RESEARCH MATTERS

Celebrating research success and opportunities
at the University of Wolverhampton

Goodbye urban congestion?

With the volume of vehicles on our roads, the UK has a serious traffic congestion problem – but persuading people to use alternative transport is a real challenge.

Dr Panos Georgakis, from the University of Wolverhampton's Faculty of Science and Engineering, is working on major projects to reduce city traffic, travel times and accidents by creating bespoke intelligent transport systems.

Using data from various sensors and systems, as well as information generated by users of social media, the digital age transport systems use machine learning algorithms to evaluate the condition of transport networks. This allows the anticipation of situations in near real time, to prevent problems before they emerge.

Providing bespoke routes and solutions for individual users, they could revolutionise the way people travel, using combinations of public transport, car shares, bicycle routes and walking.

Dr Georgakis is looking at UK cities which suffer from built up traffic problems, as part of wider European projects.

He has recently received €307,687 from Horizon 2020 for the MaaS4EU 'Mobility as a Service' project, and will be looking at relieving problems with congestion around Manchester, with a trial of 400 individuals.
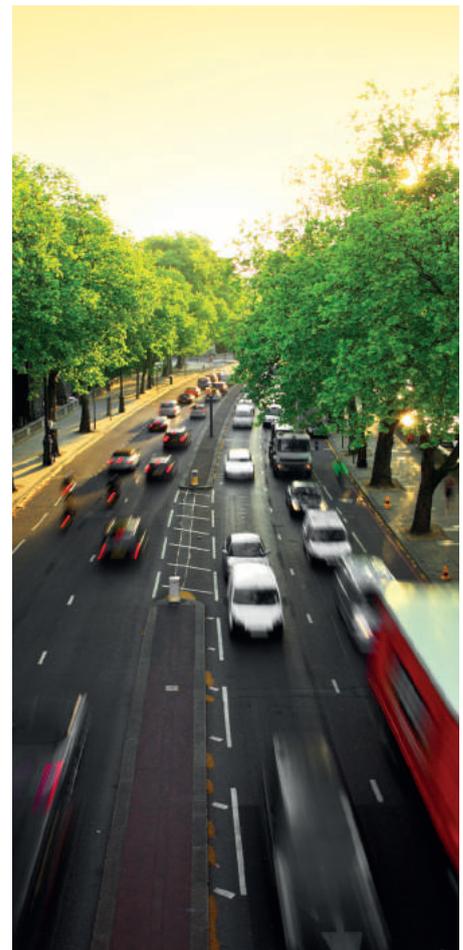
The University is one of 17 partners working on this project, which will also look at easing traffic around Luxembourg and Budapest, and is leading on the Midlands region for Optimum, part of a £6 million Horizons 2020 project. Dr Georgakis is technical and scientific lead on the University's €510,000 section of the project, working on easing congestion around Birmingham.

Dr Georgakis obtained his PhD from the University for the development of a platform for the integration of intelligent transport systems and has worked on a number of Engineering and Physical Sciences Research Council and European FP research projects.

He said: "Using intelligent transport systems will enable travellers to receive proactive recommendations for personalised trips, while city authorities will be able to plan dynamic responses to anticipated traffic situations.

"Optimal usage of existing networks is vital for sustaining ever-growing demand for mobility. We will be using technology that can harness big data to offer tailor-made solutions to transport needs and create cleaner, safer, more efficient systems.

"I would like to see a future where people move away from car ownership to being car users, who combine this with other modes of transport. We want to create viable alternatives."

The University's research work will support the operation of an app that gives travellers a bespoke route on the day, to avoid delays. Users will be given incentives for walking, cycling and using public transport systems, helping in the reduction of private cars on the transport network.

Dr Georgakis is currently working with Birmingham City Council to trial the app. Other cities taking part in the pilot are Vienna and Ljubljana.

UNIVERSITY OF WOLVERHAMPTON

Find out more about our research at: **wlv.ac.uk/research**

EDITOR'S NOTE

Research Matters welcomes Professor Silke Machold, who has been appointed as Interim Dean of Research at the University and is the new Editor of this publication. Professor Machold's welcome will be published in Issue 4 in the new academic year 2017/18.

HORIZON 2020 MARIE SKŁODOWSKA-CURIE FELLOWSHIPS

The University has been awarded three prestigious Horizon 2020 Marie Skłodowska-Curie Fellowships – a total of £491,153 of funding.

Horizon 2020 is the EU framework programme for research and innovation and the Marie Skłodowska-Curie actions (MSCA) provide grants for all stages of researchers' careers.

Professor John Roberts, Faculty of Arts, receives £183,455 for the 'Epistemological Gaps in Cultural Theories of the Soviet East and Democratic West in the 1960s and 1970s' project.

Professor Ruoling Chen, Faculty of Education, Health and Wellbeing, has been awarded £153,976 for the 'Impacts of Environmental Tobacco Smoke on Incidence and Outcomes of Dementia' project.

£153,722 has been awarded to Professor Silke Machold, Interim Dean of Research, for the 'Governance of Small and Medium Enterprises (GoSME's)' project.

Congratulations to the recipients.

Professor John Roberts

Professor Ruoling Chen

ANNUAL RESEARCH CONFERENCE 2017: HIGHLIGHTS

Research excellence at the University of Wolverhampton was showcased at the two day Annual Research Conference (ARC) at City Campus recently.

Dr Benjamin Halligan

A wide variety of work from different areas – including cybersecurity, construction, microbiology and tourism – was presented along with a packed programme that saw academics and doctoral students present their work and provide opportunities for further discussion.

Topics included brownfield building challenges, understanding the sustainability credentials of everyday products, latest cancer research and the impact of sedentary behaviour on bones.

Dr Benjamin Halligan, Director of the Doctoral College, said: "The event has been a success and what I particularly liked about it is we've tried to move beyond a typical dynamic of a conference by opening up conversations and having an event that is for everyone. I'm sure people will remember it for that."

Day one featured doctoral student presentations and a poster competition, while day two saw some of the University's leading academics present their research findings.

Research success: ERDF 2014-2020

The University has recently secured £2,870,884 in funding from the European Regional Development Fund (ERDF) 2014-2020 for two projects.

Paul Burrow, Business Solutions, has secured £1,041,600 for the Digital Passport (DigiPass) project, in partnership with City of Wolverhampton Council and Black Country Consortium. The Digital Passport programme will support Black Country SMEs (small and medium-sized enterprises) to become more digitalised.

Professor Andrew Pollard, Faculty of Science and Engineering, has been awarded £1,829,284 for the Smart Concept Fund, which will support the commercialisation of new technologies developed by businesses and universities.

Paul Burrow

Prof Andrew Pollard

History researcher's new book published

Described as 'compelling, comprehensive, and original', Dr Oliver Wilkinson's new book on British prisoners of war has been published by Cambridge University Press.
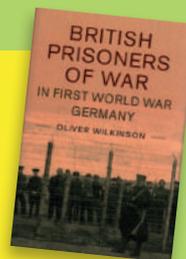
Dr Wilkinson, a Postdoctoral Research Fellow in the University's Department of History, Politics and War Studies, has conducted an original investigation into the experiences of the 185,000 British military servicemen captured and incarcerated.

British Prisoners of War in First World War Germany – Studies in the Social and Cultural History of Modern Warfare examines the psychological anguish associated with captivity.

Dr Wilkinson has been researching the topic for a decade and the book reveals a range of coping strategies embracing resistance, as well as the leadership and organisation, networks of support and links with 'home worlds'.

BRITISH PRISONERS OF WAR IN FIRST WORLD WAR GERMANY
OLIVER WILKINSON

EDUCATION EXPERT SHAPING LIFELONG LEARNING POLICY

A University of Wolverhampton professor has been chosen to help influence future education policy as part of a World Economic Forum group.

The Forum's System Initiative on the Future of Education, Gender and Work has asked Professor of Education, Alan Tuckett, to join a series of dialogues to support the development of a draft lifelong learning policy for the World Economic Forum.

It will be developed and delivered at the World Economic Forum Annual Meeting in Davos, Switzerland, in January 2018.

Professor Tuckett is an internationally recognised expert in adult education and advises UNESCO on adult and lifelong learning.

He said: "A culture of lifelong learning is at the core of the Learning Region initiative the University is actively supporting across the Black Country and in Telford."

Alan Tuckett was the President of the International Council of Adult Education 2011-2015, contributed to work on the educational dimensions of the UN's Sustainable Development Goals, and is responsible for creating the annual Adult Learners' Week.

He was awarded the OBE in 1995, and has honorary doctorates from eight universities.

Professor Alan Tuckett

SCHOLARSHIP PROGRAMME ASSISTING DEVELOPING COUNTRIES

Commonwealth Scholarships give overseas students the chance to further their studies in the UK and contribute to the international development aims.

The University of Wolverhampton has recently supported two postgraduate students who have benefited from the scholarships.

Oriyomi Okeyinka is from Nigeria where she works as a lecturer at the University of Ibadan, a nominating agency for the Commonwealth Scholarship Commission. Her PhD on the applicability of recycled wastepaper as a lightweight building material concluded that the Cement-less Wastepaper-based Lightweight Block (CWLB) has excellent properties for eco-friendliness as a more sustainable alternative to existing cement-based blocks.

"Learning in the UK has really opened my eyes," said Oriyomi. "I will be continuing my work in Nigeria and want to use the knowledge I have gained."

Peter Odunga's PhD explores the determinants of Foreign Direct Investments (FDI) into Tanzania and his home country Kenya. He plans to make recommendations to their governments, as well as relevant policy makers, based on his findings on economic growth, export performance and the role of seaports in attracting investment.

Peter, a lecturer at Moi University in Kenya, said: "I am immensely grateful to the Commonwealth Scholarship Commission and the University of Wolverhampton for the award."

Commonwealth Scholarships and Fellowships in the UK are funded by the Department for International Development and Department for Education, in conjunction with UK universities, with candidates selected on merit and their potential to contribute to the needs of their home countries.
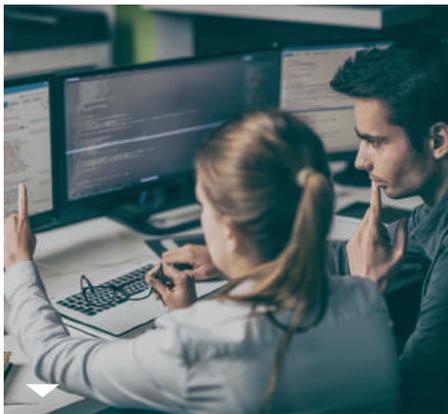
Oriyomi Okeyinka

Peter Odunga

Find out more about our research at: **wlv.ac.uk/research**

CALL FOR EARLY STAFF RECORDS ON AGRESSO PCB SYSTEM

The Project Costing and Bidding (PCB) system is the University's tool for all income generation work where staff are bidding for funds, incomes or grants.

This system can easily be accessed via Agresso on your desktop and it's also a safe space for recording ideas, project development data, papers and application forms.

The Project Support Office (PSO) is urging users to enter records earlier in the process – even if it's an idea you're working on or a project you're exploring. This allows you to work with the PCB system as a project development tool

and when it comes to submitting, all of the data, finances and papers that you need will be there.

Jan Gilder, Director of PSO, said: "Having a consistent process for costing and retaining project records means a better understanding of income generation for the University, enabling us to improve support, appreciate the potential of our staff and – in the future – give Faculties a data reporting function and an annual evaluation of bid types, numbers and growth.

"But to help bidders win more contracts, we need users to start the process as early as possible. Even if you don't have all the pieces of paper yet for your quote, tender response or bid, you can start a record on PCB – giving yourself maximum time to meet University data protection, finance and security requirements so that you can submit a proposal with confidence."

The Project Support Office is offering one-to-one training for any users or those staff wishing to register for the system. Find out more on the PCB system, including details of the staff training sessions, at: **wlv.ac.uk/staff/services/agresso-system/pcb/** or contact James Dawson on ext: 3765 or: **james.dawson@wlv.ac.uk**

UNIVERSITY HOSTS MAJOR 'CYBER' CONFERENCE

Experts in cyberpsychology, cybertherapy and social networking recently attended an international conference, hosted by the University of Wolverhampton.

Topics such as cyberbullying, apps for kids, cybercrime, robotics, virtual reality, wearable computing, video-gaming, health applications of technology and the social implications of Facebook and Twitter were all discussed at the 22nd annual Cyberpsychology, Cybertherapy and Social Networking Conference (CYPSY22) at City Campus.

The conference is an international event, previously held in cities including San Diego and Brussels. It is aimed, amongst others, at researchers to share and discuss advancements in the growing disciplines.

Dr Chris Fullwood, Reader in Cyberpsychology at the University of Wolverhampton, said: "It was a real

privilege to host a conference as highly regarded as CYPSY22. There were a captivating blend of topics and debate on important issues around the role of technology in healthcare and the broader psychological implications of human interaction with the internet."

The event was jointly organised by the Interactive Media Institute in collaboration with the University, and Cyberpsychology Research at the University of Wolverhampton (CRUW), the Virtual Reality Medical Institute and the International Association of CyberPsychology, Training, & Rehabilitation (iACToR).

The University of Wolverhampton is launching a new MSc in Cyberpsychology, which starts in October 2017.

Professor Graham Brooks and Colleagues in South Korea

Expert advises South Korea on police reform

A University expert has become an official advisor to the South Korean parliament on issues of police reform.

Professor in Criminology Graham Brooks' research areas include techniques of policing and preventing corruption in an international context.

He has shared his expertise with the police and probation services in the Republic of Korea before, and was invited to present a paper in parliament on police reform.

Professor Brooks, from the Faculty of Social Sciences, said: "It was an honour to be asked to present a paper on matters of such importance. The plan is to use this paper as a discussion point in future parliamentary debates on police reform."

His paper, co-authored with colleague Dr John McDaniel, is titled 'Democratisation of the police in the Republic of Korea: decentralisation, accountability and legitimacy'.

Prof Graham Brooks

Find out more about our research at: **wlv.ac.uk/research**