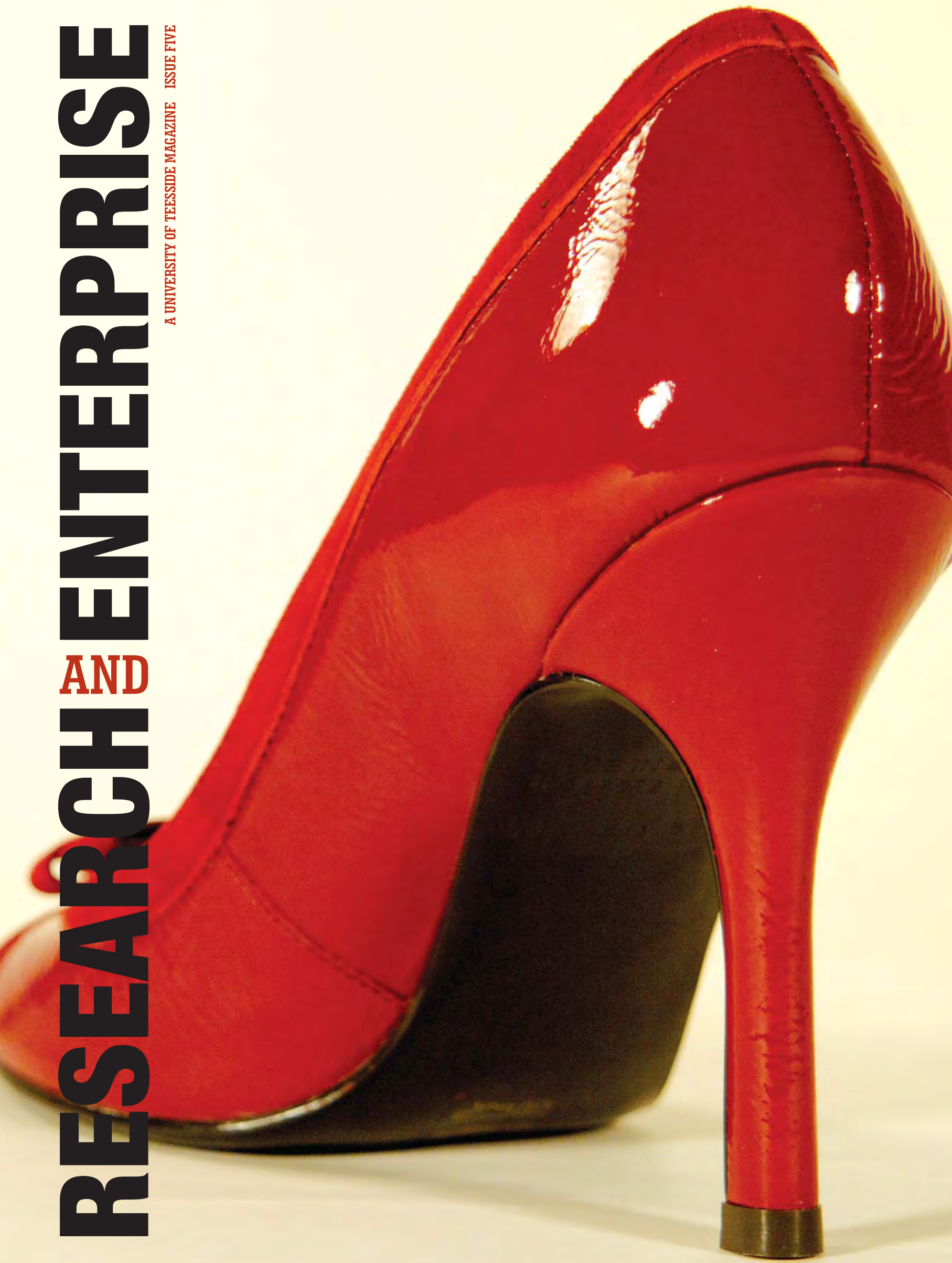
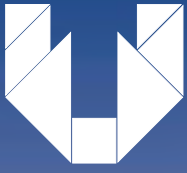


RESEARCH AND ENTERTAINMENT

A UNIVERSITY OF TESSIDE MAGAZINE ISSUE FIVE





UNIVERSITY OF
TEESSIDE

Enterprise

it's what we do



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Over the summer the findings of a major study showed that modern universities like Teesside are doing invaluable work to support Britain's regions with just a fraction of the available government research money.⁽¹⁾

It is therefore timely that the way in which we are engaging with and meeting the needs of people in the North East should be a major theme in this new edition of *Research and Enterprise*.

Promoting economic, social and cultural success in the Tees Valley and beyond is central to our university, and I hope you will agree that the initiatives featured in this magazine are helping to put the North East on the path to success. The most visible manifestation of this is the start of work on two new buildings on campus to support the DigitalCity initiative. We are confident this investment, backed by One NorthEast and European funds, will pay substantial dividends in supporting new and growing high-value businesses, creating new jobs and new opportunities.

I firmly believe interaction between universities and business is critical to regional prosperity. But health and social issues are also important, and we are actively involved in helping to tackle major issues in this area such as childhood obesity. We're also investigating the impact of government programmes for disadvantaged young people and enlisting technology to support advances in health research with a new nanotechnology clean room. This is already supporting a University-led European research programme seeking new ways to diagnose patients with suspected deepvein thrombosis.

New ideas should be at the heart of any university and during the past year we have come up with new inventions, including a device to help older people with balance problems. And one of our Design graduates is promising to make it easier for parents to get on a bus with a pushchair.

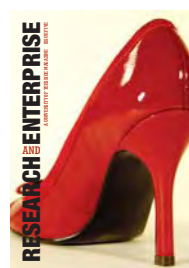
There are many other examples in the magazine of the way our work is supporting the North East. It's our region, and the University of Teesside is proud to be a part of it.

Professor Graham Henderson
Vice-Chancellor
University of Teesside

⁽¹⁾ The study into the effectiveness of research by modern universities was carried out by Arthur D Little on behalf of 35 universities, including Teesside and is available at cmu@cmu.ac.uk

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Front Cover: **Fashion Warning** (see page 19)

DISTANT HISTORY OR INVENTION OF THE TV AGE?

REGIONAL

ALISON UTLEY meets Professor Anthony Pollard who is searching for clues to the true meaning of the North East and whether the region was actually created by a television company?



Forget centuries-old traditions, it may surprise those of us who know and love North East England that the region could be less than 50 years old and was quite possibly invented by a television company.

The conclusion is unexpected, not least because the North East is considered to be amongst the most distinctive of the present day English regions. It feels old.

But a major five-year research project funded by the Arts and Humanities

Research Council has been looking back as far as Anglo-Saxon times to discover whether or not the two north-eastern counties of England - Durham and Northumberland - formed a recognisable region in times past.

The conclusions are being drawn together in a volume of essays entitled *'Regional Identities in North East England, c. 1300 - 2000'*, edited by Adrian Green and AJ Pollard and published next year by Boydell and Brewer.

And the researchers from the five north eastern universities, three of whom are now based with Teesside's highly rated Historical Research group in a team led by Dr Diana Newton, have concluded that the North East had no real meaning until relatively recently.

The researchers have had to define what is meant by a region. "This is not a straightforward question as there are a number of overlapping aspects," says Professor Anthony Pollard, pictured.

"Regions can be defined spatially by their topography, landscapes and environments. They can also be characterised economically in terms of wealth creation. Then there is the political layer as determined by relationships with central government and the exercise of authority. Finally, there is an important cultural aspect which must take account of people's shared and distinctive customs and traditions. All these layers make up what we mean by a region."

So when did the North East become a self-conscious region?

The research suggests that rather than a linear progression, regional identities have ebbed and flowed over the years and, historically at least, regions were not fixed.

In fact, for many centuries the word 'Northern' was used more frequently to describe what is now known as the North East. This confusion continued to some extent well into the 20th century.

The first waves of migration from Anglo-Saxon and Viking in the early Middle Ages to Irish, Welsh and Scottish in the modern era could have led to enhanced diversity. But the research discovered that over time absorption of migrants allowed alternative identities to emerge, which were grounded in the territory in which people lived.

In the North East two of the earliest and most distinctive of these identities were the Borders of Northumberland and the Bishopric of Durham. Although the imprints of these historic identities have survived, they were overlain in the 20th century, more particularly in the second half of the century, by the modern regional identity.

"REGIONS CAN BE DEFINED SPATIALLY BY THEIR TOPOGRAPHY, LANDSCAPES AND ENVIRONMENTS. THEY CAN ALSO BE CHARACTERISED ECONOMICALLY IN TERMS OF WEALTH CREATION"

The Tyne was a significant boundary between two 'regions' with clearly articulated identities right through the Middle Ages.

The battle over the Tyne commission in the 19th century shows how deep the divisions between the banks of the river remained.

They are traceable from the 18th century right through to the 20th century and the division of the great Northern coalfield, when separate county-based owners' organisations and unions emerged.

But gradually identities were increasingly focused on the river estuaries of Tyne, Wear and Tees, and the emphasis was on the coast. This was a transitional stage, between an era when identification with the three river valleys was paramount to the modern sense of the North East.

IDENTITY



However, the research concludes that the region as we understand it today did not even begin to take shape until the late 19th century when various employers' associations in shipbuilding, engineering and iron-making named themselves north-east coast federations. Their members stretched from north of the Tyne to south of the Tees.

By the early 20th century, the differences and distinctions between the Tyne/Wear and Tees/Hartlepool area were quite marked. But the research concludes that it was perhaps not until the mid 20th century with the advent of television that the idea of the region was widely established.

In 1959, the first edition of Tyne/Tees Television's *The Viewer* assured its readers that 'the region stretching from beyond the Tees in the south to well beyond the Tyne in the north is a region with a culture, a tradition and a way of life entirely its own'.

Professor Pollard said: "Today's culture, tradition and way of life draws on the collective memory and experience of the recent industrial past, especially on Tyneside and in Durham. And despite rivalries through the years, which in some instances are still quite marked today, the shared sense of the past, partial as it is, is a vital element in the modern creation of a regional identity just as in earlier centuries border ballads and the cult of St Cuthbert were integral to the shaping of sub-regional identities."

• For further information contact Dr Diana Newton on 01642 384061 or email d.newton@tees.ac.uk.

DIGITAL CITY

The campus at the University is alive with cranes and heavy earth-moving equipment as the foundations are laid for Teesside's DigitalCity, an ambitious economic regeneration project which aims to create a vibrant super-cluster of digital technology and digital media enterprises in the Tees Valley. Here, we find out what's in store.



The digital revolution's here! That's how it looks as earth-moving equipment lays the foundations for Teesside's ambitious project to move from 'Steel City' to DigitalCity.

The ground-breaking start on two ultra modern buildings was made in May 2006 - marking another significant milestone in the move to make Middlesbrough and the Tees Valley one of the country's top locations for new developments in digital media and technology.

Margaret Fay, Chairman of Regional Development Agency One NorthEast, backed the project by pledging nearly £6m of Government and European funds to support the main development, a £12m Institute of Digital Innovation (IDI).

Speaking at the start of construction work, she said: "The University of Teesside has a growing reputation in the digital field and this exciting project will ensure that its academic excellence can be converted into business creation and growth and help the rejuvenation of the Tees Valley."

Margaret donned a hard hat to join the University's Vice-Chancellor Professor Graham Henderson and Councillor Dave Budd, Middlesbrough Council's Executive Member for Regeneration, to make an official start on the building development. In all, £21m is being invested in two new buildings. The four-storey 4,250 m² IDI on Woodlands Road, Middlesbrough, will be the University hothouse for new talent,

Margaret Fay, One NorthEast's chairman, takes the controls of a JCB digger at the start of work on the University of Teesside's Institute of Digital Innovation. Also pictured are DigitalCity Executive Director John McDougall, left, Nick Gregory, Associate Director of CPMG Architects, centre, and Professor Graham Henderson, Vice-Chancellor of the University of Teesside, right.

new knowledge and new business growth in the digital sector. The aim is to create 110 jobs and 45 new businesses within three years.

Nearby, a £9m state of the art Centre for Creative Technologies (CCT), on the former YMCA site, will provide 3,750 m² of learning facilities for students of digital media, computing and design, reinforcing the University's reputation as a top teaching institution in these areas. The CCT will actively encourage students to work across disciplines and will act as a feeder to the postgraduate and research and enterprise-focused IDI.

Due for completion by September 2007, both buildings will mark a step-change in the University's enterprise strategy, which has already seen more than 80 new businesses starting up, most of them in the digital sector. Councillor Budd says: "We believe DigitalCity is one of the most exciting projects being developed in the region. It will contribute to the transformation of the Tees Valley by making the area a major centre for the emerging digital media and technology sectors and we're looking forward to working with the University and One NorthEast on the project."



Artist's impression of the £12m Institute of Digital Technology (IDI).

THE ARTIST WHO RARELY TOUCHES A PAINT BRUSH

Alain Lioret is an artist producing some of the most exciting work around, but he hardly ever touches a paint brush or canvas, as NIC MITCHELL found out when he met DigitalCity's French 'ambassador' in a Paris café.

You are much more likely to see Alain Lioret working on a PC or MAC than standing in front of an easel.

For French-based Alain is a digital artist and Professor in Arts and Technologies of Image at University of Paris 8, where he runs INREV [Digital Images and Virtual Reality]. He's also an enthusiastic supporter of the DigitalCity project.

Recently, he became DigitalCity's digital artist in 'virtual' residence. It has to be virtual as he spends only a few days a semester in Middlesbrough. But with the internet and a daily service from Paris Charles de Gaulle Airport to Durham Tees Valley (Teesside) Airport, the 600 or so miles between Paris and Teesside is nothing to worry about.

Alain's work, pictured, features artificial creatures living in a virtual world. "They move in time and space 'on-film'. This is the future of art - not using paint and a canvas, but harnessing software and using a computer to create emotional works of art using real-time applications," said Alain.

"The work can be put on the web, but it is best seen on a big screen. The great thing about it is that it is alive! All my paintings can move and transform themselves and allow you to become a time traveller. You can be in the past, present or future. Why not?"

DigitalCity's project director, Janice Webster, met Alain at the international conference for digital artists and scientists in Laval, Mayenne and invited him to Middlesbrough to see what was happening on Teesside.

He was impressed. "You are doing some very interesting things with real-time technology and artistic production. That is quite rare," he said.

"Often you have places with an interest in art but not technology, while other universities specialise in technological applications but are not really involved in the artistic field.

"At Teesside, you are doing both! That's what attracted me here in the first place, and it is why I was delighted to become involved. I've fallen in love with Middlesbrough and Teesside



because DigitalCity is a new place that is becoming a big, big place for real-time art."

Alain was a keynote speaker at the first DigitalCity symposium at the University of Teesside in April 2006, which brought together experts from science and the arts to discuss scientific visualisation and virtual artistic worlds. Four of his students worked in the DigitalCity studios for a month to help him prepare the new 'living paintings'. Now he is investigating ways of trying to establish a DigitalCity base in Paris.

"What I find really refreshing is that all this is happening away from London. North East England is a very dynamic area which is working hard to re-invent itself and move on from being a very industrial area. That just adds to the excitement."

He is particularly impressed by Janice Webster and the DigitalCity team. "She is interested in digital art, artists visualising science, artists and scientists working together and looking everywhere for new ideas. I hope to have a good relationship with DigitalCity for a long time," says Alain, who adds: "I feel like I am DigitalCity's ambassador. I'm always talking about it and ways we can collaborate further."

THE ART OF INNOVATION BY

DESIGN

Exciting times are ahead for art and design in the region, with the opening of Middlesbrough Institute of Modern Art (mima) and the national launch in North East England of Dott 07 in 2007.

Dott, the Design Council's Design of the Times initiative, is a ten-year programme to highlight the importance of good quality design in improving the way we live.

Situated in the town centre next to the Claes Oldenburg and Coosje van Bruggen 'Bottle of Notes' sculpture, mima will give central Middlesbrough a major venue to host international exhibitions showcasing the best of art and craft from 1900 to the present day. It will also bring the town's collections together for the first time, including a

new acquisition, Cuben, a 3D digital animation by the German artist, Oliver Zwink, who has already built strong links with the DigitalCity project and mima.

The new focus on art and design will help to put the region, and the Tees Valley in particular, squarely on the creative map. It also fits in well with the goals of the University's School of Arts & Media and DigitalCity. Here, we look at the two new design inventions from enterprising Teesside graduates who are already using their creative talents to improve our quality of life in the region.

TIM'S DESIGN WILL BANISH BUS BUGGY BLUES



Young designer Tim Flood, pictured left with his two-year-old daughter, Jessica, is hoping to banish the bus buggy blues for parents juggling to get on public transport with their child, folded pushchair and shopping - a feat that seems to need at least three hands!

For his simple-but-smart 'Lambda pushchair' converts into a child bus seat at the click of a switch. The youngster can be left in the seat as it slides next to where mum or dad will sit and is kept in place by the handles attached to the back of the bus seat.

Several big name stores and manufacturers are talking to the 25-year-old dad from Stockton who was one of the toasts of the town when he exhibited his invention at London's New Designers' Exhibition in July. "The concept was originally created for my major project on the Product Design degree at the University of Teesside," said Tim. "It is based on the experience of being a parent who relies on public transport. When travelling with a child and a pushchair it can be a nightmare, particularly if you are on your own.

"You've got to take the chair down at the bus stop while trying to prevent your child from running out into the road. Then the bus arrives and you've got to carry the child, chair and shopping while stopping to pay the driver. If you decide to leave the chair up in the hope that a low-floored bus arrives, the wheelchair space may be occupied and you will have to give it up if a disabled person gets on.

"My Lambda chair is designed to operate better than a normal pushchair in an urban environment and would be perfect for a busy city where most people rely on public transport," says Tim.

His invention allows the chair to be left up when getting on the bus and semi folded to slide into a regular bus seat. "The great advantage is that the child and pushchair do not have to part company throughout the journey," explained Tim, who says: "There are added safety benefits as the pushchair locks around the bus seat, acting as a seatbelt."

Tim got his inspiration from other urban objects such as the micro-scooter. The steel frame, with injection-moulded PET plastic, is the key ingredient. "It's low profile, light weight and simple," said Tim, who believes his buggy could retail at between £75 and £95. That's about half the cost of similar pushchairs.

The University of Teesside has awarded Tim £5,000 from its Enterprise Development Fund to help him develop the product further and commercialise the design. So watch out! It could be sitting on a bus near you soon...



DESIGNER JOANNE IS IN HER ELEMENT

A relentless sense of creativity is set to translate into business success for designer Joanne Riddle, one of the University's digital fellows.

The 30-year-old from Stockton has come up with an idea that could revolutionise the way man-made substances such as PVC and polyester are printed. Joanne's concept allows colour to be infused into plastic surfaces, creating a highly durable waterproof finish that can be used in and out of doors.

Joanne calls her innovation Formal Element. She's already filed a Patent Pending to protect her intellectual property. The end result is a form of 21st century stained glass that transforms plastic products. Experiments with flooring have already produced stunning results. Other applications include tiles and screens for nightclubs, where lighting and imagery are used for ambience.

Joanne, pictured with a transparent plastic panel printed with a digital illustration of her Great Grandad Dixon, caught the eye of the University of Teesside's DigitalCity Fellowships Scheme. This helps talented creatives develop applications for digital technologies. With their help, Joanne was awarded £5,000 from the National Endowment for Science, Technology and the Arts.

Always the creative, Joanne set up JL Riddle Design Studio in 1999 after graduating with First Class Honours in International Textiles and Surface Pattern, and sold her avant-garde designs worldwide.

She followed this with a four-year stint as an A-level Art & Design teacher, but felt the urge to get back to what made her happiest - "creating beautiful surfaces". With her new business Fuzzy

Bridge, which she set up in 2005, Joanne began to work with plastics. With help from DigitalCity, she's now looking at how digital technologies can be used to develop Formal Element.

"I'm privileged to be working with some of the most professional creatives in the region, including Marcus O'Keefe and Dave Sharp who have transformed my way of thinking and working," she says. Another colleague is University Professor Zulf Ali, with whom she's exploring new uses for high-tech nanotechnology equipment (see story on Nanoworld).

"Zulf is a scientist, but the etching and embossing equipment in his lab is ideal for developing Formal Element. It's a good example of the way science and art can cross boundaries," she said. Her latest invention, Artezate - a colourful yet transparent film that can be used for art, design and craft work - illustrates this crossover.

Joanne's work is receiving regional and national exposure. As part of the Dott 07 initiative, Portrait of a Region, she has exhibited a major portfolio of designs featuring well-known industrial landscapes like the Transporter Bridge and family portraits of local people, including her own great-grandfather.

And in September, her innovations were showcased at the 100% East trade show in London's Truman Brewery.

Joanne says, "I'm looking forward to developing these products to their maximum capacity with help from DigitalCity, and who knows what I'll invent next - that's the beauty of the collaboration of creative minds."

DRESSING UP FOR

NANOWORLD

This magazine's editor **NIC MITCHELL** doesn't usually spend 20 minutes getting togged up in bright blue protective garments before tackling journalistic assignments. But when he visited the University of Teesside's new nanotechnology clean room it was the only way to get his story.



"PRETTY UNCOMFORTABLE, BUT THIS IS THE DRESS-CODE FOR NANOWORLD"

We must have looked like something out of *Dr Who* when photographer Judy Hume and I visited the University's £1.5m micro and nanoscale technology clean room.

First, we had to dress from head to foot in nylon protective clothing, face mask and all.

This wasn't for our benefit. Far from it.

It was the ultra-clean environment inside the two air chambers that needed protecting from any dust particles we might be carrying - and from any coughs, spittle and splutters we might make inside.

Judy had to remove make-up and I was told to keep away from cigarette smoke for an hour beforehand, so no lunch in the pub for me. And our digital camera needed to be wiped clean.

After that, we entered a half-way house room between the outside world and the clean room. We put large plastic socks over our shoes, our hair and the back of our head were covered with hoods and a mask was put over our mouth and nose. Then we struggled into something akin to motorcyclists' wet weather gear before putting on moon-hopper boots.

Pretty uncomfortable, but this is the dress-code for Nanoworld and it was worthwhile as Professor Zulf Ali showed us the equipment in the white and yellow rooms, including an atomic force microscope.

The yellow room is so called because of the lighting and has an area where even greater obsessive cleanliness is required. It has fewer than 100 particles of dust larger than 0.5 micron in each cubic foot of air; the other areas of the clean room have fewer than 1,000 particles larger than 0.5 micron per cubic foot. A normal office building can have as many as 50 million particles larger than 0.5 micron per cubic metre.

Professor Ali believes the new £1.5m facility will put the University of Teesside at the forefront of developments in micro and nanoscale technologies. It is designed to imitate the environment in semi-conductor plants that produce micro (or nano, to use the right scientific word for tiny) chips for plasma television screens and mobile phones.

WORKING AT THE

NANOSCALE

Professor Zulf Ali, a scientist working with micro and nanoscale technologies at the University of Teesside, explains how the clean room is playing a part in helping clinicians diagnose deep vein thrombosis. He also looks ahead to working on key elements for the next generation of flat screen televisions.

The interesting thing about the nanoscale is that materials and fluids behave differently than at the macro scale. As a result, Micro and Nanoscale Technologies are advancing rapidly and have been identified as the most promising technologies for the 21st century.

There is a great deal of interest in developing systems that have micro or nanoscale features and integrate mechanical, electrical, chemical and biological elements. Such systems will revolutionise industrial, medical and consumer products.

At the University of Teesside, we have a particular interest in creating miniaturised devices that manipulate and store very small volumes of liquids.

Such devices, known as 'Lab-on-a-chip', are created using many of the processes employed in the semiconductor industry for making computer chips.

Lab-on-a-chip devices perform chemical and biological operations that would normally be carried out in a laboratory using macro world equipment such as flasks. These devices, as in the case of computer chips, can be produced in large numbers.

The Lab-on-a-chip concept allows us to gain a great deal of chemical and biological information without the need for large amounts of chemicals. The pharmaceutical industry, for example, needs an ever-increasing amount of such information for the drug discovery process and we are working on a device to grow micro-organisms which produce pharmaceutical compounds.

We are also developing our clean room as a regional and a European asset and are co-ordinating two European research programmes with a total grant value of around €4.5m.



THE WIDTH OF A HUMAN HAIR IS 100 MICRON OR 0.1MM; DECREASING THIS BY A FACTOR OF 1,000 BECOMES 100NM (NANOMETRES), WHICH IS THE OUTER LIMITS OF WHAT IS NORMALLY REFERRED TO AS THE NANOSCALE.

One of the European research programmes, the DVT-IMP project, is intended to develop a device to help clinicians diagnose patients suspected of having a deep vein thrombosis (DVT) or pulmonary embolism (PE). The failure to diagnose and treat DVT/PE has made it the most common cause of unexpected death in hospitalised patients in most developed nations.

The device will comprise a cartridge to handle a blood sample and a reader device to identify DVT/PE conditions.

The consortium we are working with has 11 European partners, including Helena Biosciences, a diagnostics company with a strong presence in North East England.

The second European research project, MapTech, is part of the Marie Curie programme to provide PhD level training in miniaturised diagnostic devices across four European partners.

Both projects involve the region's Centre of Excellence in Nanotechnology, Microsystems and Photonics.

The clean room is also supporting hi-tech companies. We are working with MIMIV, which has a large portfolio of intellectual property for key elements of a new generation of flat screen TVs. MIMIV plans to carry out a large part of its development at the University and has a collaboration agreement with a Taiwanese TV manufacturer that will produce the sets.

• For more information contact Professor Zulf Ali, Assistant Dean (Enterprise), School of Science & Technology on 01642 342403 or email z.ali@tees.ac.uk.

DEVELOPING TEACHERS AS LEADERS

School teachers are experiencing rapid change as the Government drives through programmes of reform and re-organisation to meet challenging targets. For many, skills in leadership and managing change are now as important as teaching itself.



"SCHOOL LEADERS NOW NEED MANY DIFFERENT SKILLS . . . TO TACKLE THE CHALLENGES OF LEADING AND MANAGING A MODERN SCHOOL"

But help is at hand through a multimillion pound project involving Teesside Business School, which will give senior teaching staff in the north of England the opportunity to develop as world-class school leaders and raise standards in schools.

The Business School has won its largest ever commercial contract, from the National College for School Leadership. As part of a consortium, it will offer three nationally recognised and flexible courses to North East teachers, all supported by highly experienced facilitators. New head teachers and potential high-fliers will all benefit from the initiative.

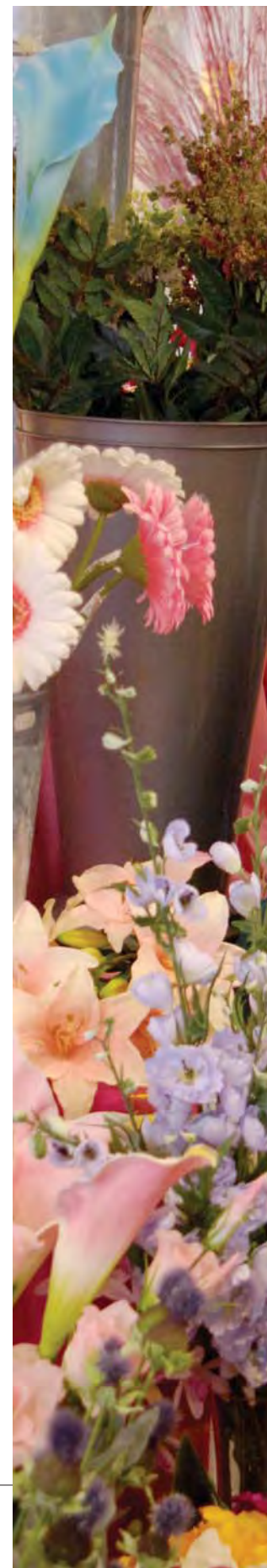
The programmes will be delivered across the North East, North West and Yorkshire and Humber through The Northern Partnership. The consortium is led by the Centre for Educational Leadership at the University of Manchester and includes Carnegie Leaders in Learning Partnership at Leeds Metropolitan University and Teesside Business School.

For Professor Christos Kalantaridis, Assistant Dean (Enterprise) at Teesside Business School, it's an exciting opportunity to help make a real difference to schools in the North East. "It's important that school leaders embrace business thinking when it comes to managing their schools. Through this initiative, they will be able to learn not just from their peers in education but also from skilled and experienced facilitators," he said.

Joanne Hughff, Project Development Manager, added: "School leaders now need many different skills, and these programmes will equip them with the business-related skills to tackle the challenges of leading and managing a modern school."

Some 700 teachers across the North East will be taking part in 2006/7, with similar numbers over the next two academic years. Professor Kalantaridis expects the contract to lead to other major public sector opportunities for Teesside Business School.

• For more information contact Joanne Hughff on 01642 384652 or email j.hughff@tees.ac.uk.



BUSINESS IS BLOOMING FOR ENTERPRISING WOMEN



It was hitting the age of 40 that persuaded **Alison McCorkell** to make the big decision to start her own business.

Now, two and a half years later, Flowerpots, in Station Road, Billingham, is busier than ever and Alison does not regret a minute of her new life as a florist.

The 43-year-old, pictured left, is one of the entrepreneurs helped by Enterprising Women, a Teesside Business School scheme to encourage established and aspiring businesswomen to develop their enterprises.

She said: "Before I opened the shop, I had been a mother and done admin jobs, but it was always at the back of my mind that I wanted to run a florists."

Since starting up Alison has employed an assistant and says business is blooming. But for all her success, she still appreciated support from the University of Teesside's Business School. Alison took part in the School's Better Business Programme, which gives tailored support to women entrepreneurs.

"Talking to other businesswomen does help and it is good knowing that there is always someone available if I need advice," said Alison.

Another taking part in the programme was Julie Wright, who set up her own photographic business in Middlesbrough after a varied career as a BBC radio news announcer, church community administrator and girls' coach for the North Riding Football Association.

Now aged 38, the mother-of-three decided to return to her long-standing love of taking pictures and set up Julie Wright Photographic. "I have always liked taking pictures but never thought I was good enough. Then people started saying how much they liked my work

and I realised there was a market out there." Julie, too, appreciated the Business School's support, saying: "I have always had good ideas and been able to do things like bookkeeping, but the University has helped me with things like marketing and pricing my products."

Better Business is just one of the projects which makes up the Enterprising Women portfolio. Another initiative, Women into Business, helps women assess the feasibility of their ideas and develop the personal skills they need to make it in business.

In addition, the Business School is looking to start a business forum for local women and stage community-based events for those seeking to start their own businesses.

"Women entrepreneurs often feel isolated. We're trying to help them tackle problems like this by bringing them together to share experiences and help them start up and grow their businesses," said Business Start-up Support Officer Julia Gillam.

Professor Christos Kalantaridis, Assistant Dean (Enterprise) at Teesside Business School, said: "Women need different help and face different issues from men. This programme offers them the chance to bounce ideas off each other, including how to tackle the work-life balance. They often feel more comfortable doing that with women than men."

- Anyone requiring more information can contact Julia Gillam on 01642 342806 or e-mail j.gillam@tees.ac.uk.

GREAT PARTNERS IN

Laura Bishop and **Lucie Nield** are great examples of Knowledge Transfer Partnerships, a government-backed initiative, bringing industry and the academic world together. NIC MITCHELL reports.



Laura Bishop has brought strategic thinking to the heart of family run Darlington meat and poultry wholesaler Country Valley Foods since becoming its marketing manager.

In less than two years, the 26-year-old University of Teesside Marketing graduate from County Durham has helped the company win £45,000 from the English Beef and Lamb Executive to launch a new regionally produced beef brand called 'Grand Reserve'.

She has also created a new marketing strategy for the firm with her former tutor, Terry Robinson, Reader in Marketing at Teesside Business School. He spends half-a-day per week advising the company through the Knowledge Transfer Partnerships (KTP) scheme.

Just over 50 miles to the south, Lucie Nield, a Food Science graduate, has provided similar support for Wakefield-based

Zeina Foods, the company set up 20 years ago by Safaa Ali to import and roast pistachio nuts. Until a few years ago, it sold most of its products in bulk to other companies, but now it is creating its own brands with Lucie's help.

Both women were appointed to their positions through a KTP scheme run with the University of Teesside and supported by the Department of Trade and Industry (DTI). For Laura, it was a chance to take on a senior role after graduating with a BA (Hons) in Marketing and a Masters in Management from Teesside Business School.

Laura's success at Country Valley led to her winning a national 'Business Leader of Tomorrow' award from the DTI, presented by Secretary of State Alan Johnson. She was one of six winners - and the only one from the north of England - out of 1,000 entries nationally. She said: "It has been amazing since I joined the company. I was the first graduate they had ever taken on and it was quite brave of them to give me so much responsibility. I was new to the food industry and to get the national award, which included a trip to Vancouver with the five other winners, was fantastic."

Stewart Munro, Company Founding Managing Director and Chairman, said: "Without the KTP, we probably would never have recruited Laura nor had the back up from the University to develop and implement the new marketing plan. We now realise how much we really needed someone who could take a longer term view of where we were going and do some strategic thinking. It has been a huge success."

Mike White, Knowledge House Manager with the University of Teesside's Department of Academic Enterprise, said: "The KTP initiative really is a win-win-win situation for all parties involved and an excellent example of university collaboration with industry." And Terry Robinson believes it can make him a better lecturer. He said: "Being involved as a mentor and adviser to Laura has provided me with material for an excellent case study, which I will be using on our newly launched MBA (Enterprise) degree."

KNOWLEDGE

FOOD FOR THOUGHT

as Lucie helps company branch out



Lucie Nield believes that being a KTP associate with Zeina Foods benefits both herself and the company.

Not only did she secure a job after graduating with her degree in Food Science, but she is able to continue her postgraduate studies into the treatment and prevention of diabetes while earning a wage.

The company wins by having a strategic thinker who can come up with new product ideas and oversee market testing.

It was in September 2005 that Lucie, from Sheffield, joined the family run business, which decided three years ago to create its own brands rather than selling in bulk to other companies.

Lucie says: "We took advantage of the healthy indulgence impulse market. Much of the development work for the new brands had been carried out when I joined, but I got involved with customer testing and quality control."

The KTP at Zeina Foods was already up and running with Dr Leo Guevara, who moved from Huddersfield University to its Teesside counterpart to become Head of the Food Technology Centre in 2004.

Dr Guevara, who is the programme's academic supervisor and spends at least a day with the company every fortnight, said: "The great advantage of having a KTP associate is that it gives the company someone who can manage longer term strategic projects and objectives. The problem is making sure that they are not diverted into everyday fire-fighting." Dr Guevara, who advises on technical matters, has also run a workshop for the firm on strategic business process improvement with Ahmed Abbas, from the Teesside Manufacturing Centre.

He said: "A lot of SMEs have always done things in the same way and it can take time to get them to change. The purpose of this KTP is to facilitate and embed changes in company culture and implement a professional approach to product development, process operations and customer relations."

• To find out more about Knowledge Transfer Partnerships contact the KTP team at the University of Teesside on 01642 384407 or email ktp@tees.ac.uk.

BUILDING THE REGION'S CONFIDENCE

Regenerating North East England is still a major challenge, but new research from the University's Social Futures Institute is exploring ways of strengthening sustainable communities. Here we find out more from the Director, **Dr Tony Chapman**.



The North East still has a struggle on its hands to restore confidence and prosperity. For over recent years, the productivity gap - which measures the lag between the North East and the national average - has actually grown, despite the efforts of regional and national agencies.

But at the same time there have been some positive signs: jobs have grown and unemployment has gone down; businesses are surviving for longer and business confidence is on the increase. School performance is also markedly better. The challenge for the region is to increase the number and pace of these improvements.

Few will argue that the key to economic success lies in growing and attracting businesses that create real jobs. But how do we put the building blocks in place to make this happen? It's a question whose answer has eluded many. For Dr Tony Chapman, Director of the University's Social Futures Institute

(SoFI), one essential foundation is the support of strong and sustainable communities.

"Businesses are less likely to be established, invest or grow in the region if communities are in decline. It's vital that people are supported to build their confidence, acquire new skills, raise their aspirations and identify real opportunities for them to lead fulfilling lives," he says.

Dr Chapman is leading a research project exploring the development of skills to support economic growth in the Tees Valley over the next 15 years. Funded by the Learning and Skills Council, the research has examined the industrial sectors most likely to grow and produce higher levels of employment for the area. Preliminary results have pointed up some significant challenges. Raising aspirations and skill levels in the most deprived communities is perhaps the biggest of all. People living in these communities have no family background in business, and often lack the knowledge, skills and confidence to take the risk.

One way forward is through the development of the Third Sector, which has a strong presence in the disadvantaged areas of the Tees Valley. SoFI's Third Sector Development Unit, led by Judith Brown, works specifically to help develop stronger business opportunities through this route.

Research by the Unit shows that new public sector purchasing policies offer significant scope to develop the Third Sector in the sub-region; but more investment is needed to help the sector respond to government expectations. Judith says: "We're making the case with the sector for greater support to build a sustainable business base in disadvantaged areas. And we're working with organisations like Community Ventures Ltd to help smaller enterprises gear themselves up to tender for contracts by offering back-room support."

A recent SoFI report, *Facing the Future*, shows that only 22 per cent of Third Sector organisations in the North East are currently tendering for public sector contracts. Clearly, there's still a way to go.

• For more information contact Dr Chapman on 01642 342321 or email t.chapman@tees.ac.uk.

ALI'S STEP TO SUCCESS



Ali Zaidi, a Web Development graduate from the University of Teesside, is one of the UK's most enterprising students - and that's official.

The 26-year-old Londoner was among 1,100 undergraduates placed with small and medium-sized businesses, community organisations and social enterprises through the nationwide Shell Step programme.

He spent last summer working with Visualsoft UK Ltd, a Middlesbrough-based online development and marketing company. While there, Ali created a system that restructures websites so search engines will find them easier to locate.

Now he is working on a new business start-up called SenseAble Solutions with entrepreneur Pete Middleton in South Bank, offering business consultancy to companies and organisations looking to enhance performance and profitability by adopting a more people-focused approach to running businesses.

Ali won the first prize in the Most Enterprising Student 2005 Awards for the Tees Valley and the North East region and came second in the national competition.

GIVE PEOPLE A VOICE

You're in a wheelchair and you want your voice heard about the issues affecting your life. Your carer has things to say, too!

It's all very well for the Social Services professionals drawing up policies and practices and churning ideas out by the score, but just where do you fit in? It's something that Wade Tovey and his team at the University's School of Health & Social Care are very concerned about as they look at ways to ensure that consultation is central to improving services.

Wade, Principal Lecturer in Social Work, has produced a range of enterprising initiatives over the past 12 months that have won contracts for the University to the tune of £300,000. He says: "None of it would have been possible without a partnership approach, which means working with other universities and agencies, and communities."

Among these is Hartlepool Partners, a carer-led group with whom Wade's team has completed a major national consultation on behalf of the Sector Skills Council designed to listen to what carers and people receiving services had to say.

"It was very worthwhile," says Wade, who adds: "When you actually start talking to real people,

you realise that we have to change the way we do things. I vividly remember talking to a woman who cares for her husband. He has multiple sclerosis and she asked how on earth did we expect her to get to meetings held during the day when there was no one else to look after her husband? People complained about transport difficulties, access and other obstacles that prevented them from attending meetings in which they wanted to play a part. In social care, we need to act early and quickly.

"A good example was an engineer I met who is now disabled. He was asked to look at a new building by a health authority to see if it would meet his needs, but in my view that really was far too late in the process! What we should be doing is giving people the opportunity to be involved in schemes when they are on the drawing board. That way they truly do have a voice which will make a difference."

- A Unit for Innovation and Enhancement in Health and Social Care has been set up by the University of Teesside to encourage more knowledge transfer activities and consultancy work between academics and the health and social care sectors.



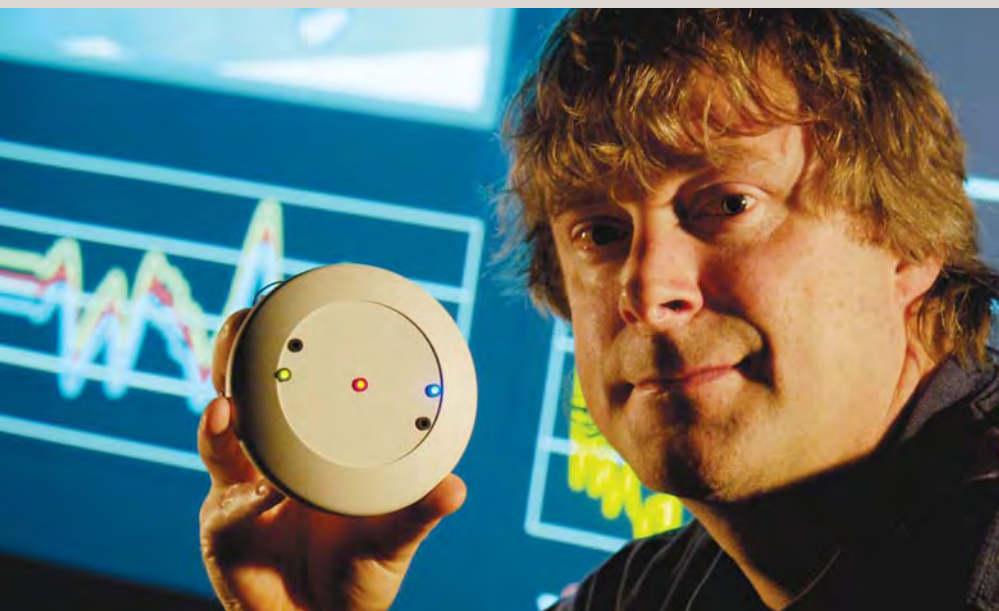
Liz Holey, Deputy Dean in the School of Health & Social Care, said: "We are well known for our high quality educational provision and this unit will help us to develop our knowledge transfer activities with a growing number of industrial and health care partners."

- For more information contact Milly Rohman on 01642 342752 or email shscenterprise@tees.ac.uk.

IT'S A QUESTION OF BALANCE FOR THE

RED DOT

JOHN DEAN meets the enterprising University team hoping to revolutionise life for older people suffering from balance problems. Meanwhile, NIC MITCHELL hears about the health risks to women who wear high heels all day from **Professor Keith Rome**, Teesside's globe-trotting podiatrist.



It was the pain of tennis elbow that set Iain Spears on the road to forming his own company.

Now, his passion for understanding the human body may be about to revolutionise life for older people suffering from balance problems.

Iain, pictured with his invention, and University of Teesside colleague Gary Quinn have created their own company, Little Red Dot Technologies, to develop a system which combines biometrics and computers to help patients overcome debilitating conditions.

A keen tennis player, Iain originally studied mechanical engineering and realised there was a crossover into the world of sport injuries.

He said: "I became interested in the causes of tennis elbow and came up with a mathematical model of the human arm which analysed the reasons for the condition. This allowed me to

predict those players who would suffer from tennis elbow and help them change their technique to avoid it."

He then studied a PhD in the biomechanics of teeth followed by research in Hamburg and joined the University of Teesside in 1999 as a senior lecturer in biomechanics.

Iain started working with Gary, then at the Virtual Reality Centre and now Technical Manager in the School of Computing.

The result is Little Red Dot technology, where people are filmed on a web-cam after which the computer maps their movements.

Little Red Dot Technologies will market the system, which uses a device resembling a spectacle case strapped round the person's waist. It sends messages to the computer, which produces analysis on-screen using a system of dots, red among them.

Iain said: "As people get older, balance can become a problem and if they fall, they can break a hip, which takes a long time to heal. What our system does is analyse the way they walk, which allows them to modify it to reduce the risks of falling."

"We hope the system will help improve people's balance and reduce the number of injuries caused by falls," he said.

Iain explained that current systems analysing balance could cost as much as £18,000 whereas Red Dot would cost a fraction of that price and would also be portable.

Geoff Archer, a University Business Development Manager, believes it will benefit not just older people, but also those whose nervous systems have been damaged by conditions such as Parkinson's Disease and strokes. "We believe we can produce this system very cheaply so that doctors' surgeries, for example, will be interested in purchasing it. The device also has the potential to be used in the home."

The University's School of Health & Social Care is carrying out reliability and validity tests on the system at Teesside's Centre for Rehabilitation Sciences at James Cook Hospital, in Middlesbrough.

INVENTORS

DON'T STAY ON THOSE HIGH HEELS TOO LONG!

It's the ultimate fashion statement - but a leading health expert caused a media stir when he suggested that women should only wear high heels in moderation.

Professor Keith Rome, of the University of Teesside, was visiting New Zealand as an adjunct professor at Auckland University of Technology. His warning about severe problems ahead for some women came while at Auckland's School of Podiatry, which specialises in the science of foot care.

The professor is a leading international podiatrist and world-renowned researcher in podiatric biomechanics. He confirmed his views about the dangers of women walking around all day in high heels while carrying out research with the University and New Zealand's leading shoe manufacturer Kumfs.

**WOMEN
WHO WEAR
HIGH HEELS AS A
MATTER OF
COURSE HAVE A
MUCH HIGHER
RISK OF
EXPERIENCING
SEVERE
PROBLEMS**

Professor Rome said: "If a woman wears adequate shoes during the day and high heels only for her social life, she may not go on to have joint or postural problems in later years.

"However, women who wear high heels as a matter of course, and have done from a young age, have a much higher risk of severe foot, ankle, knee, hip and lower back problems."

Keith, Professor of Podiatric Rehabilitation and Head of Teesside's Centre for Rehabilitation Sciences, said the definition of an 'adequate' shoe depended on the individual and could range from a flat one through to one with a moderate heel.

Now back on Teesside, Professor Rome is also carrying out research and clinical trials into the impact of shoe insoles on older people and those with severe arthritis.

His investigations are focusing on women over 50 to see whether or not different kinds of insoles make any difference for women with balance problems.

He said: "Feet are sensitive to changes but as you get older this sensitivity reduces. The question I am asking is, can insoles give you back some of these senses?"

"Shoe insoles come in all shapes and sizes. I am working closely with the industry, which has generously donated different kinds of insoles for us to work with."

GROWING UP

IN POOR NEIGHBOURHOODS

Limited prospects face young people growing up in some of the most deprived neighbourhoods of the North East, with government initiatives apparently having little impact. ALISON UTLEY finds out more from social scientists who have followed a group of young adults on Teesside.



The journey from adolescence to adulthood is often a bumpy ride but in neighbourhoods beset by deprivation, joblessness and social exclusion, growing up is an even more daunting prospect. Such a place is the 'Willowdene' area of 'Kelby', on Teesside, described by an American social scientist a decade ago as home to the 'new rabble underclass'.

Kelby, a fictional name for the town that a team of University researchers has been studying, is one of the places that has lost out in the shift from a predominantly industrial to a predominantly service sector economy. It has the highest concentration of the most deprived wards in the country.

"POOR TRAINING AND POOR EMPLOYMENT OPPORTUNITIES TEND TO BE SYNONYMOUS"

The team has been following a group of socially disadvantaged 15 to 25-year-olds to discover if their lives have improved since 1999 and whether the numerous welfare and training initiatives have halted the cycle of decline faced by so many impoverished families.

The study, led by sociologists Robert MacDonald, pictured, and Colin Webster, pays testimony to the efforts of young adults to get by in hard times. Despite well-meaning initiatives in the area over many years, the employment circumstances of most interviewees remained largely unchanged; their jobs still low-skilled and low-paid manual and service sector work at the bottom of the labour market.

The report suggests that state initiatives must go further: "Poor training and poor employment opportunities tend to be

synonymous. Income from decent, rather than poor work, for those able to work is the best way of lifting people out of poverty."

The researchers believe that, although the National Minimum Wage raised income for some, it does not help them progress further. They also argue that those who are unable to work, or who delay work because of childcare responsibilities, need more generous income support to lift them out of poverty.

Chiefly, the team suggests that the Government's policy towards reducing poverty and social exclusion needs to focus more on creating secure, better quality jobs in disadvantaged areas.

The research uncovered the positive efforts of young adults to make their way through limited opportunities. Many participants felt their lives had moved on considerably in some respects, particularly in terms of housing and family circumstances.

A significant proportion had also turned away from drugs and crime. Richard, 23, said: "Heroin and crime are like a vicious circle." One of the most positive findings of the study was that many of those previously trapped in a cycle of drug dependency, crime and imprisonment had now left this lifestyle behind, with the help of families, partners and drugs services. The research concludes that better opportunities in the form of good quality training, flexible childcare and decent jobs might allay the longer term social exclusion experienced by the people interviewed in the study.



REAL STORIES GET BEHIND STEREOTYPES

The research is based on detailed interviews with young adults and the sample of 34 was generated from nearly 200 young people who took part in two earlier studies. Contrary to media stereotypes and the claims of some politicians and academics, interviewees held very conventional and realistic attitudes to work, given local opportunities. All preferred to work than live on benefits.

Twenty-five-year-old Adam had had several short-term retail jobs as well as participating in government training programmes but had been unemployed for long periods, which he "despised". He worried that his insecure work history might make him even less attractive to employers.

Although most interviewees had been on further education and training courses, they remained poorly qualified. Because informal contacts were more useful in finding jobs, this confirmed young people's earlier attitudes about the irrelevance of qualifications.

Interviewees became trapped in low-paid, low-skilled 'poor work' with employers who were as quick to fire as they were to hire. Harry, 23, said: "I wasn't late once. I wasn't sick once. Hadn't missed

a shift. But when they found out I had a criminal record, they shot us out of the door without even an explanation. I was more reliable than some of the people they had in there. That's what bugs me."

For the few who did have a more successful career, a supportive employer (who encouraged good training and education) was crucial. Supportive families, good health and childcare support also had a positive influence.

The report, *Poor transitions: Social exclusion and young adults* by Colin Webster, Donald Simpson, Robert MacDonald, Andreas Abbas, Mark Cieslik, Tracy Shildrick and Mark Simpson, is published by The Policy Press and available free of charge from www.jrf.org.uk.

THE SOUL OF

MOTOWN

Motown music held a special appeal for young women in the 1960s and 70s. Maybe something about the blues-influenced lyrics struck a chord with their own experiences, says Teesside's resident expert, **Dr Barry Doyle**.



Blasting on to our radios in the early 60s, Motown music combined a distinctive dance beat with lyrics exploring the trials and tribulations of romantic life. The label's impressive names included The Supremes, Martha Reeves and the Vandellas, Stevie Wonder, The Four Tops and Marvin Gaye. UK number ones in the 1960s included The Supremes' 'Baby Love', The Four Tops' 'Reach Out I'll be There' and Marvin Gaye's 'I Heard it through the Grapevine'.

Teesside's resident expert Dr Barry Doyle, left, reels off his amazing knowledge of Motown gleaned from five years researching the influence and history of the Detroit-based record label.

Did you know, for instance, that a British Motown tour in 1965 featuring Stevie Wonder and The Supremes needed a British white singer - Georgie Fame - to boost audiences? Or that by 1967 Motown acts were more popular in Britain than The Beatles?

Dr Doyle, Assistant Dean for Research in the University's School of Social Sciences &

Law, is a long-time Motown fan. His first Motown record was The Jackson 5's 'Doctor My Eyes' at the age of 11. Over 30 years later Stevie Wonder's 'Uptight' and The Velvelettes' 'Needle in a Haystack' can be found in the selections on Barry's iPod.

He began exploring the Motown phenomenon in 2001, when researching the popularity of Northern Soul music: "I noticed a common link in the record collections of women in their 40s. Usually there was a David Cassidy record and a Motown chartbusters album. Why did women of this age like this sort of music? I started my research from this basis."

His investigations drew together music and popular culture, and the social life of women in the 20th century. Dr Doyle says: "In the 1960s and early 1970s, the era of Motown's first stage of popularity, there was a growth in opportunities and salaries for young women. This meant that for the first time in the post-war era, young women had more money to keep for themselves."

He has several theories as to why the Motown sound was more appealing to females. He said: "You could describe Motown lyrics in the second half of the 60s as a litany of distress, the majority were all about loss. Motown founder Berry Gordy described the lyrical content of the label as, 'romantic but realistic'. And this linked with women's experiences. The lyrics were influenced by blues music, suggesting the idea that romance is dangerous."

The combination of the lyrics with a gospel-influenced dance form makes Motown a joyous form of music even if it doesn't have a joyous lyric. And this chimed with the domestic life experienced by many young women in the second half of the 1960s. "They faced a contrast between their own romantic aims, of wanting to fall in love, against the more earthy view of older relatives that romance and sex were unimportant, that relationships have to be worked at. Motown's music fits very much into that image of the world, and women seemed to identify with this."

During the 1970s, some Motown acts explored social issues in their material, most notably Marvin

"THE LYRICS WERE INFLUENCED BY BLUES MUSIC, SUGGESTING THE IDEA THAT ROMANCE IS

Gaye's 1971 album 'What's Going On', which included songs about the Vietnam War and homelessness. Although this album was critically acclaimed, it was less successful commercially and Motown's commercial success started to decline through the 70s as the label faced competition from different musical forms.

Dr Doyle said: "As the 70s progressed, Motown artists demanded more independence and the label became more of a Conservative corporation. What Motown fans may not realise, however, is that the label enjoyed most of its UK number ones in the early 1980s. These hits included work by artists Lionel Richie, Stevie Wonder and Smokey Robinson. Fans may not rate 'I Just Called to Say I Love You' against 'Uptight' but they were big hits in their day."

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THE MARVELETTES**



THE
ALDWYCH

NEWS

WEB DUO TAKES ATHLETIC STRIDES

Middlesbrough cousins **Anthony Borsumato** and **Kevin Allinson**, who set up their own 'sporty' web design company, 13 Strides, have been busy signing up top athletes.



One of 13 Strides' first customers was double Olympic gold medallist Dame Kelly Holmes. She turned to the two enterprising Teesside graduates to launch her own official new website as she planned to retire from athletics.

Kelly knew of Anthony's interest in web design from their days together in international athletics as members of the GB Athletics squad. They kept in touch when he had to drop out of the sport after hitting a hurdle and breaking his ankle in five places in the 2003 World Championships in Paris.

The company is called after the 13 strides required between each hurdle in athletics and reflects Anthony's passion for the sport.

The cousins both graduated from Teesside's MSc Multimedia Applications degree and have been supported by the University and DigitalCity in their new digital business venture.

"The company enables us to combine our love of sport and the internet by creating websites for athletes, including

a new one for international javelin thrower Steve Backley," said Anthony, who is pictured, centre, with Kevin and Steve, left.

"The websites give the retiring athletes the chance to keep in touch with fans and let people know of their future plans. In Steve's case this is a business venture connected to his 'pac' training sport and fitness programme," said Anthony.

"We are now attracting a lot of interest from sporting bodies and sports equipment manufacturers, including the Canadian Coaching Foundation, and we're going from strength to strength. I think we will stay in Middlesbrough as we've moved into the University's Victoria Road business enterprise centre and it is very useful to be neighbours with the animation and other digital companies being established there. If we need extra support it is usually just down the corridor, which is fantastic."

• To find out more go to www.13strides.com

DIGITAL TEAM CREATES NIGHTMARE WORLD

A team of digital artists linked to the University and DigitalCity has worked with international film-maker Richard Fenwick to produce *Artificial Worlds 3*, a nightmare world that taps into some of Man's deepest fears.

Many working on the film were University graduates and the project reinforces attempts to create a cluster of digital businesses on Teesside. Written and directed by Richard Fenwick, the film portrays an apocalyptic world in which runners are chased by a barely glimpsed foe who annihilates them one by one.

Designed to show how society can break down, the film involved a large number of actors, behind-the-camera experts and production teams, including the moShine Animation Studio and DigitalCity fellow Robert Shoebottom. To date, it has been screened in Russia, Poland, Switzerland and Sarajevo.

Scott Watson, Cultural and Creative Enterprise Co-ordinator for DigitalCity, said: "That someone of the stature of Richard Fenwick has come to us with his idea is an example of what can be achieved. It is a fantastic production."

EMILY WINS MORE PRAISE

Emily and the Baba Yaga, the scary animated film produced by a team of computing lecturers and students from the University of Teesside, has won more plaudits.



Two of the producers, Siobhan Fenton and Clive Tonge, were featured on the front cover of the last *Research and Enterprise* magazine.

Since then, the film has been lavished with praise and took the prize for the Best Drama or Entertainment Production with production costs of under £50,000 at the Royal Television Society North East and Borders regional awards earlier this year. It also topped the bill in a poll

conducted by the prestigious media bible, *The Encyclopedia of Fantastic Film and Television*, beating all other contestants including Wallace & Gromit's *The Curse of the Were-rabbit* to win the encyclopedia's Best Animated Film of 2005 Award.

Siobhan, who teaches computer animation, said: "The production team is now turning the nine-minute 3D computer-animated stunner into a feature length film with the support of the University of Teesside. The shortened version has also been taken on by a French distribution company, which is keen to see it screened on French television."



NEW SOFTWARE TOOL TO AID GAMES DEVELOPERS

A new software tool to help video games developers compare their concepts against potential rivals has been launched by a spin-out company based at the University of Teesside.

Strange Agency, set up by Clive Fencott, an academic with the University's School of Computing, and Jo Clay, the company's technical director, was featured in the last *Research and Enterprise* magazine.

Since then, the company has completed the development of Strange Analyst, which enables developers to profile a game concept against thousands of published games. This helps them focus on creating concepts that are more likely to succeed and assists them in pitching to games publishers.

"What would take months of research can be reduced to a few hours," said Clive, who has analysed computer games for six years.

Earlier this year, Clive and Jo, pictured left, were among representatives of the UK games industry at the E3 exhibition in Los Angeles. Over 40,000 attended the biggest gathering of people connected with the computer games industry in the world and the company is talking to some of the major players in the US.

- Jo Clay was featured in *New Scientist* in July after presenting at the Women in Games 2006 conference held at the University of Teesside. One of her findings showed that women enjoy shooting computer monsters just as much as men do, providing the violence is balanced by a good story.

She used the Strange Analyst software tool to analyse the 33 best games as listed by 76 female gamers.

Jo found that women prefer games with confrontation and attack, investigations and puzzles - and a good storyline. "Many developers believe the games women enjoy are confined to shopping and soap-opera simulations," says Jo. "In fact, women like shooters, as long as they have a story."

DOUBTS OVER HEALTH BENEFITS OF OMEGA-3

Omega-3 might not be the way to a healthy heart after all, following a study by a group of researchers involving **Professor Carolyn Summerbell** and **Dr Helen Moore** from the University of Teesside's Centre for Food, Physical Activity and Obesity.

The findings, published by the British Medical Journal in April, said there was no evidence of a clear benefit to heart health from fats commonly found in oily fish such as salmon, herring and mackerel. Eating foods rich in omega-3 fatty acids is thought to protect against heart disease and current UK guidance advises eating up to four oily fish portions a week.

But the paper, summarising research by Professor Summerbell and Dr Moore and colleagues from other UK universities, suggests that further work is needed before health benefits can be proved. The research team was led by Lee Hooper, from the University of East Anglia in Norwich. She suggests people should continue to follow the advice to eat more oily fish, especially after heart attacks, but adds: "The evidence should be reviewed regularly."

The paper was based on a Cochrane Systematic Review, which looked at the evidence for an effect of omega-3 fatty acids on total mortality, cardiovascular events and cancer. These fatty acids are found in cold water oily fish such as herring and mackerel, but the review concluded that omega-3 fats do not have a clear effect on total mortality, heart attacks or cancer.

• For more information contact Dr Helen Moore on helen.moore@tees.ac.uk.

"THE EVIDENCE SHOULD BE REVIEWED REGULARLY"



LOOKING OUT FOR SCANDAL AND CORRUPTION

JOHN DEAN talks to Professor Alan Doig, Teesside's fraud expert, about his globe-trotting - and sometimes dangerous - research.

When Alan Doig starts to tell you about his trip to strife-torn Sierra Leone, it becomes apparent that he is no ordinary university professor.

His work studying the way the world's unstable regimes abuse their power has made him a leading expert on corruption and its control.

Although much of his task is managing researchers working on the ground, he inevitably finds himself at the sharp end occasionally. Last year, on a short consultancy in the West African country of Sierra Leone, he experienced first hand what life was like in one of the most troubled countries in the world.

Sierra Leone was torn apart during the early nineties by a devastating civil war, which was only brought to an end a decade later when the United Nations and British Government disarmed 17,000 militia and rebels.

When Professor Doig visited things were still tense, and even though the war had ended, flying into the capital Freetown was unnerving to say the least.

"Freetown's airport is on the other side of the river from the city and there is no bridge, which means you have to fly across in a helicopter.

"Our helicopter pilots turned out to be Ukrainian mercenaries left over from the civil war. They insisted on flying at 80 feet in case we had to ditch into the water, and made us keep the windows open and go without seatbelts in case we needed to make a quick escape."

Professor Doig, who has devoted his professional life to studying corruption, was already a leading international figure when he came to Teesside Business School in 2001. His interest began when he was a student at Durham University, just after the Poulson scandal rocked local government in the North East in the 1960s. As someone who had lived in the North East all his life, he was intrigued at how real-life politics appeared to have nothing to do with the local government he had been taught in the classroom. With his interest engaged, Alan went to work as a university administrator in Liverpool and became involved with journalists on a radical local newspaper, *The Liverpool Free Press*.

"I became fascinated by the way corruption can work behind the scenes and learnt a lot from those journalists about where to look for the right information. I began to write more and more, asking how corruption works politically.



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"I interviewed people involved in subsequent scandals, including police officers, journalists and officials, to get a flavour of politics in action, in ways never found in textbooks."

Eventually he joined Liverpool Business School as Professor of Public Services Management. There he set up the Fraud Management Studies Unit and began delivering academic courses, consultancies and applied research, which took him to the Middle East and Africa.

Moving back to the North East in 2001, he developed his expertise both locally - becoming Vice-Chair of the North East Fraud Forum, which brings the private and public sectors together with the police to promote fraud prevention and detection - and internationally, winning a £1.2m anti-corruption EU project to review and implement the national anti-

corruption strategy for the government of Lithuania.

The fraud qualifications he runs through Teesside Business School are unique to the UK and he actively promotes national debates on fraud and corruption.

Professor Doig also works frequently in Vienna, where he is the lead editor for the *United Nations Technical Guide* on the implementation of the UN Convention Against Corruption.

And some 20 years after his first book on corruption in the UK appeared, he has co-authored a new book on the subject with Dutch colleagues*.

He says: "I have been fortunate to become interested in a subject that crosses academic and practitioner boundaries and has taken me to some interesting places."

Not that he will be hurrying back to Sierra Leone. It wasn't so much the barbed wire, double-barred windows and armed guards at his hotel that put him off. But he really wasn't happy at having to seal his room to stop the cobras getting in...

* *Is Government Setting a Good Example? Rule Breaking by Government in the Netherlands and the United Kingdom*, Bju Legal Publishers, www.bju.nl

GROWING

Since the Tees Valley currently holds the unenviable record as England's childhood obesity capital, it is fitting that the University of Teesside should be looking for fresh ways to reduce our weight problems before we reach adulthood. ALISON UTLEY finds out more.



WAISTLINES

A glance around the average high street will confirm what medical experts have been warning for some time now: there are a growing number of overweight and obese children across the UK, especially in areas of social deprivation.

Halting the growth in childhood obesity is a major public health priority with expert committees identifying links between obesity and serious health complications including some types of cancers.

The prevalence of obesity among children under ten in North East England is particularly high at 18 per cent compared with other regions. And since the Tees Valley currently holds the unenviable record as England's childhood obesity capital it is fitting that the University of Teesside should be fully focused on the problem.

While there is no simple solution to the increasing number of young people and adults with weight problems, the University's Centre for Food, Physical Activity and Obesity is running a number of innovative projects. The aim is to tackle the different causes of obesity - and its devastating consequences - from a number of angles.

Children's lifestyles are a particular cause for concern, since habits learned early on in life tend to stick. Underlying all the work is the need to find ways to reduce health inequalities, so many projects are conducted in poorer communities with participants from vulnerable groups who are statistically more likely to be obese.

Childhood obesity leads to a host of metabolic complications previously seen only in adults. Insulin resistance (a precursor to type 2 diabetes), high blood pressure and elevated cholesterol levels are on the rise, and obese children are at greater risk of becoming obese adults, thus increasing their risk of these types of medical problems. There are also worrying specific conditions, such as fatty liver disease in obese children, not forgetting the serious psychosocial impact of being overweight or obese in childhood. Primary schools are seen as vital to addressing childhood obesity by the National Institute of Clinical Excellence (NICE). Since health education is expected to play a significant role, understanding young people's attitudes to food, nutrition and exercise is key to a number of new University projects.

The Peas@tees project, for example, led by researcher Sally McLure has devised a way of using computers to measure physical activity levels and eating patterns in schoolchildren. Around 255 nine and ten-year-olds from six schools across a range of socio-economic areas within Middlesbrough and Newcastle took part in Peas@tees. The children wore an



"THE CHILDREN TASTED FRUITS, VEGETABLES, SMOOTHIES AND OTHER HEALTHY SNACKS AND THEY ABSOLUTELY LOVED IT"



accelerometer on their hip and completed diaries on their food intake and activity. They then used a fun computer-based survey to assess their results.

Another study known as TeesCAKE has been working with more than 80 nine and ten-year-olds trying to make small changes to their diet and activity levels. The children, a quarter of whom were obese, took part in a 26-week activity programme delivered by Middlesbrough Football Club Community Project Team, as well as a 12-week dance programme run by Middlesbrough Council. There was also an eight-week food preparation and tasting programme delivered by University researchers.

"The children tasted fruits, vegetables, smoothies and other healthy snacks and they absolutely loved it," said researcher Leah Avery. "We encouraged them to try things like berries, which many of them had never had before and the kids were very positive."

The children particularly enjoyed the food preparation and tasting sessions. Beans (apart from baked beans) were a new food to most of the children and many later reported making some of the recipes at home with their parents.

"We got them talking and thinking about what they eat and how they exercise, which is a huge step," said Professor Carolyn Summerbell, the principal investigator and head of the University's Centre for Food, Physical Activity and Obesity.

But what about unborn children? Pregnant women who are overweight are putting their health and the health of their unborn infant at risk. They also put a strain on the health service.

This is one of the main conclusions from a University study into maternal obesity and pregnancy outcome for the North East Public Health Observatory. See <http://www.nepho.org.uk/>

Professor Summerbell said there was a lack of weight management guidance and support readily available for obese mums to be, and doctors and midwives in the region have expressed concern about the increase in complications and medical interventions arising from obesity in pregnancy. A third of maternal deaths occur in obese women.

Lead researcher Nicola Heslehurst stressed that while this was a serious issue, women who are obese should not go on a crash diet during pregnancy. "What they should do is try to eat a healthy diet during pregnancy and then lose weight after their child is born and before they have their next child."

FROM FARM TO FORK

JOHN DEAN talks to **Professor Graham Street**, Director of CLEMANCE - the Clean Environment Management Centre at the University of Teesside - about how we can all do our bit in the battle to save the planet.

It starts with an apple growing in the bright South African or New Zealand sunshine and ends with a debate on the way North East people can help tackle devastating climate change.

The problem is not the apple itself but the vast amount of energy used to produce it and ship it over to the UK.

Challenging the decision to buy apples and other fruit and vegetables that have travelled halfway across the globe is the kind of thinking that environmentalists like Professor Graham Street insist is needed to reduce global warming.

Professor Street is director of the University's Clean Environment Management Centre (CLEMANCE), which advises companies on how to manage wasted energy. However, he believes the solution starts not with industry but with every individual - and the decisions they take.

He said: "We have to ask how far our food travels from farm to fork and think about the ecological footprint."

With the apple, that includes how much land the farm took up and how much energy was used - and pollution created - in its processing, packaging and transportation to reach the north-east of England.

Professor Street said: "It has been estimated that if everyone in the world lived like we live in the UK, we would need three planets. If we lived like people in the US, we would need five planets."

A delicate balancing act is needed to get our requirement back down to one planet while at the same time acknowledging the desire of Third World countries to develop.

"A solution for us would be to purchase items like fresh fruit and vegetables from local shops which take produce from local farms, because the food has less distance to travel. Or we could go to farmers' markets, which are also more environmentally friendly.

Although CLEMANCE works primarily on advising companies, Professor Street says everyone has a role to play. "Take microwave cooking, for example. It is an efficient way of cooking food but leaving the clock on uses more energy than it takes to do the cooking. And appliances like washing machines and LCD television sets also consume large amounts of energy.

"Everything is consumer-driven. Companies don't make products if no one is going to buy them. We have to ask whether or not we need these things and if we can be more economical in the way we use them."

He continues his emphasis on the personal touch when it comes to wider issues of energy use. While accepting that wind farms are currently the most popular type of renewable energy, with much research also being carried out in the region into other technologies such as tidal power, Professor Street believes the answer could lie much closer to home.

He said: "You would need a landscape covered with turbines to meet the country's energy needs and many people now think instead that the answer is micro-renewables - where everyone generates their own power. That could mean every building, every house, having a mini-wind turbine or solar panel or some other form of renewable technology."

This would mean a huge change and it is coming, he predicts. "We are moving in the right direction but the big issue is the slow pace of progress. In this country, on average, each person consumes four times as much energy as someone in Africa. The big debate surrounds ways of balancing that out. It's a global issue that we can tackle locally."

"WE HAVE TO ASK HOW FAR OUR FOOD TRAVELS FROM FARM TO FORK AND THINK ABOUT THE ECOLOGICAL FOOTPRINT"



FOOD TECHNOLOGY CENTRE WINS AWARD

The Food Technology Centre at the University of Teesside has won a special award for its success in bridging the gap between industry and academia in North East England.

The Promoting Technology Award was presented to the Centre's Head, Dr Leo Guevara, at the first ever Partners in Europe Awards ceremony, held to celebrate the achievements of European-funded projects in the region.

Dr Guevara said: "Many food and drink companies in the North East already work with us and benefit from the vast experience that the Centre can offer to small businesses developing new products and processes. Our customers can also tap into the

wealth of knowledge in areas like manufacturing, IT and product design at the University of Teesside."

The Food Technology Centre was set up with the support of both European Regional Development Funds and European Social Funds. It recruits industry specialists to work within the University setting to help food and drink companies throughout the region and has provided advice on product development, legislation and food hygiene audits.

• For more information contact Dr Leo Guevara on 01642 384625, email l.v.guevara@tees.ac.uk.

CONNECTING WITH GOLDEN AGES IN

SPORT

Since the Hillsborough disaster 17 years ago, sporting venues across the North have been transformed. Sometimes this is part of urban renewal, but academic **MIKE McGUINNESS** who lectures in Sport Studies believes the process has been cathartic and a chance to identify with past glories.





In the North East, all three of the major football teams - Middlesbrough, Newcastle and Sunderland - have either moved to new stadiums or transformed their grounds since 96 Liverpool fans tragically lost their lives at the Sheffield Wednesday ground in 1989.

But this process of renewal of clubs and sporting venues is more than a sprucing up of buildings and a tightening up of safety rules. And it is more than just being part of economic regeneration projects such as the Middlehaven Riverside development in Middlesbrough's old docklands.

The transformation also represents a growing trend towards the commemoration of heroes, which is stronger now than at any other stage in sporting history.

Take the now popular practice of naming stands, roads, bridges and bars after players associated with the club - and the erection of statues and busts to legends.

In extreme cases this commemoration has led to 'sites of memory' or 'sacred places' - particularly following events like Hillsborough or the Manchester United Munich air disaster. These memorials provide an important identity for the communities and fans affected by such tragedies.

Stadium relocations have also tried to connect with the past. At the relatively new Riverside Stadium in Middlesbrough, for example, we have seen the recent re-erection of the famous Ayresome Gates from the old Ayresome Park ground. Heritage references are also evident in the statues erected to the club's and fans' heroes. Witness the memorials to Boro greats George Hardwick, pictured top right, and Wilf Mannion at the club's Riverside Stadium recalling the post-war glory days of Middlesbrough FC.

All reminding fans that while they may now have a brand new stadium thanks to the club's saviour and chairman, Steve Gibson, the glory days of the pre-1986 club (before it went into liquidation) have not been forgotten.

On Tyneside, no fewer than three statues pay tribute to Newcastle United's Jackie Milburn, one of them pictured opposite. Over at the Stadium of Light in Sunderland, the club takes a slightly different approach with a clear intention to link to County Durham's proud mining tradition. The new stadium is built on the old Monkwearmouth Colliery site, the last coal mine in the town, and a miner's lamp reflects an association with the past and the community.

The Wearsiders also pay tribute to the ordinary fans with a statue to those who have supported the club through thick and thin, the ordinary working man and his family. It's clear that while stadiums and other sporting venues have now become central to tourism and economic regeneration of communities, they also have an important part to play in the identity of a community.

- In my research, I have borrowed the concept of the canonisation of common people from Alex King's 1998 study of the commemoration and memorialisation process after the 1914-1918 Great War. Then, people commemorated the fallen from within their own communities. Today, I believe we can see the same process at work in the context of sport and that this process will continue as clubs see the value in commemoration for continuing fan loyalty, often by evoking 'golden ages' in club history.

"THESE MEMORIALS PROVIDE AN IMPORTANT IDENTITY FOR THE COMMUNITIES AND FANS AFFECTED BY SUCH TRAGEDIES ... STADIUM RELOCATIONS HAVE ALSO TRIED TO CONNECT WITH THE PAST"

ALL IN THE MIND

JOHN DEAN meets **Dr Jim Golby**, the Teesside sports scientist who says England can win at major sporting tournaments, but first they must win the battle of the mind and start believing in themselves again. It is a view increasingly shared by people connected with sport, including former Boro boss and new England coach, Steve McClaren.



Millennium Year. The Reebok Stadium, Bolton. England expects. What happened in that 2000 Rugby League World Cup semi-final was a familiar tale for English sports fans as New Zealand's players destroyed home hopes with power, determination and belief, winning 49-6.

England's players had buckled against more determined opposition, a phenomenon seen in many sports. When the going gets tough, England's players get going - home.

England's footballers did the same thing in their World Cup quarter final against Portugal in Summer 2006. When it came to penalties, the players fluffed their kicks. And the confident way the Germans slammed theirs past the keeper in their game did not go unnoticed. Watching was Dr Jim Golby, head of research with the University of Teesside's Sport & Exercise section, who played Rugby Union for Bradford and Yorkshire as a younger man and whose father Joe was a member of the Wigan Rugby League championship-winning side.

He is fascinated by the way England teams continually fail at major championships in a range of sports and believes that mental toughness, or the lack of it, is a critical ingredient.

Dr Golby, who with Teesside academic colleague Michael Sheard, has written several papers exploring the English weakness, said: "Sport is about speed, stamina, strength, skill and psychology and I would argue that psychology is the most important. It is possible to lose a game in the mind before you even go out to play. Over the years, there have been many examples of English teams lacking mental toughness and our work has been trying to find ways of addressing that." An example of the techniques they suggest is visualisation, where the players imagine themselves doing well.

Dr Golby continued: "The great golfer Jack Nicklaus said that he could hit his shots during major tournaments because he had already played them in his mind time after time." The researchers' analysis has shown that players from other nations, such as



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Australia, the US, Wales and New Zealand, often appear to exhibit a greater self-belief and Dr Golby is currently carrying out research with the top Welsh rugby team, Llanelli, to examine different approaches to mental toughness by Welsh players.

He said: "The great teams work with coaches who prepare them mentally. That shows on the field. Take the football World Cup quarter final against Portugal. There was a tremendous expectation of failure on those England players and when you watched them take the penalties, they did not believe they could score. England players can kick the ball as well as the next man but when they get into the pressure situations, they simply do not have the belief."

He believes English players can get it right and cites English Rugby Union star Martin Johnson, skipper of the national team that beat Australia in the final of the 2003 World Cup. "He was a winner and he believed his team could win. It's

not as if England cannot produce these types of players. Look at Bobby Moore and the England World Cup-winning football team in 1966 (above) or the way Freddie Flintoff and his English cricketing side barnstormed their way to winning the Ashes from the Australians in the summer of 2005. So English sides can win, but they need real self-belief to do so." For Dr Golby, Brian Clough, the former Middlesbrough footballer who went on to achieve glory as manager of Nottingham Forest, is a classic example of someone able to utilise the concept of mental toughness. Although most of his players were regarded as 'journeymen', they won the European Cup.

Dr Golby, who worked with Clough earlier in his career, said: "He picked players not so much on their footballing ability but on their mental make-up, players who were winners. While people can't necessarily change their personalities they can change parts of their personality style.

That's where England's coaches need to concentrate and it is encouraging to see that Steve McClaren has signed up psychologist Bill Beswick to help develop the mental strength of England's players."

The pair worked together at Manchester United and Middlesbrough and the England football manager told the *Sunday Express* recently: "At the top level in any sport the difference between winning and losing is usually mental so we need to give our players any advantage we can."

So let's hope with more and more people putting mental toughness alongside physical ability that England can win the battle of the mind games and start winning Championships again.

• For further information contact Dr Golby on 01642 342324 or email j.golby@tees.ac.uk.

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