

**Dr Kevin Golden**

Dean and Head of  
School

**Prof. Phil Legg**

Professor in Cyber  
Security

23<sup>rd</sup> Nov 2023

# School of Computing and Creative Technologies

# College of Arts, Environment and Technology (CATE)

Architecture  
and  
Environment

Arts

Computing  
and Creative  
Technologies

Engineering

# Computing and Creative Technologies

- Computer Science
- Artificial Intelligence
- Cyber Security
- Data Science
- Information Technology
- Cyber Security and Digital Forensics
- Software Engineering
- Business Computing
- Mathematics and Statistics
- Music and Audio Technology
- Digital Media
- Games Technology

# Outreach

- Cyber Security
- Computer Science
- Mathematics
- Games Technology

Prof. Phil Legg

Professor in Cyber  
Security

Co-Director:  
UWEcyber  
ACE-CSE

Programme Lead:  
MSc Cyber Security

# Cyber Security

23<sup>rd</sup> Nov 2023



in association with

National Cyber  
Security Centre



Department for  
Digital, Culture,  
Media & Sport

Academic Centre of Excellence in **Cyber Security Education**

# About



Professor in Cyber Security

Programme Leader: MSc Cyber Security

Co-Director: UWEcyber ACE-CSE

Cyber Security Theme Lead: Computer Science Research Centre

Co-Founder of CISSEUK

[Phil.Legg@uwe.ac.uk](mailto:Phil.Legg@uwe.ac.uk) / <http://plegg.me.uk>

**UWE since 2015:** Prev. Oxford (CPNI, Cisco), Swansea (Welsh Gov, WRU), Cardiff (NHS).

**Research:** Cyber security, Machine Learning, Data Visualisation

- *Insider threat detection, cyber situational awareness, adversarial AI, privacy-preserving AI, visual/explainable AI, cyber resilience, software security, data science, decision support*



# UWEcyber

**UWEcyber** was recognised by National Cyber Security Centre (NCSC) as one of the first Academic Centres of Excellence in Cyber Security Education (ACE-CSE) in December 2020, for our commitment to teaching and learning, outreach and external industry engagement.

Our MSc Cyber Security has been [NCSC-certified](#) since it started in 2018.

Our Degree Apprenticeship with Gloucestershire College is the only NCSC-certified programme in England and Wales.

Our undergraduate programme is to be submitted for certification in 2024 following programmatic redesign.



Gold Award



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<https://www.ncsc.gov.uk/information/ncsc-certified-degrees>  
<https://www.ncsc.gov.uk/news/uk-universities-excellence-recognition>  
<http://www.uwecyber.co.uk>  
<http://www.twitter.com/uwecyber>



# UWEcyber Research

## **Software, Cloud and Infrastructure Security**

Container-based,  
Software Security, IoT,  
CAV, Hardware

## **Cyber Security Data Analytics**

ML for Security, Security  
of ML, Explainable AI,  
Privacy, Transparency and  
Trust

## **Cyber Crime and Domestic Cyber Security**

Online Harms, Forensic  
Analysis, Dark Web,  
Financial Crime

## **Pedagogical Research for Cyber Security**

Effective interactive methods for teaching and learning

# Cyber Security Education Outreach



**HARGREAVES  
LANDDOWN**

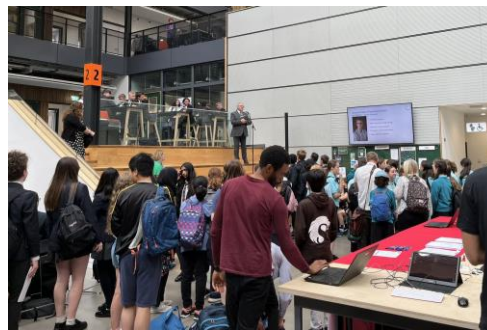
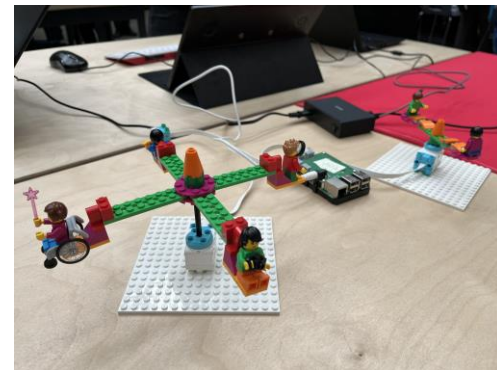
**CGI**



**BAE SYSTEMS**



# Cyber Security Education Outreach



# Cyber Security Education Outreach



# Train the Teachers

- NCSC support for supply teacher cover
- First workshop series (2021-2022) was to help teachers co-create activities to develop knowledge and confidence
- Second workshop series (2022-2023) was on co-creation of activities for specific Key Stages:
  - Cyber Security for Young Adults – KS3
  - Cyber Security Basics – KS4
  - Cyber Security Careers and Apprenticeship – KS5



## Workshop 1

*“A very well led pace to the day, I felt everything was shared well, the resources used were good and everyone was able to engage well.”*

*“This was a well-structured workshop and I took away a lot of online resources that I might be able to use in classrooms.”*

*“New ideas for things I wouldn't have even begun to think of as an activity! Like being able to speak to more knowledgeable people about these aspects - especially up to date info”*

## Workshop 2

*“Additional approaches to teach content (physical boxes for encryption, access control rules list) and ideas for making Computing more engaging in enrichment activities (training padlocks !!)”*

*“Making use of the different networking tools to map the network and access other devices and block them.”*

*“The ability to see a workable practical solution which can be used in a class”*

## Workshop 3

*“I learnt more about cybersecurity and current advances in Computing such as ChatGPT and Stable diffusion (AI image generator). I was exposed to new ways of teaching and linking knowledge for students (physical boxes in boxes to teach asymmetric encryption, firewall tool on Rasp Pi, layering using the airport analogy) some of which I have already used in the classroom (Firewalls and access control list). I found new resources for talking about careers with students and created co-created a sample Careers poster. I was able to network and share best practice with other teachers (What's on Board, off timetable for CyberFirst Girls, new online resources). In additional I have strengthened links with UWE and have a better understanding of the outreach they can provide.”*

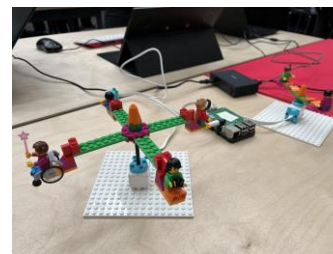
*“It was brilliant to get some ideas and perspective from a HE level and to talk to different members of the cyber community.”*

*“share practice, the ability to work with other colleagues from similar schools”*

***“This is the best CPD I have ever been on, and I organise CPD!”***

# CyberWEST

- SW regional project led by UWE, with UoB, UoE, UoP and OdysseyLA.
- 1-day workshop
  - Wednesday 17th January 2024 – UWE
  - Tuesday 23rd January 2024 – Exeter
  - Friday 2nd February 2024 – Bristol
  - Tuesday 6th February 2024 – Plymouth
- Activities with lesson plans, key stage relevant, aligned to OCR specification.
- Regional equipment loan library to support schools with activities.
- £150 funding per teacher.



# Thank you for listening



Professor of Cyber Security

[Phil.Legg@uwe.ac.uk](mailto:Phil.Legg@uwe.ac.uk)

<http://plegg.me.uk>

<https://go.uwe.ac.uk/uwecyber>

**Sign up!**



CyberWEST Teachers Workshops  
2024



<http://go.uwe.ac.uk/uwecyber>

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CyberWEST Teachers Workshops  
2024

