk/en/AboutGlyndwrUniversity/Newsandmediacentre/Newsarchive/PressReleases2015/Centreforultra-realisticimaging/>. The page title is "Centre for ultra-realistic imaging". The breadcrumb trail reads: "You are here: Home > About Glyndwr University > News and media centre > News archive > Press Releases 2015 > Centre for ultra-realistic imaging".

On the left side, there is a navigation menu with the following items:

- Partner Colleges
- Education for all
- News and media centre
- Latest news
- Social Media
- News archive
- Photos and videos
- Contact us
- University newspaper
- Governance
- Graduation
- Sustainability
- Freedom of information
- Aerial footage
- Branch of the Coleg Cymraeg Cenedlaethol
- FAQs
- Teaching Excellence Framework

The main content area features a large headline: "New hybrid research centre will allow artists to create holograms". Below the headline is a 3D wireframe illustration of a city skyline with various skyscrapers in shades of cyan and blue. At the bottom of the image, there is a caption: "The Centre for Ultra-Realistic imaging will allow artists to work alongside scientists".

At the bottom left of the page, there is a yellow banner with the word "OPEN" in large, bold, black letters. Below the banner, the text reads: "Artists will be able to create their own holograms with the help of world-leading imaging scientists at a".

# Mirrors for £900 million European-Extremely Large Telescope

Glyndwr University - ESOgo


www.glyndwr.ac.uk/en/AboutGlyndwrUniversity/Newsandmediacentre/Newsarch

Search

- Who we are
- Fundraising
- Partner Colleges
- Sustainability
- Education for all
- News and media centre
- Latest news
- Social Media
- News archive
- Photos and videos
- Experts directory
- Contact us
- University newspaper
- Job vacancies
- Governance
- Freedom of information
- Aerial footage
- Graduation

## Delight as construction of ESO telescope is given green light

Scientists can reach for the stars after



construction of the world's largest telescope was approved.

The news is a major boost to Glyndwr University, where a team from the National Facility for Ultra Precision Surfaces has been successfully polishing mirrors for the £900million European-Extremely Large Telescope (E-ELT) project.

Due for completion in 2024, the giant eye on the sky will be sited in Chile and was given the green light by European Southern Observatory (ESO) Council members on Friday.

The group of scientists and engineers at Glyndwr's OptIC Centre in St Asaph are leading the race to polish the mirrors and are rapidly approaching completion of the third prototype segment.

# Solar Energy Research

3 min video - <https://www.youtube.com/watch?v=wDMz9A5mXPk>

The screenshot shows a web browser window displaying the staff profile of Stuart Irvine at Glyndwr University. The browser's address bar shows the URL [www.glyndwr.ac.uk/en/StaffProfiles/StuartIrvine/](http://www.glyndwr.ac.uk/en/StaffProfiles/StuartIrvine/). The website header includes the Glyndwr University logo (PRIFYSGOL glyndwr UNIVERSITY) and social media icons for Facebook, Twitter, YouTube, Instagram, and Google+. A navigation menu contains links for STUDY WITH US, STUDENT LIFE, INTERNATIONAL, BUSINESS, COMMUNITY, RESEARCH, and ABOUT US. The breadcrumb trail reads: You are here: Home > Staff Profiles > Stuart Irvine.

**Undergraduate courses**  
Postgraduate courses  
Part-time courses  
Professional courses  
Kick-start year

## Professor Stuart J C Irvine

Director of CSER and Professor of Opto-electronic Materials for Solar Energy  
[s.irvine@glyndwr.ac.uk](mailto:s.irvine@glyndwr.ac.uk)  
01745 535234

B.Sc Hons Physics (Loughborough University), Ph.D Materials Science (Birmingham University), D.Sc Physics (Birmingham University), Chartered Physicist (CPhys), Fellow of the Institute of Physics (FInstP), Fellow of the Institute of Materials Mining and Minerology (FIMMM)



Professor Stuart Irvine is Director of the Centre for Solar Energy Research (CSER) at the St Asaph OptIC campus of Glyndwr University, and research professor of Opto-electronic Materials for Solar Energy at Glyndwr University.

Research interests include pioneering work on deposition of thin film materials by Metal-organic Chemical Vapour Deposition (MOCVD), thin film solar cells and application of advanced thin film materials to the solar energy and opto-electronics industry.

This research has led to the development of new optical in situ monitoring devices to measure growth rate, layers thickness and roughening of the growing films and was commercialised through the spin out of a company ORS Ltd which has now been bought by Laytech GMBH. The value of awarded grants to Professor Irvine's CSER team over the past five years has been in excess of £5M.

The previous appointment was to the Chair of Opto-electronic Materials Chemistry in the Chemistry Department at the University of Wales Bangor, 2000- 2008. Prior to that Professor Irvine was Chair of Materials Chemistry at North East Wales Institute (NEWI) from October 1993 to 2000. From 1990 to 1993 he was an Assistant Manager, Array Producibility Research at Rockwell International Science Center in Thousand Oaks, California. He pioneered new methods in metal organic vapour phase epitaxy (MOVPE) for infrared detector applications.



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# Vice-Chancellors

- Prof Michael Scott



- Prof Graham Upton

- [https://en.wikipedia.org/wiki/Graham\\_Upton](https://en.wikipedia.org/wiki/Graham_Upton)



- Dr Maria Hinfelaar

- <https://uk.linkedin.com/in/maria-hinfelaar-61b1b516>



# References

- Annual Research Reports –
- <https://glynfo.glyndwr.ac.uk/course/view.php?id=41&section=5>
- Research Strategy –
- <https://glynfo.glyndwr.ac.uk/course/view.php?id=41&section=4>
- QAA Institutional Review, March 2013 -
- <http://www.qaa.ac.uk/reviews-and-reports/provider?UKPRN=10007833#.VoZoaVKbVj8>
- *“Materials Challenges: Inorganic Photovoltaic Solar Energy”* (RSC Energy and Environment Series), V. Barrioz, S. J. C. Irvine, D Bagnall, 2014
- *“Advanced Composite Materials and Technologies for Aerospace Applications”* R. Day and S. Reznik, 2014