Those of you who have followed the progress of the University of Surrey (UniS) will know that it is committed to advancing excellence in all it does. It is acknowledged to be a world leader in many of the research activities in which it is engaged. It is amongst the vanguard of UK universities establishing productive relationships with industry and commerce, and its consistently impressive graduate employment record has earned it the title of ‘The University for Jobs’ from the Sunday Times. The Surrey Research Park has enjoyed over 20 years of success and students from over 140 countries travel to Guildford from all over the globe to study our innovative, yet straightforwardly vocational and practical, range of undergraduate and postgraduate programmes.

The importance of higher education to the world, as it enters the information age, has never been greater. The knowledge and intellectual property which universities generate will propel its development in the twenty-first century. Universities are becoming the prime drivers of the age of the information superhighway, pushing back frontiers in space exploration, nanotechnology, post-genomic research, materials science, mobile communications and sustainable engineering – to mention just half a dozen areas where trailblazing research at UniS is at the forefront of scientific thinking.

Research-led universities, like UniS, require imaginative thinking and Government support to ensure that their scientific and technological advances successfully translate to the full economic benefit of the nation. A forward-thinking commitment to flexible, lifelong learning is necessary if the creation of a diverse and highly-skilled workforce is to be achieved.

Doctors and other health professionals, legislators, lawyers and public policy makers, require assistance from academics as they create the legal, ethical and moral frameworks necessary to moderate and set the parameters for the implementation of many of the scientific discoveries and technological advances that are currently being made. Interdisciplinary approaches, epitomised at this University by new initiatives such as the I-Lab, seek to assess the full impact of new technologies on society at the time of their development. Sustainability is the watchword if we are to avoid any deleterious future impact on the world about us.
The late Sir Alec Issigonis who trained at UniS’ forerunner Institution, Battersea College of Technology, pictured with the Mini motor car he designed.

Professor Sir Martin Sweeting, founder of Surrey Satellite Technology Limited (SSTL)

The I-Lab
UniS has already contributed much to the advance of science and technology, both in its early life in Battersea, where it trained Sir Alec Issigonis, who went on to design the Mini motor car, and since its move to Guildford, where Sir Martin Sweeting has transformed the satellite industry by successfully placing spacecraft, not much larger than Sputnik, but with phenomenal computing power for their size, into low earth orbit.

None of these achievements has occurred by accident. Popular culture often portrays universities as complex organisations that are difficult, nigh impossible to manage, where mysterious, yet marvellous things occur in a seemingly random and ad hoc manner to the general benefit of society at large. This is a wholly inaccurate picture of a modern university like UniS and through the pages of this year’s annual report, I hope to illustrate that we are both well organised and excellently managed – a university which utilises its resources efficiently and effectively, and is alive to the many agendas it sets itself and which are given to it by others.

UniS seeks to make a positive difference to the world and to the lives of all who work, study or enjoy relationships with it. It is an ambitious and confident organisation. What cannot be achieved now, we aspire to achieve in the future.

The Future Funding of Higher Education

Universities became front page news during the year with the passage of the Higher Education Act through Parliament. By far the most contentious issue contained in the legislation is the planned introduction of variable fees for undergraduate students from 2006/07 on. The income from fees will provide much-needed resources for the University to enable it to invest in its future.

However, we also strongly believe that anybody with the ability to benefit from higher education should have the right to do so – thus enabling them to maximise their potential contribution to society. The University’s Variable Fees Group has put together a package of scholarships and bursaries which reward academic excellence and provide much-needed financial support to those who otherwise might not benefit from a university education.

We continually assess our offering to students, both in academic terms and through the type, range and quality of the facilities and support services we provide for their use. Modern-day students rightly feel empowered as ‘customers’ to make demands of us. Fulfilling their expectations, as long as they remain realistic, ensures that a continuous commitment to improvement emerges and we become committed to cultural change agendas. As you will read elsewhere in this report, I have charged my senior administrative management team of Peter Beardsley, Tony Knapp and Greg Melly with the responsibility of ensuring that UniS develops appropriate systems, processes and customer-driven approaches to ensure that a consistently excellent experience is enjoyed by all with whom we do business.

Creating an Academic Strategy Fit for the Twenty-first Century

During the year, UniS submitted its new Academic Strategy to the Higher Education Funding Council for England (HEFCE). Under the leadership of my deputy, Professor John Turner, a submission was made which I believe accurately captures our aspirations for the future. All members of the University community, staff and students, were invited to contribute to its development, and key external stakeholders were asked to comment on its content. A more detailed summary of the Strategy can be found on page 7 of this report.

The full submission provides detailed plans for the future development of each of our academic Schools, support services and administrative departments. Two key academic developments emerge from the Strategy: the creation of a stand-alone Law School and a Medical School. The new Estates Strategy, which reflects the Academic Strategy, is aptly timed to concentrate our minds on the opportunities presented by the granting of planning permission to develop our new campus on Manor Park.
Manor Park
As I entered my final year of office, the news that outline planning permission had been granted to enable us to develop Manor Park made all of the hard work and effort of the previous decade worthwhile. I was delighted for the University because it will now be able to develop its true potential and become a world-class seat of learning. I was delighted for Guildford as the presence of the University in its midst will continue to ensure the economic, social and cultural pre-eminence of this very English town. And, of course, I was delighted for the staff team who assisted me throughout this very arduous, yet ultimately satisfying, process.

I am sure that Dr Peter Leggett, the first vice-chancellor of this University, felt much the same nearly 40 years ago, when the initial plans for our current campus on Stag Hill were approved, thus allowing Battersea College of Technology to relocate to Guildford and become the University of Surrey. The establishment of the Surrey Research Park must have provided similar satisfaction for my immediate predecessor, Professor Tony Kelly.

With work well underway on the new Postgraduate Medical School building and construction about to commence on new accommodation and sports facilities, I will leave the completion of this most exciting project to my successor, Professor Christopher Snowden, who it was announced recently will become only the fourth vice-chancellor of the University, when I complete my term of office at the end of June 2005. I leave Chris with my dreams for the future of this very fine institution, confident in his ability to make them become reality.

The Future of Research
Debates continue to rage about the ways in which universities should be funded to conduct research. There are those who argue that the Research Assessment Exercise (RAE), in its current form, has created an upwardly mobile, football-style transfer market of academics to premier league universities. Others suggest that the system keeps talented professionals out of higher education altogether, and some view the demise of disciplines such as languages and the physical sciences at regional level as catastrophic given that 50 per cent of all undergraduate students now study within 50 miles of their home.

As a research-led university, UniS has strategically invested in its research activities to maintain a forward momentum. Over the past year, through our Investment in Research Programme, it has appointed 17 chairs and five readerships to ensure that it maintains and strengthens its position in the next RAE in 2008. Nevertheless, investment in university research is crucial to the future of our nation. Many traditional industries have already been lost to overseas competition and now that some service industries are also being eroded, Britain requires its economy to be innovative, entrepreneurial, flexible and dynamic, if it is to maintain its economic prosperity in the future. Universities require those who undertake research to meet its true cost, a point I forcefully made in my capacity as Chair of the Business and Industry Strategy Group of Universities UK (UUK), to the Treasury Select Committee earlier in the year.
The expansion of UniS’ campus onto Manor Park is the most significant development in the University’s history since it was established in Guildford nearly forty years ago. It provides a unique opportunity to create a genuinely world-class environment for students of the twenty-first century.
The University is certainly not an ‘island’. As well as welcoming the people of Guildford onto our campus on many occasions each year, we reach out to the community and take UniS into Surrey through a wide range of activities. These range from our Open Studies provision at the Guildford Institute to our involvement with the Music, Dance and Book Festivals. We also provide access for the young and ‘young at heart’ to utilise our sporting facilities, whilst our Students’ Union plays a very active role in leading community action projects.

I have been particularly gratified that the current Mayor of Guildford, Councillor Keith Taylor, and his immediate predecessor, Councillor Gordon Bridger, both chose to involve UniS as part of their respective mayoral themes, ‘Youth and Technology’ and ‘Guildford: A Centre of World Excellence’. We have been delighted to support their endeavours and take the opportunity to showcase parts of the University such as the Surrey Space and Sleep Research Centres, which are world leaders in their fields.

The University’s influence is also growing significantly across a wider region of South East England. As I suggested earlier, more of our undergraduate students are being recruited from ‘our own back yard’. Important Government agendas in the areas of widening participation, and innovation and enterprise, are also creating important links to young people who might not benefit from a university education, and to companies who require access to our intellectual property and expertise.

**The Innovation and Enterprise Agenda**

Sir Richard Lambert, the former editor of the *Financial Times*, undertook a review on behalf of the Government to understand how Higher Education Institutions (HEIs) might better meet the needs of business. Contrary to popular belief, his report highlighted demand-side rather than supply-side problems, with too few businesses making the best use of the knowledge and facilities universities provide. Small- and medium-sized enterprises (SMEs), in particular, are shown to make very little use of the HE sector and this and other concerns are addressed in the report’s recommendations. The many ways in which UniS is supporting the Government’s innovation and enterprise agenda are covered in greater depth elsewhere in this report.

**‘Good for Guildford and the Region We Serve’**

I feel very confident in making the statement that UniS is ‘Good for Guildford’. In the time that the town has been our home, I believe that we have established excellent relationships with all parts of the community. Throughout my period of office as Vice-Chancellor, I have been committed to playing an active and varied role in ‘town and gown’ matters, which I have thoroughly enjoyed. I have also been hugely grateful for the goodwill and support the University has received in return from the community. Our ‘supporters club’ extends from those of you who provide accommodation and assistance for our students, across a diverse range of cultural and sporting activities, to the churches (and cathedral, of course) and community groups, through to our local politicians and Guildford Borough Council.

... And Finally

In June 2005, I will retire from office having had the privilege to serve as Vice-Chancellor of the University of Surrey for eleven years. In that time, I believe much has been achieved to drive the University towards its ‘2020 Vision’ of recognition as a truly world-class seat of learning. This progress would not have been possible without the many remarkable successes of our students and graduates, the commitment and interest shown in our University by our Chancellor, His Royal Highness, The Duke of Kent, the Chairman and Lay Members of the University Council and other external stakeholders, together with the loyalty, support and achievements of my entire staff team.

I am extremely grateful to you all and sincerely thank you for your unstinting help and support.

Professor Patrick J Dowling
CBE, DL, FREng, FRS
Vice-Chancellor & Chief Executive
Prioritising the Student Experience
Over the coming decade, students at Unis will see major advances in the educational experience on offer here.

The expansion of support services, residential accommodation and sports facilities are amongst a range of improvements to many aspects of student life set out in the University’s new Academic Strategy. Following extensive consultation in the University community, Unis’ wide-reaching Strategy was submitted to the Higher Education Funding Council for England (HEFCE) in July 2004. Developed by a staff team led by Deputy Vice-Chancellor Professor John Turner, it takes a root-and-branch look at the University’s operations, creating a visionary blueprint for the next ten years.

Clear goals are included for every area of Unis’ activities. The Strategy team has scrutinised the University’s teaching and learning agenda, research, partnerships in the community, strategic alliances, its HR policy and estates plan. Linking these disparate strands is the student experience. With the introduction of the new fee structure in 2006, the quality of life at Unis will become even more important as potential students consider the value of higher education.

Professor John Turner commented: “The essence of our strategy is to maintain a constant improvement in the quality of our research and teaching with a steady growth in staff and student numbers.”

Key Areas of the Academic Strategy: Teaching and Learning
As a teaching university, Unis is highly successful in preparing its students for the world of work. The University has topped the Sunday Times Employment League tables for the past six years. At only 1.3 per cent, Unis’ average graduate unemployment rate over a seven-year period is the lowest figure in the UK.

The Academic Strategy includes a number of goals that will build on this success. All students will continue to benefit from the culture of academic scholarship and research at Unis, also strongly characterised by its responsiveness to the needs of employers and the economy. A personal development plan will be created for each student, linking learning experiences to the workplace. For many undergraduate programmes this will include a supervised professional placement.

By pioneering e-learning and creating a virtual learning environment, Unis will ensure that students enjoy a more effective and flexible learning experience. The adoption of blended learning – with students learning at home, at work or on campus – will further enhance this flexibility. Some specialised programmes will be taught completely on-line.

A happy and responsive staff team will be crucial to improvements in the student learning experience. Unis will support high quality teaching by offering development opportunities and rewarding teaching excellence.

Broadening Unis’ Academic Range
The University’s programmes aim to meet the country’s, and in particular the South East’s, social and economic needs. Unis has been very successful in designing its portfolio to fulfil this aim.

Unis will maintain the current eight academic schools, which have been so important to establishing its position as a thriving multidisciplinary university, until 2009. The planned additions of a School of Law and a Clinical Medical School by 2010 will further raise Unis’ status. With these highly attractive subjects on offer, the University will join the country’s elite group of universities that provide a wide-ranging portfolio of the highest quality.
The Institute of Advanced Studies, under the leadership of Professor Nigel Gilbert, draws on the expertise of UniS’ distinguished professors and eminent scholars from around the world.
Over the last year, a department of Political, International and Policy Studies has been established in the School of Arts to meet growing demand for programmes in these fields.

**Widening Participation**
Running a wide-ranging programme of events and activities designed to encourage secondary school students to progress to HE, UniS has been at the forefront of widening participation for many years.

Aspiration-raising workshops and visits by a science and technology bus to local schools and colleges have been highly successful. And to give them a real taste of university life, the Educational Liaison Centre team also invites young students onto the campus to enjoy conferences and subject-specific events. Over 1,500 local schoolchildren benefited from these activities last year.

A major element of UniS’ Widening Participation initiative is the mentoring and tutoring programme. More and more UniS students are training to go into local schools and offer young students the extra support that could make a real difference to their academic success.

In addition to linking up with schools, the University aims to continue working with FE colleges and providers of Access courses. To encourage flexible entry, UniS will promote arrangements to harmonise the structure of its honours degrees to allow progression from foundation degrees and other sub-degree programmes.

**Research**
UniS has one of the country’s highest proportions of staff working in top-rated fields of research. An impressive 34 per cent of its research-active staff are members of research groups that achieved maximum 5* ratings in the 2001 RAE.

With the 2008 RAE now clearly in sight, UniS’ research strategy encourages further investment in the University’s world-class 5* areas of Electronics, Sociology and Biomedical Sciences. Areas that have achieved 5 ratings in the 2001 RAE – Psychology, Mathematics, Physics, the Centre for Environmental Strategy and areas of the Arts – will receive the support they need to achieve a top class performance, equivalent to a 5* rating, in 2008.

It is also important to develop niche areas of specialist expertise that encompass a broad spectrum of UniS’ portfolio, from work on small satellites and mobile communications to sociological methods and the healthcare workforce. Equally, cross-disciplinary themes in areas such as food, health and consumer behaviour, medical imaging, ethnicity and materials science will receive support.

Drawing on the expertise of eminent scholars around the world, an Institute of Advanced Studies (IAS) has been established. The IAS hosts small-scale, scientific and scholarly meetings of leading academics, allowing them to discuss specialist topics in a stimulating environment, away from the pressure of everyday work.

UniS has one of the country’s highest proportions of staff working in top-rated fields of research.
Enterprise
In line with its strong connections with business, industry and the professions, UniS will continue to foster a culture of entrepreneurship, creativity and innovation.

The success of the Surrey Research Park and UniSdirect means that the University is already ahead of the field in exploiting the immense pool of talent here at UniS. An increased share of the University’s turnover will be derived from the exploitation of intellectual property. New business streams will be created and UniS will look closely at promoting appropriate strands of research and knowledge transfer for business purposes.

Eventually the University will build a reputation as a recognised and funded centre for entrepreneurship education.

Partnerships in the Community
Since its inception, UniS has built positive, constructive relationships with Guildford Borough Council, Surrey County Council, the local police and the region’s health and education authorities. UniS will work towards enhancing its community relationships. Teaching provision will serve these services’ workforces and research will be conducted to benefit these partners. Developing programmes in collaboration with the Surrey Schools Support Service and Surrey Learning and Skills Council will foster progression and lifelong learning.

The University is well represented on committees and groups concerning local and regional development. Again close partnerships with Surrey County Council and agencies such as the Surrey Economic
Partnership and the South East England Development Agency (SEEDA) will ensure University can make a full contribution to the economy and quality of life in the region.

Seeking to be a good neighbour to the people of Guildford, the University will provide enhanced social and welfare services for its growing student numbers to relieve pressure on the town's public resources. Support for the cultural life of the community through University's performing arts programme will continue.

Strategic Alliances in Higher and Further Education
University is growing its network of links with overseas universities. Not only does the University have a high proportion of overseas students, but alliances between research teams are increasing.

Partnerships with the University of Kuopio in Finland and Japan’s Kyushu Institute of Technology have already been established. The international network will be developed gradually with new members coming from inside and outside the EU.

Closer to home, regional partnerships offer significant opportunities to share services, strengthen provision and influence the local and regional agenda. Collaboration with Brunel University and Kingston University is underway in the provision of engineering education. The productive relationship with Roehampton University will continue to thrive through joint teaching and research initiatives. In the knowledge transfer fields, the University collaborates with the Universities of Bath, Bristol and Southampton, and with Royal Holloway College of the University of London, and the Universities of Reading and Sussex.

Widening participation has always been a priority. University has traditionally supported the development of HE provision in further education colleges and non-university institutions. This network of Associated Institutions will receive further support.

Estate’s Strategy
The quality of University's buildings and landscape is an important factor in recruiting students and ensuring a comfortable and pleasant environment for the whole University community.

Since the opening of the Stag Hill campus in the late 1960s, new buildings – housing, teaching and social facilities as well as student accommodation – have been added over the years. The campus is now almost at the limit of its potential for development and its academic activities are comfortably accommodated in the space available. Now the focus will shift to the refurbishment and updating of Stag Hill’s current stock.

Major expansion of University’s estate is taking place at the Manor Park campus where exciting new buildings, including the Postgraduate Medical School and sports facilities, are currently under construction. With the extra capacity this new campus offers, University will have the flexibility to accommodate new academic activities and buildings for a variety of uses. For example, it is planned that affordable staff housing will also appear on the campus in 2006.

Over the next decade, additional space will be provided for a wide range of activities, including teaching, research, performance and recreation, support services and student facilities. Of particular benefit to students will be a new multi-faith centre and new housing to increase the proportion of students resident in accommodation to 60 per cent.
Human Resources Strategy

To maintain Unis’ status as a leading teaching and research university, it is vital that the University can recruit and retain the very highest quality academic staff.

As mentioned in the Estates Strategy, new housing at Manor Park will be built for staff, including those with young families, for rent at below market rates. Other features such as a nursery, scheduled to open in 2005, for staff and students with pre-school children, should prove to be added incentives. The University will continue to provide relocation costs in order to recruit the best senior academics to Unis.

Staff development schemes for both researchers and teaching staff, in the form of new enhanced teaching excellence awards, will be expanded.

Improvement Programme

During the year the University has not just been looking forward. A programme of continuous improvement has been set in train which has already produced benefits for Unis’ staff and students.

Led by the University’s senior administrative management team of Peter Beardsley, Tony Knapp and Greg Melly, and assisted by Roger Stickland, the Improvement Programme puts into practice plans outlined in the Academic Strategy and earmarks significant areas that require immediate investment. It also recognises that to be successful it needs to engage with every member of staff to encourage best practice approaches to develop further and for the necessary level of cultural change to be achieved.

Ongoing projects include several new systems to support staff working in finance, accommodation and student administration which is being funded to the tune of £5.5m. In addition, a major investment of £1.5m is ensuring that in 2005 all students will have access to high speed broadband connections in their residential accommodation.

Commenting on the project’s main aims, Roger Stickland said: “The Improvement Programme is based on the themes of customer service, continuous improvement and supporting a vibrant community. Our plans affect both students and staff and are building the foundations for change within the whole community.”

The major improvement areas for students are outlined in the ‘Student Experience’ section below. Staff can look forward to improved IT systems that will enhance efficiency in the office and the provision of social space for University events that encourage a sense of belonging.

Getting to work will also be a major area for discussion. Ideas include encouraging car sharing, cycling, and using the bus service, with the additional incentive of the provision of breakfast for staff travelling from particular postcodes.

The Student Experience

Central to the Academic Strategy and the ongoing Improvement Programme is the student experience. Feedback from current students has been mainly positive but has also pointed to areas that would benefit from improvement.

As always the University has to work within tight financial boundaries. But with the introduction of top-up fees in 2006, it is also committed to making Unis “the University of choice” for its target markets. In the new higher education scene, students – and their parents – need to be more confident than ever that “their” University can deliver a value for money experience.

In consultation with the University of Surrey Students’ Union (USSU), Unis is upgrading key areas supporting the academic, pastoral and social aspects of students’ experience at Surrey.

USSU President, Hash Alsaidi, points to developments such as the installation of broadband, refurbishment of laundry facilities and extension of library opening hours as improvements that make a real difference to students. He is also highly supportive of longer-term plans such as a one-stop shop that will bring all administrative services for students together in one building.

With major developments like these in the pipeline, it is vital that Unis works closely with its target audience to ensure that services are tailored to their needs. Hash is very positive about the way in which the University consults its students:

“The level of student representation at Unis is probably much higher than at many other universities. The Students’ Union has a lot of input – our representatives sit on all the major committees – and as SU President I can always talk to the Vice-Chancellor about issues of concern.”

The SU President also stresses the importance of the campus environment, both in attracting students and keeping them happy when they are here. “The new Management School is exceptional and is already having an impact on Unis’ recruitment to management programmes.”

On Stag Hill, a major refurbishment programme of the original 1960s buildings is
USSU President, Hash Alsaidi, points to developments such as the installation of broadband, refurbishment of laundry facilities and extension of library opening hours as improvements that make a real difference to students.
underway. The Improvement Programme has identified disability access as an important focus, together with improved signage around the site. At the same time, the whole campus will be made more accessible to the local community.

With the recent opening of the Lakeside Restaurant in the new School of Management Building, UniS is now looking at upgrading all its restaurants to meet more varied dietary needs. Improving social space for postgraduate students is also a priority.

The quality of the teaching experience is, of course, crucial to helping all students fulfil their potential at UniS. With the major advances in IT coming on stream, students will benefit from a new virtual learning environment that combines traditional teaching methods – lectures and seminars – with distance e-learning. In fact, some programmes will be entirely on-line. At the new Postgraduate Medical School for example, busy medical practitioners will use IT to deliver programmes to students’ own workstations.

The success of UniS students in gaining employment after graduation owes a great deal to their programmes which are designed to meet the needs of the real world. To complement the teaching experience, UniS has pioneered the professional training year, which is now being taken up by over 80 per cent of students. Employers value the enhanced interpersonal, management and communication skills gained during the year and many offer students a permanent position after graduation.

In the future UniS will be creating a Personal Development Plan for all students. The plan allows them to record their experiences during their programme and link their studies to the world of work.

The Personal Development Plan will include activities such as volunteering, tutoring and mentoring. UniS students continue to make a huge contribution to schools in Surrey and Hampshire. In 2003-2004 around 100 students underwent training at UniS before going into classrooms at primary and secondary level to provide extra tuition. The mentoring scheme, piloted the previous year at King’s College in Guildford, has been particularly successful. Academic and pastoral support from UniS students has helped GCSE pupils achieve better exam grades than expected.

Volunteering in general is strongly promoted at UniS. Students are encouraged to give their time to a range of projects such as working at wildlife hospitals, organising leisure activities for people with disabilities or clearing play areas. The University works in partnership with USSU to fund the volunteering programme and provide appropriate training for students.
Celebrating its status as a thriving centre of excellence for management teaching, UniS welcomed Dr Kim Howells MP, Minister of Higher Education, to officially open the new School of Management Building.

“It is wonderful to see this level of investment in the Management School at Surrey, building on its already established international reputation. I look forward to seeing the School develop the new managers and leaders of the future,” commented Dr Howells.

Characterised by its feeling of light and space, the £12 million building offers staff and students a stimulating, modern and comfortable environment for work and study. Since its completion in April 2003, the building has won the 2004 Guildford Society’s design award for best new building and a 2003 heritage award from Guildford Borough Council for environmental sustainability.

It is a state-of-the-art, energy efficient facility housing seminar rooms, an auditorium, staff offices, a coffee shop and a high-quality restaurant. It provides computing facilities and a wireless network for all staff and students.

Outside a large piazza provides a stunning frontage to the building’s modern design. With its granite paving, lighting, water feature, sculptures and lawns, this attractive space will make an ideal meeting place for the whole University community.

Building on the School’s Strengths

The official launch of the building marks an important turning point in the development of the School of Management. The School can now celebrate the successful union of its two centres of excellence and the foundation of a major regional and national focus for management education and research.

The School was created just two years ago from the merger of the former Surrey European Management School (SEMS), the School of Management Studies for the Service Sector (SMSSS) and the Work-Based Learning Department of Educational Studies. The strengths of these centres have helped to shape the forward-looking educational ethos of the new unified School of Management. A strong international orientation influences both teaching and research – a direct legacy of SEMS’ work across the globe, and SMSSS’ tradition of excellence in the service sector areas of tourism, hospitality and retail.

With greater opportunities for interdisciplinary work, new teaching programmes and cutting-edge research resulting from an expanded staff team, Head of School Professor Bob O’Keefe believes that his vision for the School can be more ambitious than ever before.

“We have established a strong reputation at a regional and national level. And as we already have extensive links overseas, we are aiming to become major players on the international stage. To do this we are honing our research, focusing on specific niches of expertise, investing in our ‘star’ programmes, and continuing to invest in exceptional staff.”

Gaining accreditation for all the Management School’s programmes, particularly the MBA, is an important goal.

The School has applied for accreditation from the AACSB (the Association to Advance Collegiate Schools of Business). This US-based association provides the hallmark of excellence in management education and officially approves the highest standard of achievement for business schools worldwide. To achieve accreditation, the School is measured against its mission statement and is required to prove that it is fulfilling the goals set out in this statement.

As part of the accreditation process, an AACSB review team will scrutinise UniS’ submission and monitor the School’s performance against its accreditation plan. The process is very lengthy and news of full accreditation is not expected until late 2005.

Professional Placement Scheme to Benefit More Students

During the last academic year, the highly successful professional placement programme was extended to include general Business Management students for the first time.
‘Knife Birds’, a sculpture by Bridget McCrum, is positioned adjacent to the Piazza.
A large proportion of students enrolled on service sector degrees – in retail, tourism and hospitality management – have traditionally taken the third year out to work in industry. This year over 100 placements were made across all the sectors, including general management. The scheme is closely controlled by the School. Academic staff visit each student twice during their placement year to monitor the work they are doing and ensure its relevance to their studies.

As the School has a strong network of industrial links across the spectrum, it has built close connections with many prestigious companies who offer professional placements. These include: Inter-Continental, Disney, Millennium, Boca Raton Resort and Club, TGI Friday, IBM, IKEA, Fortnum & Mason, Boots, John Lewis Partnership, Dunhill and House of Fraser plc.

Commercial Director at the Management School, Charles Croker commented: “We open doors for our students with companies; it is then part of the student training to obtain an offer for the professional year. The professional year attracts students to the School’s programmes and provides an opportunity for students to gain employment after their graduation.”

Professional Development Degree for ASDA Managers

UniS has joined forces with supermarket chain ASDA in a unique partnership that will run degree programmes for aspiring store managers.

In a generous package, the superstore has offered to give both existing staff and external candidates the chance of qualifying for a degree from the School of Management. The initial pilot scheme started in August 2004, and the students will graduate with a BSc in Professional Development in Retail Management.

“This exciting opportunity will give candidates both a career and a degree, with their fees paid by the retailer. Successful applicants will be offered a job-share of a manager post at an ASDA store, together with time to study, and with university fees taken care of,” said Jean O’Neill, Director of the programme.

In the first instance, ASDA are offering the opportunity to their existing part-time staff, but have reserved spaces for external candidates. Students will choose from a variety of management modules, take part in eLearning and attend classes. Assessment will be through the application of what they have learned in their ‘day job’ – there will be no examinations.

Bruce Boughton, People Development Manager for ASDA, said: “We’re 100 per cent committed to developing talent which is why we are so excited about our partnership with the University of Surrey. They have had the foresight to help us turn our ‘on-the-job’ training into a formal and transferable qualification.”

Staff staying with the company for six years will have a full honours degree but if they want to make a move before then they will have a qualification that reflects what they have learned so far. People who already hold qualifications will receive credits and will be able to pick up the programmes at more advanced stages. Similarly, those who have had retail experience will be able to convert this into credits with these counting towards their qualification.
**DBA Launch**

The School’s vibrant research environment plays a major role in ensuring it maintains its position as a leader in its specialist fields. Research work by students is a vital element of the School’s strong culture of scholarship.

Following the revised validation of the DBA, two cohorts of eight students started on the programme last year. DBA students apply their research to real problems in the workplace. The programme, therefore, offers greater opportunities to combine work with study, a highly attractive option for busy professionals.

In developing the new DBA, the Programme Director examined all other DBAs in Europe and the most prestigious ones outside Europe and consulted prospective students and employers. He also checked how the programme relates to Government national educational frameworks. As a result, both the DBA and the School’s PhD have been admitted to membership of the European Doctoral Programmes Association in Management and Business Administration (EDAMBA).

**Specialist Areas Make a Major Impact**

For many years UniS has been known for producing skilled graduates who are highly attractive to employers. The service sectors of tourism, hospitality and retail management have already been mentioned. At postgraduate level, programmes also focus on food, healthcare, financial services, marketing and international business management in addition to the well-established MBA.

Over 30 years of excellence in teaching is supported by the School’s highly regarded research work. Around 60 per cent of academic staff are research active and the award of a grade 4 in the Research Assessment Exercise (2001) gave the School the highest research rating of all service sector management schools in the UK.

An overview of research and teaching successes in the three specialist areas of tourism, retail and hospitality management highlights the enormous scope of the School and its impact on key areas of the economy.

**Tourism**

UniS was ranked number one for Tourism education by The Guardian in May 2004.

It was one of the first universities in the world to introduce the study of tourism with the launch of the first postgraduate programme in 1972. There are currently more than 80 students studying for Masters awards in tourism and 25 studying for PhD awards – each year about 60 undergraduates join programmes in tourism.

Further academic and research achievements this year confirm the School’s position as the leading provider of higher education in this field.
David Airey, Professor of Tourism Management, has been awarded the EuroCHRIE Presidents’ Award for Outstanding Achievement. This award recognises outstanding individual contributions to the hospitality industry and to education. EuroCHRIE is the European branch of the leading international organisation that supports education and training in tourism.

The School has also welcomed a new professor of tourism. John Tribe was formerly Professor of Tourism at Buckinghamshire Chilterns University College. Professor Tribe has a high profile in tourism education. He has authored books on strategy, economics and environmental management and is currently Chair of the Association for Tourism in Higher Education.

Strengthening its links within the industry, the School launched a Knowledge Transfer Partnership (KTP) with the HCIMA (Hotel and Catering International Management Association). The KTP grant of £107,500 will fund the development of an eLearning strategy by a UniS graduate.

The project will scope the needs of members, industry and the Association and pilot eLearning modules based on current HCIMA qualification material. Professor Andrew Lockwood and Dr Dimitrios Buhalis are providing the academic lead. Dr Buhalis said: “As well as expanding the delivery of HCIMA qualifications, the project offers an academic challenge and a chance to develop the strong relationship with HCIMA and its members.”

Dr Buhalis will be able to feed the results of another IT-based research project into the KTP. This year he completed the SMART-UP project which aims to give tourism SMEs access to specialised management know-how by introducing them to the benefits of internet-based knowledge networks. Like the KTP, SMART-UP will make an important contribution to the development of knowledge amongst businesses in the sector.

Retail
Michelle Lowe has become UniS’ first woman professor in the field of management. In the New Year, Michelle joined the School as Professor of Retail Management, coming from the University of Southampton where she was Reader in Geography.

Professor Lowe has published numerous articles on retailing and consumption as well as three well-known books: Retailing Consumption and Capital (1996), Commercial Cultures (2000) and most recently Reading Retail (2002). Current research includes an ESRC-funded study on Food Deserts in British Cities and a study of retail-led urban regeneration focusing on regional shopping centres in the inner city.

Commenting on her appointment, Professor Lowe said: “The retail research group in the School of Management has a strong reputation and well-developed industrial links. I am looking forward to working with a staff team that is already highly respected both in industry and higher education and building one of the strongest retail research groups in the UK.”

This year Michelle has completed a research project for Tesco plc. The research focused on the retail development implications of Government plans for the expansion of housing in the South East. Looking forward to 2016 and beyond, Tesco were keen to see what the new sustainable communities of the South East would look like and what development opportunities these would allow them. Tesco have taken forward the key strands of the findings made by Michelle and further work is planned.

Also working in partnership with the UK’s leading food retailer, two School of Management graduates won an award for their management consultancy project for Tesco. Jane Sassiene and Sophie Edwards’ company Trilogy was presented with the gold award for the Change Management Category at the Best Practice in Management Consultancies Awards 2004.

The project started three years ago when Jane and Sophie pitched their ideas to Tesco about the level of service shoppers expect when they go to the supermarket. They were chosen from a group of several larger consulting firms to work with the supermarket.

Jane Sassiene said: “Our theory has been to help the workers get rid of rooted attitudinal blocks and transform their mindset so they can change their behaviour and results. If the workers are happy, then so will the shoppers be – giving a smile is maybe all it takes to lift their spirits, and the staff have responded very well.”

Senior Lecturer in Retail Management Dr Andrew Alexander is continuing his work on a Leverhulme Trust-funded research project analysing the history of the British supermarket. The research, involving retail studies specialists at UniS and the University of Exeter, has been reported in local newspapers in South West England to promote a series of oral histories of early supermarket shoppers.

Retailing in town centres is greatly influenced by its quality and availability as well as the safety of car parks. Research by Dr Alan Hallswoth, Reader in Retail Management, looked at car parking safety
standards as set out by the ‘Secured Car Parks’ scheme. Alan’s team concluded that the scheme was deeply flawed and the Government’s policy has been amended to reduce the emphasis on design features. NCP has now joined the new scheme and is investing in security-related improvements to its city centre car parks.

**Hospitality and Food Management**

As with all major specialist areas in the School of Management, the quality of teaching and research in hospitality gains enormously from its strong connections with leading industry figures. The School has re-appointed Alan Parker as a visiting professor in the same year that the UnS alumnus has been promoted to Chief Executive of Whitbread plc.

Alan joined Whitbread as Managing Director of the Whitbread Hotel Company in 1992 and was appointed to the board in May 2000. The company manages leading brands in hotels, restaurants and health clubs, including Premier Travel Inn, Marriott (UK), Brewers Fayre, Beefethear, Costa, TGI Friday and David Lloyd Leisure.

Support from key industrial associations is equally important to UniS’ success in tourism education. The School of Management has the world’s first and only professor of In-Flight Catering, endowed by the IFCA (the International Flight Catering Association). Peter Jones is Professor of Production and Operations Management and heads the Travel Catering Research Centre (TCRC) at UniS. The TCRC leads the world in research on issues such as food safety and chef competency in in-flight catering and is currently investigating waste management in the industry.

Dr Margaret Lumbers and Dr Anita Eves are founder members of the University’s Research Centre for Food, Consumer Behaviour and Health which builds on UniS’ strengths in the Schools of Management, Human Sciences, Biomedical and Molecular Sciences and the European Institute of Health and Medical Sciences.

Currently Dr Lumbers is co-ordinating a major £3 million EU-funded project investigating older consumers’ attitudes towards snack, ready-made, convenience and functional foods and their satisfaction with food-related services. Retail access to food and the interaction between shopping, food selection, economic constraints and meal preparation skills are being investigated using home, shopping and in-store observations.

Encompassing the specialist knowledge and skills of UniS’ leading academics, the Hospitality and Food Management Research Group (HFMRG) has recently completed a major Department of Trade and Industry-funded study of best practice in small and medium size enterprises (SMEs) operating in hospitality, tourism and leisure. Professor Peter Jones has contributed his expertise as one the world’s leading authorities on the process of menu development in restaurants and its impact on performance.

**Lakeside Restaurant**

Fulfilling its three key functions as an educational facility, a first-class restaurant, and a venue for special events, the Lakeside Restaurant has enjoyed a very successful first year.

The Lakeside restaurant aims to provide a unique dining experience managed by professional staff, a team of academics and first year hospitality students from the School of Management.

Complementing this on-the-job training in the restaurant, the School’s new demonstration room has a TV facility and hob where students can practise their skills.

The lunchtime menus, created by head chef Huw Griffiths, offer an innovative selection of world cuisine ranging from great British favourites and classic European dishes to tastes from the Orient and beyond. The dishes are all freshly prepared by Huw and his team of staff and students, ensuring the best quality food is delivered to customers whilst maintaining excellent value.

During its first year in operation, the restaurant has played host to many official University receptions, dinners and seminars as well as events for external organisations.
Fulfilling its three key functions as an educational facility, a first-class restaurant, and a venue for special events, the Lakeside Restaurant has enjoyed a very successful first year.
An International Perspective

With its roots strongly embedded in worldwide educational networks, the School of Management continues to work hard to enhance its reputation as a key international player.

The MBA attracts a high proportion of overseas students: currently 85 per cent come from outside the UK representing 63 countries around the world. But most overseas students do not even have to leave their own country to study the MBA. The distance learning MBA is attracting record numbers with students in Greece, Barbados, Germany and Mauritius registering for the programme. In addition to on-line tuition and guidance from UniS tutors, the School provides a free laptop and textbooks for all its postgraduate students.

In China, the School has struck an agreement with the Dongbei University of Finance and Economics (DUF). Students can spend two years at DUF which then qualifies them to undertake two further years at UniS where they can choose any programme from the undergraduate portfolio. These types of partnerships are vital in helping the School’s profile-raising activities in potentially huge markets like China.

Students from the UK on both undergraduate and postgraduate management programmes benefit enormously from working alongside international students. During their time at UniS, home students also have the chance to study and work abroad. Through its professional placement programme, the School has partnerships with a wide range of international companies: this year around 40 hotel management students worked in hotels in Florida and some were placed in the stunning seven-star Burj al Arab hotel in Dubai.

The School’s exchange schemes with overseas universities offer another opportunity to see the world. Partnerships with several institutions – in North America, Singapore and Australia amongst others – allow UniS students to spend one semester studying overseas and experiencing a different culture.
Managing Excellence in the Postgraduate Medical School

Health impacts on all aspects and areas of society and it is a theme that stretches across each of Uni’s eight Schools, in either their teaching or research portfolios. The Postgraduate Medical School (PGMS) aims to play a central part in the developmental agenda within Uni and also within the local community.

New Building
In July 2003, Guildford Borough Council granted planning permission for the exciting new development of a Postgraduate Medical School (PGMS) on Manor Park. The role of the School will be to act as interface between the University’s academic activities and the healthcare services. PGMS is research-led and aims to be a leader in translational research enabling expertise to be transferred from the “bench to the bedside”. In so doing, the School will build on existing links with colleagues from the Royal Surrey County Hospital as well as other hospitals, GPs and trusts.

Currently, PGMS, which was formed in 2000, has 250 part-time students, and is on
three sites – two on the Surrey Research Park and one on Stag Hill. The provision of a new building scheduled to open in early Summer 2005 will provide teaching and research which will help to ensure that the key strategic activities and priorities of the NHS are linked to those of the University. Visiting appointments of senior NHS staff have been made in important clinical areas, including cancer surgery, minimal access surgery, pathology, medical physics, diabetology/endocrinology, oral maxillofacial surgery, vascular medicine and cardiology. Most of these areas will feature strongly in the new building.

The new Postgraduate Medical School building has three storeys with a large cantilevered ‘top box’ and is the second major building to be erected on Manor Park – the first being the Human Psychopharmacology Research Unit (HPRU) which stands adjacent to the PGMS building. The structure is curved in plan and this sits well around the existing pond to ensure the preservation of mature trees and fauna. The ‘top box’ extends some eight metres beyond the face of the building and will provide superb meeting rooms for both the School and the University. It is also well suited for corporate sponsorship events.

The original architectural concept was by Arup Associates and the design was selected following an architectural competition. This building continues the University’s tradition of producing developments of the highest architectural quality.

Construction began on the £10m building on 22 March 2004 and it will be completed in 60 weeks, on 13 May 2005.

A bolt-tightening ceremony was conducted by Chairman of the Council, Sir William Wells on 24 May 2004 and later in the year the Chancellor, HRH The Duke of Kent KG, visited the rapidly developing site.

The University, together with colleagues from the Royal Surrey County Hospital, believe the facility will add immeasurably to the quality of research facilities for our local Health Service staff and will contribute to Guildford becoming a nationally recognised centre for health-related research. More importantly, in the long term these developments will add value to the quality of care provided for patients within Surrey and the surrounding districts.

Funding for the building to date has come from the Science Research Investment Fund (SRIF) – part Government, part Wellcome (£2.39m); Wolfson Foundation (£500K) for the capital and equipping costs of the Diabetes Laboratories and GUTS (Guildford Undetected Tumour Screening – Colorectal Cancer) has contributed £300K towards the endoscopy unit and oncology laboratories. The University was extremely grateful for the very generous donation by GUTS. This is the latest in a series of donations and grants by this local charity led by Professor Chris Marks, Visiting Professor of Surgical Oncology, which previously have included the provision of a fully funded PhD studentship, contributions to salaries for researchers, laboratory materials and equipment, and the commissioning of a research project.

Further sponsors are actively being sought by the University’s Development Director, Professor Peter Butterworth.

The Faculty of Pharmaceutical Medicine

Professor Richard Farmer, Professor of Pharmacoepidemiology, has contributed to the recent worldwide debate on the usage and possible side effects of Hormone Replacement Therapy (HRT) following the ‘Million Women Study’. He has been the invited keynote speaker on this subject at both national and international conferences.

Professor Farmer became a Fellow by distinction of the Faculty of Pharmaceutical Medicine during the year. He was also appointed, as a University nomination, to the Board of Governors of Glyn Technology School, Epsom.

Other areas of interest within the department include the safety of oral contraceptives, acne treatments, antidepressants and treatment for benign prostate hypertrophy. Professor Farmer has formed collaborative links with NHS colleagues to establish a joint Prostate Group to further research in this very important area of men’s health. Stephen Langley of the Royal Surrey County Hospital is widely known for his innovative work in
cryotherapy where, under minimally invasive techniques, the prostate is subjected to a series of freeze-thaw cycles with the aim of destroying malignant cells adjacent to it. John Davies’ research into brachytherapy involves implanting tiny radioactive seeds, like minute grains of rice, into the prostate gland to deliver radiation directly to the malignant cells. Both approaches have led to outstanding progress being made to treat this very common form of cancer.

In addition to the clinical techniques of cryotherapy and brachytherapy outlined above, other prostate cancer research has been undertaken by Dr Helen Coley, in collaboration with the Urology section, St Luke’s Cancer Centre, RSCH (Robert Laing, Stephen Langley, and a PhD student, Prasanna Sooriakumaran), and Professor Colin Smith of the University’s School of Biomedical and Molecular Sciences. A project has been initiated which is using a genomics approach to investigate the problem of prostate cancer.

A six-month pilot study was undertaken with the aim of creating the basis for a large multi-centred study (involving Greece, Italy, Sweden, USA, Finland and the UK) co-ordinated by Dr Giuseppe Carruba, University of Palermo, Sicily. With the data obtained from the pilot study, a multi-million dollar grant application was submitted to the National Institute of Health in the US and the outcome is eagerly awaited. The aspiration is that Guildford will be the lead centre for the study as the entire scientific analysis will be conducted at UniS in the Post-Genomics Laboratory. This provides an excellent opportunity to forge international collaborations in the area of prostate cancer.

Professor Hilary Thomas

Another member of the Faculty of Pharmaceutical Medicine, Dr Brian Gennery, is its current President and also the PGMS Programme Director for the MSc in Pharmaceutical Medicine, the School’s most popular programme, started by HPRU in 1993. The first graduates since PGMS’ inception were conferred at the April 2004 graduation ceremony.

The links with the Faculty of Pharmaceutical Medicine have led to PGMS providing tailor-made modules for their Higher Medical training requirements. 30 students attended a Summer School in July 2004. A very generous contribution of £100K from Glaxo enabled PGMS’s existing modules to be adapted to meet the specific needs of the faculty. The Summer School finished with a course dinner where the guest speaker was Professor Kent Woods, Chief Executive of the Medicines and Healthcare Products Regulatory Agency (MHRA). This further reinforced links with the School as it is planned for there to be an MHRA laboratory in the new building.

Professor Hilary Thomas, Professor of Oncology and a Joint Appointment with RSCH, became Medical Director in April 2004 and joined the board of the Royal Surrey County Hospital at the same time. Professor Thomas is well known for her work at the St Luke’s Cancer Centre and as part of the Surrey and Sussex Cancer Network.

Obesity and Diabetes

Another dominant health theme and one that has attracted considerable coverage in the media has been the dual issues of obesity and diabetes. Professor Ross Lawrenson, Dean of Medicine, has published widely on diabetes and its effects on morbidity and mortality. Not only does he work alongside GPs on the management of diabetes via a local specialist interest group, he has also been a keynote speaker on the subject, particularly in children, at both national and international conferences.

Close links with the local Primary Care Trusts (PCTs) have led to Professor Lawrenson’s collaboration with Guildford and Waverley PCT on two particular projects. One study involved examining the effectiveness of walk-in centres and a second study screened 2500 women aged between 60-80 for osteoporosis. This identified ten per cent of the women to be in the high risk category. The research again highlighted the benefits of early detection, which might reduce the number of fractures suffered later in life.

Reinforcing the links with the local community on these important issues, Professor Lawrenson led a group from PGMS at the Surrey County Show in May to raise awareness of the importance of diet, exercise and regular health screening by checking blood pressure and offering blood glucose testing.
Smoking is also a topical issue and PGMS was able to facilitate the work of the Surrey-wide Tobacco Control Alliance.

Dr Silvana Di Palma joined PGMS as a Joint Appointment on her appointment to the Royal Surrey County Hospital as a consultant histopathologist. Her husband, Professor Martin Cook, is also one of PGMS’ visiting staff and a histopathologist.

Road Safety
A novel aspect of PGMS’ work is that undertaken in the field of road safety by Dr Nicola Christie who worked at the Transport Research Laboratory for 17 years prior to joining PGMS. Dr Christie originally joined as a researcher in pharmacoepidemiology, but the opportunity arose for her to return to her primary interest in road safety, where she examines the causes, effects and prevention of road traffic accidents.

Road safety is a key issue for most communities. Each year, nearly a third of a million people are injured in road traffic accidents and more than 3500 die.

Road accidents are a complex public health issue involving psychological, social and environmental factors and, for some groups such as children, there are major inequality issues. Child pedestrians in the lowest socio-economic group are five times more likely to be killed than their counterparts in the highest social group. It is for these reasons that PGMS will be developing, in conjunction with other elements of UniS, a multidisciplinary research team to address these important issues.

Dr Christie has also recently completed an international survey of policy and practice on children’s traffic safety on behalf of the Department for Transport. This study aimed to look at international differences in child traffic fatalities among the OECD countries and compare their policy and practices in dealing with the casualty problem. The change from pharmacoepidemiology to accident research has also paid off financially with two successful grant applications achieved and the promise of more in the pipeline. Dr Christie is a member of the working group on road safety behaviour for the Parliamentary Advisory Committee for Transport Safety and the Miskin Group – an alliance of leading injury researchers led by the University of Swansea.

Successes
The graduation ceremony in April 2004 saw the first graduates since PGMS came into being. Amongst the graduands were Dr Helen Seaman, one of our pharmacoepidemiology researchers, who was awarded a PhD by publication and Dr Richard Haworth, our first ever graduate in the MA in Medical Education.

Later in the year, at the annual conference of the International Society for Pharmacoepidemiologists (ISPE), Dr Seaman received the best article award for a manuscript published in Pharmacoepidemiology & Drug Safety on ‘The risk of liver disorders in women prescribed cyproterone acetate in combination with ethinyloestadiol (Dianette): a nested case-control study using the GPRD’. This is the second occasion that Helen has won a similar award at ISPE.

An Epilepsy Action Postgraduate Research Bursary was awarded to Yingfen Hsia, a PhD student from Taiwan and studying pharmacoepidemiology.

The Summer School for Higher Medical Training attracted full classes, an interesting programme and students from many countries. The formula will be repeated in future years to cover this important need.

Each year, nearly a third of a million people are injured in road traffic accidents and more than 3500 die.
With a new director at the helm, UniSdirect has seen many of its flagship projects flourish this year. New funding and growing partnerships are ensuring that UniSdirect can support an increasing number of start-up businesses.

Dr Ben Ferrari joined the team in the New Year. His experience, heading up research and enterprise at Royal Holloway College and before that at the University of Glasgow, makes him ideally qualified for the role at UniS.

In addition to his work in higher education, Dr Ferrari has worked in the private sector on the formation of internal business units and developing marketing projects for digital resources. He has also represented the UK as an expert in the European Community.

**Consortium Wins New Funding**

Following its success in building new businesses, UniS’ partnership with the Universities of Bath, Bristol and Southampton has received the largest award from the Department of Trade and Industry’s (DTI) Higher Education Innovation Fund (HEIF) this year. The consortium has been awarded £13m over two years.

The four institutions already have a successful track record of working on joint initiatives, such as the SETsquared programme. This provides dedicated support for early-stage, high-tech, high growth potential ventures: SETsquared has helped around 100 new companies to get off the ground across southern England.

The driving force behind SETsquared’s success lies in combining the research strength of the universities with private sector commercial experience. The programme helps commercially exciting, technology-based entrepreneurs make the vital move from initial ideas to business start-up. It provides serviced office space, business mentoring and a network of entrepreneurs and business professionals. The DTI award will fund an expansion of the SETsquared programme: a Centre for Enterprise Development and a student enterprise laboratory will be created.

These new assets, combined with the expertise available at UniS’ School of Management, will enhance the quality and effectiveness of support that entrepreneurs receive. UniS and the other consortium partners will work closely with SEEDA (South East England Development Agency) and SWRDA (South West Regional Development Agency) to ensure that resources are deployed to achieve maximum impact on regional competitiveness. This will involve active participation in the SEEDA Enterprise Hub programme and a particular focus on support for sector-based developments, for example aerospace technology.
Recent additions to SETsquared’s professional support network include Barker Brettell, intellectual property advisers, and Rawlinson & Hunter, an international firm of chartered accountants. Individual business leaders – start-up veterans and seasoned technical experts – are also coming into the fold, acting as mentors to the entrepreneurs.

Successful companies include Polarmetrix, an optical fibre sensing technology business, which is carrying out feasibility work following an award of Government funding and an evaluation contract from a FTSE100 company. Similarly, Izezi, which has created a unique digital power controller for the next generation of microchips, has raised sufficient equity funding for a trip to California to meet potential customers and investors. In the healthcare sector, Optx has moved on from the centre having won contracts totalling more than £500,000 as a result of its work in modernising cancer care through advanced clinical information systems.

Enterprise Hub
The first UK Enterprise Hub for the Aerospace and Defence Industries was successfully launched at this year’s Farnborough Air Show with the aim of making the South East a centre of excellence in the sector. The aerospace and defence industries are vital to the South East’s economy: over 1,000 aerospace and defence-related companies are based in the region. Recent research has revealed that this sector is responsible for an annual turnover in excess of £7 billion and employs over 44,000 people.

However, the industry is under threat from increased globalisation and cheaper competition. In response to these pressures, UniS is a lead partner in creating the Farnborough Enterprise Hub, which will offer a vital support network for start-up and small and medium-sized enterprises. The Hub will provide companies with access to specialist knowledge, flexible workspace and mentoring, as well as advice on investment and funding opportunities.

Key partners in the Hub include SEEDA, Farnborough Aerospace Consortium (FAC),
and major companies in the sector. Based in the Cody Technology Park in Farnborough, the Hub will house a hatchery for new businesses. Surrounded by world-class players in the aerospace and defence industry such as QinetiQ, Sun Microsystems and BAE Systems, all based in Farnborough, Hub companies are ideally situated to receive access to their expertise.

The Farnborough Enterprise Hub is further evidence of UniS' commitment to working with SEEDA to promote entrepreneurship and to increase the survival rates of young companies.

What Do Women in Business Want?
What obstacles do women starting their own business face? What training do they need? Aiming to answer these questions, UniS direct has been awarded a two-year research grant worth £277,000 from the National Higher Education ESF body. This new project builds directly on the success of the European Social Fund’s ‘Women in Business’ training programme.

Encouraging female entrepreneurship remains an economic priority in the UK. The UniS direct team will look at training provision for female entrepreneurs in southern England and pilot recommendations for future initiatives. Consultation with female entrepreneurs and owner/managers of start-ups and micro-sized businesses will be at the heart of the research, as will consultation with key stakeholders from across the business and policy-making communities.

The findings will be disseminated at a number of events across the South East and South West regions and aim to contribute to the development of training programmes for the next generation of businesswomen.

KTP Successes
Farnborough company Process Analysis and Automation (PAA) has completed two successful projects under the KTP scheme which have substantially developed its business.

Since the creation of KTPs, which evolved from the original Teaching Company Scheme in 2003, UniS direct has been highly successful in linking businesses with UniS on strategic projects to boost innovation and increase wealth creation. PAA's project has resulted in the creation of a comprehensive database interface for their main software product, OVERLORD™. Using this interface, a fully-automated tracking system for the laboratory automation environment has been produced. In addition, the company has investigated the potential of integrating new technologies such as Bluetooth and wireless networking with PAA products.

As a direct result of this R&D work, PAA has entered a new business area of factory automation and is now developing new products for use in the pharmaceutical industry and in a production environment.

The success of the project has been enhanced by the personal attributes of the scheme’s two associates. They have been exposed to a wide range of projects in the industry and have gained valuable interpersonal and project management skills. In addition, Associate Chris Taylor has completed an MSc and an NVQ Level 4 in Management. Both associates are now permanent members of staff at PAA.

The success of the programme provides a foundation for future work between PAA and the University of Surrey. This will include opportunities for placements and project work, in particular for students on the Computer-aided Chemistry programme. A new MSc programme at UniS is being developed based on the project’s work.

UniS has also launched new KTP projects this year. Professor Marios Chryssanthopoulos in the School of Engineering has been awarded a KTP grant for a 30-month project with PAFA Consulting Engineers. The KTP grant covers 60 per cent of the £107,500 project, which will develop a computer-based optimisation tool for the design and reassessment of new build and converted offshore floating structures. This will aim to reduce the risk to workers and the environment while enhancing profits by improving the skills base of the company.
The Surrey Research Park: Bright New Businesses Join the Park

Companies that embody University of Surrey’s strong ethos of leading-edge innovation and enterprise joined Surrey Research Park this year.

FirstPartner, a specialist marketing agency for the high-tech sector, was formed in 2001 by two University of Surrey Civil Engineering graduates, Kurt Lyall and Justin Coelho. The professional working environment at Surrey Research Park, together with its business networking support, were major attractions for the pair. A further advantage was the Park’s high quality image, which supported FirstPartner’s reputation in the technology market place.

“The Surrey Research Park’s enterprise agenda provides an ideal environment for nurturing new businesses and transferring technology between the University and industry,” said Kurt Lyall.

Since its formation, FirstPartner has focused on helping technology companies to develop new products. Its origins are in IT and telecommunications, but today it serves an increasingly broad client base including Vodafone, BT, Sybase, LogicaCMG and NTL. Although FirstPartner is headquartered in the UK, it operates with an international team, and has worked on projects spanning North America, Asia and Europe.

High-tech companies Siptel and Endeleo Limited have also created new bases for their businesses at the Surrey Research Park this year.

Siptel provides a comprehensive portfolio of leading-edge voice and data technologies for the UK enterprise marketplace. As a new generation, independent voice and data solutions company, Siptel helps companies to manage a combination of increasingly varied channels of business and achieve the maximum value in all of their customer contacts.

Endeleo specialises in video switching and transmission technology for the digital signage, network operations and information display market. The technology delivers real-time, multi-format video to PCs, TVs and flat panel displays for the retail, public information, financial and media sectors. The company boasts a wide range of international customers from some of the world’s leading names in investment finance, insurance, entertainment, media and telecommunications.

In recognition of the company’s advances in the delivery of multi-channel TV, Endeleo won the ‘Pick Hit’ award at the industry’s prestigious Infocomm show in Atlanta, USA this year. The Endeleo Managed TV System delivers 192 channels of television. The system uses an IT platform that can schedule events or broadcasts and control TVs, LCD or plasma displays from any location in the world, and has already had significant success in the financial, public safety, security and media markets.

With the arrival of three new businesses, all emerging as market leaders in their sectors, University of Surrey will enjoy even greater financial and commercial benefits from the culture of work, research and discovery at the Research Park.

“Surrey Research Park and the University enjoy a mutually beneficial relationship,” commented Dr Malcolm Parry, Director of the Research Park. “It is a unique situation here, and a vibrant environment in which young and start-up technology and science businesses can develop. The Surrey Research Park presents a fantastic opportunity and the best possible start in life for any businesses choosing to locate here.”

Major Growth for Park Resident

Established Research Park resident, Thomson Ecology, announced plans to increase its office space. The independent ecology consultancy specialising in a broad range of habitats and species found in terrestrial, fresh water and marine environments, will more than double its office space to accommodate its rapidly growing staff team.

Thomson Ecology has experience of major road and rail schemes, mineral extraction sites, waste facilities, housing and industrial developments, wind farms and flood defence projects. The firm regularly draws up ecological surveys and impact assessments for engineering companies and developers who require planning permission for large developments.

The Thomson Ecology team

“Surrey Research Park and the University enjoy a mutually beneficial relationship.”
Knowledge Transfer Across the Globe

In its quest to broaden its industrial base, the Kazakhstan Government turned to Surrey Research Park for advice on how to move forward into a high-tech environment.

The University of Surrey’s Deputy Vice-Chancellor, Professor John Turner, and the Director of the Surrey Research Park, Dr Malcolm Parry, welcomed the high level delegation to the Research Park. The visiting team was led by Sauat Mynbayev, Deputy Prime Minister of Kazakhstan and Co-Chair of the Kazakh-British Trade and Investment Council, and Erlan Idrissov, Ambassador of Kazakhstan to the UK.

The purpose of the visit by over 20 senior members of the Kazakhstan Government and business community was to gain an insight into how the Surrey Research Park and the University are working together to advance the economic development of the regional and national economy.

With its international reputation for success in technology transfer and economic development, the Surrey Research Park was identified by the Kazakhstan Government as a leading research park. The visit is part of Kazakhstan’s strategy to diversify its economy, which currently relies heavily on its extractive industries, towards a more high-tech industrial base.

Joining the discussions, Angle Technology, a Research Park resident, contributed its expertise in the commercialisation of technology. The company offers consultancy services in the field of technology and innovation, aiming to fill the vacuum between research and technology and business and finance.

Vital Support for Cancer Charity

Following last year’s Queen’s Award for Enterprise, ID Business Solutions (IDBS) has enjoyed further success with its flagship ActivityBase software package.

Cancer Research Technology Limited (CRT), a technology transfer and development company owned by the charity Cancer Research UK, has signed up to use the market leading database solution to manage its chemical and biological drug discovery data.

“We needed a robust informatics platform to integrate both our chemical inventory and all our biological data easily since we have limited IT backup,” said Dr Tony Raynham, Head of Medicinal Chemistry at CRT. “We know that ActivityBase is the industry standard for biology and we chose it because it is a mature product that gave us the best all-round solution.”

Founded in 1989, IDBS employs over 150 people worldwide. It provides advanced software solutions for the pharmaceutical, biotechnology, agrochemical and animal health industries. Robust, rapidly deployable applications, such as ActivityBase, accelerate the discovery process by enabling scientists to share knowledge and process information faster and more accurately.

Cancer Research Technology Limited (CRT) is a specialist technology transfer company which aims to develop new discoveries in cancer research. CRT is wholly owned by Cancer Research UK, the largest independent funder of cancer research in the world. It works closely with leading international cancer scientists to protect intellectual property arising from their research and establish links with commercial partners. The company also facilitates the discovery, development and marketing of new cancer therapies.
Surrey Satellite Technology Limited: Rewards for Commercial Success

SSTL is emerging as the world leader in advanced small satellites. The company garnered several major accolades during the year in recognition of its progress as a fast-growing, highly successful business.

Competing against prestigious US space companies including the NASA International Space Station and Mars Rover Teams, SSTL won the 2004 World Technology Network Award for Space. At the awards ceremony in San Francisco, SSTL’s Phil Davies said: “Space does not have to be expensive. SSTL is building affordable yet highly capable small satellites that have created a new era in space missions for a larger user group.”

The World Technology Network Award for Space recognises work that advances the long-term possibilities of space as a place of industry and non-governmental human enterprise. The awards encompass activities that range from the emerging private space launch industry to actual industrial applications and business services which can be profitably pursued in space.

In 2003, SSTL was ranked 27 in Deloitte’s Technology Fast 50 awards for London and the South East. Deloitte’s programme rewards companies in the telecommunications, hardware, software and biotechnology markets that have shown impressive growth rates over the last three financial years.

This award followed acknowledgement of SSTL’s standing in the technology sector when the company achieved a placing in the Sunday Times Tech Track 100, which recognises Britain’s fastest growing technology companies.

Commercial success in any company is always dependent on its staff, their achievements and their personal commitment to the business. In May 2004 SSTL’s Marketing & Business Development Director, Dr Wei Sun, won the BEXA-Women in Business Achievement Award in recognition of her outstanding contribution to UK exports. Sir Stephen Brown, Chief Executive of UK Trade and Investment, presented the award to Dr Sun at a ceremony in the Foreign and Commonwealth Office in London.

Wei Sun has driven the company’s sales over the last three years from £5.4 million to £15 million, winning contracts from every continent. Two thirds of sales last year were attributed to export trade.

Commenting on the year’s successes Dr Jeffrey Ward, SSTL’s Managing Director, said: “All these awards reflect growing international demand for affordable access to space. This is significant for SSTL at a time when the international space industry is downsizing and emphasises the capability and expertise of our dedicated small satellite team.”

SSTL employs 175 staff at the Surrey Space Centre based at the UniS Stag Hill campus. Sales have grown over 20 per cent each year to £19.4m in 2004. Through the pioneering use of consumer and industrial ‘commercial-off-the-shelf’ (COTS) technologies and devices, SSTL are able to produce highly advanced small satellites which compete with ‘large’ satellites but at a fraction of the cost.

Major New Contract to Build Earth Observation Constellation

Ensuring its continued financial success, SSTL has won a £19.2m contract from MacDonald, Dettwiler & Associates of Canada for the world’s first-ever commercial Earth observation constellation. SSTL will supply the spacecraft platforms, integration and launch arrangements of a five-microsatellite constellation for high resolution Earth observation.

The five satellites will provide agricultural and cartographic images primarily for insurance companies, who will exploit the data for risk modelling and claim assessments. RapidEye is the world’s first commercial Earth observation constellation. Conceived by the German company, RapidEye AG, the project has been made possible through the application of SSTL’s low cost small satellites and opens a new and significant business sector for the space industry. The five satellites will be launched into a 620 km sun synchronous orbit, becoming operational in 2007.

Wei Sun has driven the company’s sales over the last three years from £5.4 million to £15 million.
Monitoring Disasters

The company’s profile as an international innovator in space has been firmly established over the last two years by SSTL’s high profile Disaster Monitoring Constellation (DMC). The DMC comprises four satellites, launched in 2002 and 2003 for the project consortium’s member states – Algeria, Nigeria, Turkey and the UK.

Demonstrating its invaluable potential to the international disaster monitoring community, the DMC captured a large area image of the Californian fires in October 2003. Taken by the UK-DMC satellite, orbiting 686km above the Earth, the image of a 240-square km area showed the vast scale of the disaster, and in particular the pollution caused by the huge smoke plumes reaching some four kilometres into the skies across the Californian coast.

In March 2004 all four satellites reached their designated orbit stations in preparation for full operation. The satellites needed to be moved into precisely the same 686km orbit and then phased (spread out) around the orbit plane in order to provide adjacent imaging passes over the surface of the Earth. They are now able to image anywhere on the surface of the Earth with a 24-hour revisit. Once the co-ordinated constellation systems are commissioned and tested, the consortium will be ready to begin supplying daily images for support of disaster response, initially in partnership with Reuters AlertNet.

Celebrating the Past

In a year characterised by major advances, SSTL had the chance to go back to its roots and celebrate past achievements. The second-ever satellite built at Surrey, UoSAT-2, has now been in operation for 20 years. Launched on 1 March 1984, the satellite is still used today by amateur radio operators around the world.

The mission was designed to complement UoSAT-1, Surrey’s first microsatellite launched in 1984. UoSAT-2 involved many thousands of radio amateurs, schools, college and university groups around the world who have participated in the technical challenge of receiving, decoding and analysing the data transmitted by the satellite.

As well as the data collected from the spacecraft, plain text news bulletins were uploaded to the satellite each week and broadcast around the world, keeping radio amateurs informed in an era before the Internet. In 2004 signals from UoSAT-2 are still clearly audible on the 2-metre amateur radio band. And schools and colleges continue to use its data as part of the science curriculum and for Physics A and AS level courses.

Current Projects

Since its inception in 1981, SSTL has designed, built and launched 23 satellites ranging from 6kg to 315kg. Over the last few years the growth in the whole SSTL enterprise has been staggering and the team currently has nine new spacecraft under construction. These include a 400kg minisatellite for the European Space Agency’s Galileo mission; a 120kg enhanced microsatellite for Earth observation for the UK Government, and a DMC microsatellite for China. The world’s first low cost small geostationary platform, GEMINI, is also under development to provide affordable broadcast communications to West Africa.
The University’s Centre for Communication Systems Research (CCSR) is the UK’s largest and best-known academic research centre in the fields of mobile and satellite communications systems. The Centre has the maximum RAE 5*A rating.

Formed in 1996, CCSR is currently home to some 170 researchers – a significant increase from the 120 active in 2002. The team comprises 12 full-time academic researchers, 45 research assistants, 90 PhD students and 12 support staff. CCSR shares a building with the Surrey Space Centre and the I-Lab, a new facility founded within CCSR.

CCSR’s project portfolio grew to more than 30 this year, attracting a total of £6.8m in funding. The Centre’s funding sources include significant streams from the European Commission’s Framework Programme 6 (some of these projects are described below). It also receives funding from the Engineering and Physical Sciences Research Council (EPSRC) and from commercial partners including Nokia, Ericsson, Vodafone, ESA (European Space Agency) and Inmarsat.

Collaboration with industry is a strong theme running through the Centre, which now has more than 40 partners in Europe. Further industrial links have been established with NICT (National Institute of Information and Communications) in Japan, ETRI (Electronics and Telecommunications Research Institute) in Korea, Winlab and Berkeley in the United States, BUPT (Beijing University of Posts and Telecommunications) in China as well as numerous smaller research collaborations.

The array of European Union-supported research projects now makes CCSR the largest university recipient of funds from the EU IST Framework Programmes, as well as having a share of the largest ever EPSRC Portfolio Grant, which totals some £6.2m.

**Building the Fourth Generation Mobile Network**

As consumers begin using the long-heralded Third Generation (or ‘3G’) mobile phone services to make video calls, download music and find directions, the CCSR’s mobile group is researching to create the Fourth Generation.

4G is due to debut as soon as 2010, so the challenging timescale demands a multidisciplinary, cross-border collaborative effort. The Mobile Communications Research group is playing a key role in five strategically vital projects funded under EU Framework Programme 6, in collaboration with the major European mobile industry players. The projects are running concurrently, with each organised into two-year...
phases. The first phases of the projects began in January 2004.

The WINNER project, led by Siemens, is performing fundamental research into novel radio architectures that will deliver wireless bandwidth up to 100Mbits per second. To put that in perspective, today’s commercial 3G systems offer rates in the hundreds of kilobits per second. Part of the team’s challenge is to enable this high bandwidth without consuming large amounts of power.

The Ambient Network project, led by Ericsson, is researching methods for making mobile and fixed networks work together seamlessly. Users will be able to access services regardless of the underlying technology, and switch from one to another without noticing. This would allow people to work on a company system on the train and continue using it while they walk to their office or home. Achieving the simple-sounding aim of ABC (Always Best Connected) demands that the team find ways of managing and hiding the sheer complexity needed to deliver an ‘always-on’ experience.

Being able to use such powerful services in any imaginable context has knock-on implications for usability. The Mobilife project, led by Nokia, is rethinking the way people use devices to access information and communicate with each other – and with systems. Intuitive, personal and secure methods for using handsets are the project’s guidelines for developing new interfaces, controls and metaphors.

Maestro is a satellite mobile-based project led by Alcatel. The Maestro consortium of 20 partners is developing a Satellite Digital Multimedia Broadcast (SDMB) system, based on an original idea proposed by CCSR’s Professor Barry Evans. SDMB is intended to complement terrestrial 3G services by providing multicast and broadcast services in an integrated fashion. The Maestro project is also being developed for use over satellite, to a common user terminal.

Finally the E2R project, led by Motorola, is developing new techniques for reconfiguring wireless networks and the devices that use them. Making the most efficient use of both the radio spectrum and the network’s resources as traffic rises and falls unpredictably is a major technical challenge and an important key to delivering a reliable, quality service to customers.

UniS is the only university involved in all of the wireless projects in Framework Programme 6, and the group’s central role in developing the next generation of wireless technology has been recognised in the appointment of Professor Rahim Tafazolli, Head of Mobile Communications, as Chairman of the EU-Mobile Expert Group. This group brings together the leading European research directors to define the research goals and plans for Framework Programme 7.
The I-Lab
Reflecting the widespread interest in new communications services and applications, CCSR has built and equipped a new mobile media laboratory dedicated to multidisciplinary research into how media and communications technologies can impact our lives. The 900-square metre I-Lab facility was created with the aid of a £3m injection from the Science Research Investment Fund (SRIF).

Researchers from social sciences in the fields of psychology and economics and computer sciences in human computer interaction, will work together with engineers to model and pilot new uses of technology and evaluate their benefits. The mixed, collaborative research groups have access to a range of high-performance processing, display and prototyping facilities, as well as physical space for conducting usability studies. The ability to make extensive, holistic trials of techniques, services and devices provides unique insights into how we interact with information, and puts users at the centre of concerns.

The I-Lab’s most distinctive feature is the huge, semi-cylindrical rear-projected display in the visualisation section of the facility. Together with an advanced 352-speaker WFS (Wave Field Synthesis) audio system, this unique audio-visualisation system is used to study immersive media techniques, where users are surrounded by a complete audio-visual experience. It will be employed to understand how people react to and control such environments – and how useful services might be designed for them.

The I-Lab’s Director, Professor Ahmet Kondoz, explains that collaborative working environments have obvious benefits in reduced travelling costs for those involved, but also more compelling productivity benefits.

Imagine, for example, there’s been a major fire in a city. Using immersive collaborative media technologies and communication systems we can bring together all the emergency services and other specialists in a virtual space. They can all see and work on the same information. It gives them a natural and efficient way of co-ordinating everyone involved as events unfold.

The I-Lab’s research practice makes extensive use of prototyping. Users essentially lead the research effort by providing feedback that drives changes to the prototypes they are trialling. New products and services developed in this way will find faster and more enthusiastic acceptance with consumers, since they have been designed with user needs and preferences in mind right from the start.

“We usually think of communications systems as being about separation,” said Professor Kondoz. “But actually they minimise the distance between individuals. If you can include more human senses in the communication, you reduce the effective distance further. The I-Lab’s goal is to bring communications and media technologies together in order to improve the way people live, work and play.”

Industry colleagues from Thales were welcomed to the I-Lab with a team of secondees moving permanently on site to form the University’s first embedded industrial laboratory. This arrangement is bringing researchers much closer to their industry colleagues, and helping to ensure that results transfer rapidly from the lab to the real-world environment.

The Internet: Towards End-to-End Quality of Service
While the Internet started its life as a research network, in the last decade it has become the fabric of the ‘information society’. The emergence of wired broadband access and wireless local area network technologies enable high-speed information access from fixed or mobile terminals. On the other hand, despite high access speeds, end-to-end information transfer can be limited in busy times because of congestion in the network core and in inter-network links. This is a problem for interactive information and real-time streaming services that need constant and reliable connections, such as web browsing, voice-over-IP and video conferencing.

CCSR’s Networks Group is a leading player in research initiatives to introduce service capabilities for guaranteed Quality of Service (QoS). The group is also researching management and control methods and techniques for delivering service quality while making the best use of available network resources. The group masterminded two key European projects that contributed significantly to this area and produced the relevant internet standards.

The TEQUILA project (Traffic Engineering for Quality of Service in the Internet at Large) brought together key Internet industrial players such as France Telecom, Alcatel, Global Crossing and Cisco. It has produced standards for quality of service agreements between customers and providers as well as the techniques for network provisioning and dynamic resource management required to make those agreements work. The proposed Service Level Specifications (SLSs) have been widely adopted throughout the industry.
The main focus of Visnet is the advanced processing, compression and transmission of moving 2D and 3D visual content.
as well as being used by other researchers and practitioners.

The MESCAL project (Management of End-to-end Quality of Service Across the Internet at Large) is effectively the continuation of TEQUILA, investigating a framework for end-to-end QoS delivery across different provider domains. Cross-domain delivery is a complex problem to tackle because the Internet is a loose collection of networks with no central authority. The group’s “cascaded” approach was invented to circumvent this problem. MESCAL has updated the customer-to-provider SLSs and introduced provider-to-provider peering SLSs. With inter-domain agreements becoming a key issue for network and service providers, we expect MESCAL solutions to have the same high impact as TEQUILA on the development of the industry.

The group’s key role in network and service management approaches for emerging network technologies has been acknowledged by the appointment of Professor George Pavlou, Head of the Networks Group, as editor of the IEEE Communications network management series and as a board member of the newly established IEE journal ‘Transactions on Network and Service Management’.

The Internet: In the Future, and in Space

CCSR’s Networks Group is a prominent player in Euro-NGI – the Next Generation Internet project. This is the largest Network of Excellence project within Framework Programme 6. Fifty-seven institutions, 173 researchers and more than 300 PhD students from 18 countries are involved. Dr Zhili Sun is the leader of the UniS team and a member of the project’s Joint Research Activity Management Committee.

The Euro-NGI network’s role is to function as Europe’s centre of excellence in the design and engineering of the technologies that will take over from the current Internet. The Next Generation Internet will offer a range of new services as standard, including full multimedia capabilities, mobile connectivity and defined Quality of Service standards.

While the benefits of the NGI for users are enormous, the technical challenges are acute. For example, the instant availability of very high bandwidth connections across both fixed and wireless networks will pose particular problems for traffic forecasters. A major issue will be how they plan and configure networks to meet unpredictable patterns of usage whilst guaranteeing Quality of Service. At the same time the NGI requires a diverse range of collaborating technologies, as opposed to the relatively simple devices and protocols that have enabled the present Internet to grow so impressively. Managing this diverse environment, and allowing for its evolution, presents new challenges to network designers and architects. Euro-NGI is generating the design, planning, dimensioning and management principles needed to create a reliable and sustainable NGI.

Network experts from the contributing organisations bring complementary skills to the tasks of defining and integrating the various technologies required by the NGI. They also bring expertise in traffic engineering and quantitative methods, helping to make Euro-NGI a knowledge centre that is leading the world in the recreation of the world’s network.

The Networks Group at CCSR is also playing a key role in the delivery of Internet services from space via the Framework Programme 6 project SATLIFE, which is in turn related to the AmerHis satellite system. AmerHis is a ‘switch in the sky’, an intelligent broadband network node aboard the AMAZONAS satellite launched in 2004. The satellite serves North America, South America, Brazil and Europe. AmerHis connects users wherever they are in the satellite’s service area, without requiring any processing to be done at ground stations. This means that the network’s resources can be used optimally while user devices can become smaller and simpler.

The SATLIFE project (Satellite Access Technologies: Leading Improvements For Europe) has been set up to develop ways of integrating with AmerHis’ onboard multimedia processor. This processor, which derives from the earlier IBIS (Integrated Broadcast Interaction System) research programme, is a core component in the satellite system’s broadband network. The functionality of users’ handsets can be improved by exploiting the multimedia processor’s capabilities. Integrating AmerHis’ services with terrestrial systems is also a focus of the project.

SATLIFE brings together partners from a range of international organisations including Alcatel, Telefonica, Telemar and Thales. All SATLIFE’s deliverables are intended for use as open standards governed by the relevant industry bodies, so that the entire communications community will benefit from the research. SATLIFE is built on the success of the Framework Programme 5 GEOCAST project, and is also led by Dr Zhili Sun.
Creating and Running a Network of Excellence

Visnet is a Network of Excellence (NoE) project launched and led by CCSR. Funded under the European Commission's Framework Programme 6, the project is described by Project Co-Ordinator and Executive Board Chair Dr Abdul Sadka as forming “a critical mass” in networked audio-visual media technologies. The network has a clear vision for research, integration and dissemination for the next five years and beyond, and aims to be the world leader in this field of research. Visnet’s rapid birth and early progress show how effective pan-European research collaboration can be, given the right kind of leadership.

The main focus of Visnet is the advanced processing, compression and transmission of moving 2D and 3D visual content. Finding new, ever more efficient and secure methods for representing visual information is an important part of improving multimedia systems. While the bandwidth of networks is improving, the volume of data that users wish to send across those networks continues to grow apace. Compressing video data into ever smaller packages allows service designers to squeeze more content across network connections, creating rich, fast and cost-effective applications for users.

The earliest applications for Visnet’s work are in ‘conversational video’, such as the video calling services now available on 3G mobile phones. Visnet has so far filed two patents in this area.

As Visnet prepared for its first review in Brussels at the end of 2004, Dr Abdul Sadka recalled how quickly the consortium had been assembled and the project won. “I wrote a four-page proposal in response to the European Commission’s June 2003 call for expressions of interest,” he said. “The key step was persuading eight initial partners across Europe to input to the document. The Commission then asked us for a more detailed proposal, by which time we had enlarged the consortium to the current 15 members. After evaluation, Visnet ranked top of all the proposals submitted to the strategic objective on Networked Audiovisual Systems and Home Platforms, and was one of only two Network of Excellence (NoE) submissions retained for funding. We were also the first project from the first call to commence, getting started while other projects were still in their negotiations with the Commission.”

Visnet represents a large and diverse community of nine universities, three major telecom companies and three research institutes from nine European states. A Supervisory Committee made up of representatives from each of the 15 partners forms the project’s leadership, while a five-member Executive Board manages the day-to-day activities of the network. Work Package teams manage and publish the work of the various task groups.

Visnet’s record as a Network of Excellence after one year is impressive. Several meetings have been held with more than 100 attendees at each. More than 150 papers were published in the first eleven months. All the project’s deliverables have been completed and submitted on time, and Visnet has made time to contribute to international standardisation activities, making more than 25 submissions to MPEG standards meetings in the period to October 2004.

While Visnet is due to continue following its plan until the end of 2005, the consortium is already preparing its submission for Visnet II.
Managing Excellence in Research

The UniS Materials Institute

The UniS Materials Institute (UMI), led by its inaugural director, Professor Peter McDonald, seeks to be a world-class interdisciplinary centre for research on interface science and engineering, surface phenomena and materials functionality.

The challenges of the twenty-first century demand dramatic advances in our understanding and use of materials in areas identified by recent Foresight activities to include cognitive systems, manufacturing, healthcare, crime, security and smart materials.

Vertically- and horizontally-integrated programmes of research address pure and applied aspects of polymers, metals, ceramics, particles, coatings and dispersions. Researchers are brought together at the forefront of their disciplines in a vertically (nano-micro-macro-mega or synthesis-processing-characterisation-application) and horizontally (interdisciplinary) integrated whole.

Activities to have witnessed major advances in recent years, and actively addressed at UniS, include those of adhesion of polymers to metals in a controlled and engineered fashion; film formation processes in emulsions and latexes; and the development of chemical, biochemical and electro-active sensors.

The UMI includes the work of around 20 full-time academic staff and their associated research groups. It is formed by the coming together of the Centre for Advanced Surface, Particle & Interface Engineering in the School of Engineering, the Materials Chemistry Group in the School of Biomedical and Molecular Sciences and the Soft Condensed Matter Physics Group in the School of Electronics and Physical Sciences.

UniS has externally acknowledged breadth and depth in the relevant science and engineering disciplines that make it a natural home for the UniS Materials Institute.

“The UMI houses one of the best selections of materials characterisation facilities to be found anywhere and is one of the largest recipients of support from the UK Engineering and Physical Sciences Research Council (EPSRC) Materials Programme,” said Professor Barry Evans, Pro-Vice-Chancellor for Research and Enterprise.

A recent SRIF-2 award of £3.6m will provide UniS Materials with newly-refurbished laboratories opening in 2005, equipped with yet further new experimental facilities.

**Power to the People**

UniS chemists are leading the way in the search for new materials for use in fuel cells for ‘clean’ power generation with the help of a total of some £600,000 in research grant funding received over the past four years from the Engineering and Physical Sciences Research Council (EPSRC) and the Leverhulme Trust. Dr Saiful Islam and Dr Peter Slater of the Materials Chemistry Group are investigating novel conducting oxides, using a combined synthetic, structural and computer modelling approach.

Fuel cells have huge potential to reduce the environmental problems and geopolitical consequences of the use of fossil fuels. Like a combustion engine, a fuel cell uses some sort of chemical fuel, but like a battery, the chemical energy is converted directly to electrical energy, without the polluting and inefficient combustion step.

“The types of novel compounds we are studying provide good alternatives to materials currently in use,” Saiful Islam explained, “because they show improved properties and are more environmentally friendly.”

Solid oxide fuel cells are particularly suited to local combined heat and power generation for households, hospitals and industry. For instance, fuel cells to provide emergency back-up generation could fit into the space of two or three fridges. In fact, during the recent blackout in New York the lights stayed on in the very few buildings powered by fuel cells.

Non-polluting, quiet cars powered by hydrogen fuel cells are currently being considered by almost every car manufacturer as a technology to help combat pollution and fossil fuel dependency.

Experimental work conducted by Peter Slater is complemented by Saiful Islam’s studies of state-of-the-art computer
Inside living cells, such as the *E. coli* cell illustrated above, lie the most complex functional materials we know of. Researchers at UniS are trying to understand how this complex set of molecular machines functions. This will create a better understanding of diseases such as Alzheimer’s that occur when this machinery malfunctions.
modelling tools to probe novel complex materials on the atomic- and nano-scale which act like “computational microscopes”.

“We believe that the unique synergy of simulation and experiment will throw new light on the fundamental science of these exciting materials which underpins their applications,” said Peter Slater. “We hope our work will lead to the design of new and better solid oxide fuel cells in the future.”

**Taking an In-Depth Look at Materials**

Magnetic resonance imaging, MRI, has found widespread application in medicine where it is often the imaging modality of choice for a wide range of clinical disorders. Less well known is the fact that MRI is also widely applicable to problems in materials science.

The facts that the technique is non-invasive and non-destructive and allows a distinct image contrast to be derived are of a particular benefit to materials scientists. Unis has a history of expertise in this field, pioneering initial experiments in the 1980s and progressing to stray field imaging (STRAFI) techniques in the 1990s, to measure water mobility and content, and pore structure in porous materials. Almost uniquely, STRAFI succeeds in preserving the dynamic contrast which makes magnetic resonance so powerful, while at the same time offering the very highest spatial resolution. Professor McDonald and colleagues at Unis, together with collaborators from both industry and academia, have been instrumental in pioneering the understanding, methodology, instrumentation and applications of STRAFI from its earliest days.

In recent years, Professor McDonald’s interests have tended towards applications including solvent ingress into polymers for engineering and biomedical applications and coatings systems. He co-ordinates the stray field imaging facility at Unis used in collaboration with a large group of academic and industrial researchers. Peter’s active industrial collaborators include researchers from Unilever, ICI Paints, Disperse Technologies, Napp Pharmaceuticals and, in Sweden, Traetek.

In 2003, Professor McDonald and Dr Mike Mulheron (Civil Engineering) received the Royal Society’s Brian Mercer Senior Award for Innovation to conduct research on portable magnetic resonance sensors for the assessment of moisture movement in built concrete structures.

“The basic question of how water moves through different media is age old,” commented Peter McDonald, “but new and emerging solutions from our work here at Unis are pointing to more flexible approaches. The integrity of buildings, bridges, roads and other structures can all be compromised by the movement or build-up of moisture in crucial locations. The cost of just bridge repair in the UK alone is £550m annually.”

The challenges presented by degradation of twentieth-century concrete infrastructure have been drivers for the development of improved means of in-situ measurement. Unis has risen to this challenge, using the results of laboratory-based work to show that spatially localised magnetic resonance relaxation analysis can provide the required information – the techniques are now being moved out of the laboratory and into the field.

The 2003 Brian Mercer Award addresses the urgent need of the engineering community in this regard. The award will be used to exploit the technology of modern magnetic brain scanners to develop a proof-of-concept portable magnetic resonance sensor with the ability to monitor moisture in the surface layers of concrete construction, up to 55mm from the surface. “We hope that our techniques will provide a reliable profile of the underlying pore structure and pore water content which will be of practical value to the engineering community,” said Mike Mulheron. “The success of this project will open a direct route to commercial exploitation.”

**The Science of Watching Paint Dry**

Materials scientists at Unis have found a way of getting paid to watch paint dry! There is a serious side to the project, since guaranteeing the quality and reliability of the surface coverings we all take for granted is a high priority for manufacturers. This is testified by the large and important list of collaborators sponsoring work being carried out at Unis.

Science has shown that organic as well as chemical solvents can bring about harm to living creatures through inhalation as well as causing ozone damage. In response to such environmental concerns, recent legislation in the EU and the USA has restricted the release of solvents into the atmosphere, which has meant that paint manufacturers have had to review the whole development process of their product.

An increasing amount of paint production is water-based and in the case of gloss paint, this makes it much more difficult to manufacture. Dr Joe Keddie and his colleagues from the Unis Materials Institute have been working with ICI Paints, and other companies, to evaluate the properties of water-based products, which can be poor when compared with their solvent-based counterparts. The paints take longer to dry
and do not have as robust a texture once hardened off, so research to refine and improve the process of manufacturing new products is a crucial commercial concern.

The research team uses a range of techniques including atomic force microscopy, spectroscopic ellipsometry, and MRI scanning, to study film formation processes and to map the movement of particles as the paints dry. Water-based varnishes tend to ‘cloud up’ and another consideration is that surplus water may be absorbed into the product, in this way compromising its integrity. “It is a complex process,” said Joe Keddie, who leads the work, “and the technique has applications everywhere there is a need for reliable water and scratch-resistant paint; the automotive industry, household and industrial appliance manufacture, architecture and aerospace.”

In addition to paint, the team is studying adhesives, since solvents have been traditionally used in the manufacture of many of them. Household adhesives such as sticky tape must also comply with new environmental regulations and the UniS Materials Institute team have been working with a Belgian manufacturer, amongst others, to refine the production processes. Safety is a key concern when evaluating the reliability of an adhesive being used to hold together aircraft or automotive parts under high pressure and the stress of high speed movement.

So although watching paint, or adhesive, dry may sound a far cry from cutting-edge research, this is far from the case and the processes used by UniS researchers are much in demand by many sectors of industry.

**Studying our Material World**

As well as paints, there is expertise in the characterisation of a whole range of other coatings and surfaces within the UMI.

For example, the development of a coating which is resistant to barnacles on the hull of a ship can help maintain its robustness, improve its efficiency through the water and save money and time on cleaning costs. Since recent scientific evidence advises the limitation of the use of solvents and other chemicals, this could provide an additional environmental benefit.

Professor John Watts, Director Designate of the UniS Materials Institute, is enthusiastic about the interdisciplinary links being established.

“Researchers in this field are now linking with biologist colleagues in the School of Biomedical and Molecular Sciences here at UniS to explore whether biocompatible coatings can be developed for implants, stents and catheters for use in medical applications. As medical technology moves forward and our understanding increases of how such devices can correct disorders and assist recovery from operations, appliances that can prevent protein adhesion or are bacteria-resistant could open new avenues in efficient healthcare. It is an exciting prospect.”

As well as paints, there is expertise in the characterisation of a whole range of other coatings and surfaces within the UMI.
Managing Excellence through New Initiatives

Launch of New Department of Political, International & Policy Studies

Voter apathy, Iraq and same-sex marriages were just some of the issues tackled in UniS’s version of ‘Question Time’ held on 2 July to launch the new Department of Political, International & Policy Studies (PIPS).

Sixth formers from around Surrey were invited to put questions to a guest panel made up of high profile activists, politicians and policy makers, including Baroness Sharp, Claire Fox (Director of the Institute of Ideas), Peter Tatchell, Jon Benjamin (Head of Human Rights Policy Department, Foreign and Commonwealth Office), Shami Chakrabati (Director of Liberty), Virginia Bottomley MP and Ewan Panter (Vice-President of the Student’s Union). Chairing the session was head of the new department, Professor John Holford.

“As our name suggests, we work in the field of international politics and policy. But the focus is less on institutions and more on people and power,” said Professor Holford.

“Our students are encouraged to study the ways in which policy is shaped for the real world, and how people can make a difference by being active and engaged citizens within society. It was fascinating at the launch to have the insight of people like Peter Tatchell and Shami Chakrabati, who in many ways personify this idea of active engagement on issues.”

The new department was formed from elements of the Department of Educational Studies and the Department of Linguistic, Cultural and International Studies. It offers a range of programmes at undergraduate and postgraduate level and current research areas include political theory, European politics, citizenship and policy studies, and combating social exclusion.

Winning the Race?

Leading political philosopher, Lord Bhikhu Parekh, officially launched CRONEM (The Centre for Research on Nationalism, Ethnicity and Multiculturalism) at UniS on 9 June 2004.

For the past two decades, the idea of ‘multiculturalism’ has dominated race relations in Britain. Instead of trying to assimilate new migrants into the mainstream, it argues, cultural differences should be celebrated. Ethnic communities should preserve what makes them different, and by interacting with other communities around them, help to enrich the wider society.

Recently, however, cracks have started to show in this approach. Critics argue that it has led to isolated and withdrawn ‘ghetto’ communities emerging across Britain. And instead of mutual respect, encouraged by interaction between different ethnic groups, suspicion and resentment have been allowed to grow, flaring up occasionally as they did in the Bradford riots of July 2001.

In April 2004, Trevor Phillips, chairman of the Commission for Racial Equality, sparked a passionate debate when he stated that in his view multiculturalism has had its day in Britain. Others however, including Lord Bhikhu Parekh, vigorously disagree.

“Nothing could be further from the truth,” the leading political philosopher said in his lecture to launch CRONEM. He argued that multiculturalism is both a necessary and desirable feature of modern society. Cultural diversity is an inescapable fact of British life, he pointed out, so the question is how should we respond to it?

“We can’t eliminate it, because it is tied up with individual choice, which the liberal society should respect. Nor should we try to eliminate it, because diversity is a great source of new intellectual and moral energy. At the same time, we can’t allow each community to live as it pleases, because that undermines social cohesion and is, in any case, unworkable.”

Steering between the extremes of assimilation, which destroys the rich cultural diversity that immigrants bring, and isolationism, which undermines social cohesion, Lord Bhikhu Parekh argued for a middle path based on intercultural dialogue.

“What we can and should do is find ways of reconciling the demands of social cohesion and cultural identity. This requires a broad agreement on common values which all British people share and within the framework
of which they can express their identities and conduct a dialogue. A successful multicultural Britain requires a common sense of national identity. Britishness is like a language which we all share but speak in different accents.”

Guests at the launch also heard about how the new research centre will work in this highly contentious area. CRONEM brings together experts from Unis and Roehampton University who are working in the areas of ethnicity, multiculturalism, citizenship and migration. It is based in the School of Arts, but also draws on expertise from the School of Human Sciences at Unis and the School of Business, Social Sciences and Computing at Roehampton.

Executive Director, Professor John Eade’s approach will be essential to CRONEM’s future success: “It’s a complex area, involving aspects of language, culture, politics, sociology, psychology and other fields. It’s beyond the perspective of any single academic discipline.”

It is also, as Professor Eade pointed out, highly topical: “It cuts across a lot of different issues about life in modern Britain, such as cultural identity, immigration, attitudes towards asylum seekers, the impact of globalisation and Britain’s role in an expanding Europe.”

Professor Eade also said that concepts of nationhood and ethnicity, while always at the forefront of social and political debate in the past, have assumed particular potency since September 11, with major shifts in geopolitical relationships and a proliferation of ethnic conflicts around the world, most recently in Sudan.

Transforming to Meet New Challenges
There have been growing pressures on leadership at UK universities to meet the challenges of an educational sector that is undergoing phenomenal change. New players in the marketplace, such as corporate, foreign and on-line universities, lifelong learning, ever-shifting needs for skills and diversification of revenue streams are dilemmas that more traditional universities are grappling with. In order to stay competitive in an increasingly global marketplace.

Robin Middlehurst, Professor of Higher Education and Head of the Centre for Policy and Change in Higher Education, has spent much of her career helping universities in the United Kingdom and internationally to stay ahead of these changes.

Academics who once thought their research should take precedence over day-to-day management concerns are now faced with managing staff, finances and collaborative projects, while at the same time they are expected to keep up with the transforming educational sector.

“Academic leadership has been about leading your subject and leading research teams to find new answers to problems,” said Robin. “The leadership of people in the past has not been as highly valued as intellectual leadership.”

Her work with the Higher Education Staff Development Agency (HESDA), the Top Management Programme for Higher Education and Universities UK (UK) has led to the formation of the Leadership Foundation for Higher Education (LFHE). The LFHE, which was launched in early 2004, has a £10m budget earmarked by Government for the next three years and a mission to develop the talent of leaders in higher education to help them deal with these new pressures effectively.

“The Leadership Foundation is the next step in the process,” said Dr Tom Kennie, Director of Ranmore Consulting Group. Tom has collaborated with Robin for ten years in leadership development and works with her on the Top Management Programme for HE.

“It’s a recognition of Robin’s influence on policy. Her research and publications have an impact on policy and influence the direction of policy. I think that her work shows how the academic community can influence society,” said Kennie.

For Robin, a leader in her own right within the leadership and quality assurance fields, this achievement is just one of her latest. Collaborative research contracted from UUK on borderless education, which she led for Unis, contributed to the creation of the Observatory on Borderless Higher Education (OBHE). In addition she worked first as Assistant Director and then Director of the Quality Enhancement Group of the Higher Education Quality Council, now QAA, for five years. She continues her work on borderless and transnational education with UNESCO and on quality assurance with the Council for Higher Education Accreditation (CHEA) in the US, and contributes to the ongoing research and academics’ programmes in her department.

Professor Middlehurst believes that changing the culture of universities starts with its leaders. “As things become more competitive, there’s a move to professionalise and streamline management and business processes,” she said, adding that with changes in patterns of research funding, academics will feel still more pressure to enhance the management of research.
Managing Excellence in the Arts and Sport

At UniS there is a strong tradition of celebrating the arts. Staff and students in the many science, technology and business-oriented fields here are encouraged to enjoy the benefits of a multidisciplinary university that also embraces the performing arts.

Through its lively programme of dance and music performances, the UniS Arts Office aims to ensure that everyone on campus and in the local community can enjoy the talents of UniS' staff and students. And the work of local artists, musicians and dance groups is also nurtured through a range of projects on and off campus.

Filling Buildings with Art
A visually stimulating surrounding enhances the learning experience for students and provides a more pleasant work environment for staff.

The new Management Building has been one of the first campus buildings to benefit from UniS' pioneering ‘Per Cent for Art’ policy, which is administered by the Arts Office. The scheme allows one per cent of the contract price of all new building projects to fund works of art to decorate the new place of work or study.

As many members of the public as well as students and staff will be visiting the Management Building with its 400-seat auditorium and restaurant, it was felt important to enhance the space using exciting pieces of modern art.

Complementing the spacious and light atrium at the heart of the Management Building are three motion pictures by Kathryn Lang hung on three panels near to the Lakeside Restaurant. In the restaurant itself, six images of Koi carp and water droplets by Matthew Andrews highlight its proximity to the lake.

Outside on the Piazza, the ‘Per Cent for Art’ policy has funded two striking pieces of sculpture. Inspired by an African tribal knife, Bridget McCrum’s ‘Knife Birds’ was unveiled by Sir Idris Pearce, Pro-Chancellor Emeritus in March. Later in the year this was joined by an eight and a half-foot high sculpture of World War II code-breaker and Guildford resident Alan Turing (1912-1954). The statue, created by distinguished sculptor John W Mills, is sited on a walkway striding towards the Department of Computing.

New Steinway to Delight All
The addition of a new Steinway concert grand piano will not just benefit UniS’ Music Department. Audiences comprising staff and students from across the campus as well as local people who attend concerts at UniS will be able to enjoy the unequalled sound of the new concert grand.

To select the new piano, a group from the Music Department visited the Steinway showroom in London and brought back two pianos to the University. Staff and students

Matthew Andrews’ ‘Koi Carp and Water Droplets’

A sculpture of Alan Turing was unveiled by the Earl of Wessex

Bridget McCrum with Professor Patrick Dowling and Sir Idris Pearce at the unveiling of her sculpture, ‘Knife Birds’
then played and recorded these pianos in the studio, which is also UniS’ main recital hall, before the final selection was made.

The Steinway will feature in a full programme of over fifty concerts throughout the year. Performances by undergraduate and postgraduate students from the Department of Music and Sound Recording and visiting professional artists are very well attended. Highlights of the year include the University Symphony Orchestra performances in November and February at Guildford Cathedral. Equally popular are the chamber music recitals by the University’s distinguished artists in residence, the Gemini Ensemble and the Medici String Quartet and internationally renowned pianist, Nikolai Demidenko.

Further strengthening UniS’ links with the local community, the Chamber Choir performed a charity concert in aid of a building project at the Parish Church in Godalming in November 2003.

Dancing in the Forest
The local cultural scene is enriched by the wide variety of dance performances open to local people and the University community.

A major dance highlight this year took place in the beautiful North Downs countryside just outside Guildford. Commissioned by UniS’ Department of Dance Studies, Seven Sisters dance group created ‘The Forest’, a magical performance presented in the woodland setting of Newlands Corner.

Drawing an adult audience into the woodland dusk, away from the comfort and familiarity of the theatre, Seven Sisters group offered compelling insights into the untamed and primeval qualities of nature and humanity. Mysterious, sensual and haunting, ‘The Forest’ comprised a seamless blend of dance, sound and visual imagery, taking place when darkness fell.

Guildford Son et Lumière
In June 2004, Guildford’s newly restored Castle Keep was opened by the High Sheriff, Dr Grace Dowling. To celebrate the Keep’s first refurbishment for over 100 years, a Son et Lumière ‘900 years in 90 minutes’ was mounted later in the summer. A star-studded cast headed by Penelope Keith, James Bolam and Edward Hardwicke recorded the script at UniS’ studios.

Other celebrations linked to the Keep’s restoration included the 25th anniversary of the twinning of Guildford and Freiburg and the unveiling of the statue of Alan Turing. This huge project, supported by UniS working together with the Guildford Institute, the Borough Council, Surrey County Council and local businesses, has made a major contribution towards putting the Keep on the tourist map and renewing the sense of pride in town and gown events.

Sport
During the year, UniS’ top student athletes proved that the determination to succeed, backed up with support from family, friends and the University, can lead to major successes both in and outside of the sporting arena.

UniS’ Olympians
Graduating from UniS with an Upper Second Class degree in Psychology this year, Kirsten Lawton was the only female British representative in trampolining to compete in the Athens Olympics. Kirsten was a UniS Elite Squad member undertaking rigorous training and competition in her sport. She has won numerous World Cups in synchro trampolining and is the current World Cup final champion in the event. Rated sixth in the world, she also coaches and competes for the University of Surrey.

Just after her graduation Kirsten was presented with the trophy for the British Universities Sports Association (BUSA) Sportswoman of the Year by HRH the Princess Royal at an anniversary dinner in London. Kirsten has been awarded the prestigious title, triumphing over stiff competition from other sportswomen, by BUSA who this year celebrate ten years as the national governing body of university sport.

Guildford-based Ian Wynne also won a place at the Olympics. Following his success at the European Championships in May, when he gained both a silver and bronze medal, the canoeist was selected to compete in the individual K1 500m canoeing event as well as the double K2 1000m with his partner Paul Darby-Dowman.
During the year, UniS’ top student athletes proved that the determination to succeed, backed up with support from family, friends and the University, can lead to major successes both in and outside of the sporting arena.
British Gymnastic Champion
UniS alumnus and gymnast Ross Brewer became the British Champion, the English Champion and the London Open Champion in 2004.

Ross graduated in 2002 with a First Class Honours degree in Mathematics and was this year named joint winner of UniS' new Young Alumnus of the Year Award in recognition of his outstanding achievement.

Previously Ross has won two gold medals at the Commonwealth Games: the first was in 1998 in Kuala Lumpur and the second at the 2002 Games in Manchester. Ross trains and competes for the Sutton School of Gymnastics. He is coached by Simon Moore, coach to Lee McDermott who is a former British Olympian and Commonwealth medalist.

He plans to continue training and competing at World and European level, aiming to compete in the 2006 Commonwealth Games in Melbourne and ultimately the 2008 Olympics in Beijing.

Sport for All
Sport, recreation and fitness activities are open to all at UniS. The UniSPORT office organises a wide range of programmes – dance classes, aerobics and fitness sessions, sports leagues – to ensure that the whole University community and local people can stay fit and healthy.

This year UniSPORT launched a new Healthy Walks programme. Taking full advantage of the beautiful countryside that surrounds the campus, the walks feature well-known beauty spots.

Run by UniS staff volunteers, the walks are graded by difficulty into three categories. Grade 1 walks are around 30 minutes in length, flat and include no obstacles. Grade 2 walks are slightly longer, may include slight inclines and could include obstacles such as stiles. Grade 3 walks will be longer still (up to three hours) and can include steep inclines and obstacles such as stiles.

As the walks have been well attended by UniS staff, UniSPORT is aiming to attract more local people to come along.

Major Accolade for UniS Squash
Squash has been one of the most popular sports on campus for many years. The Varsity Squash Centre at UniS has been awarded the Gold Charter as accredited by England Squash, the national governing body for the sport in the UK. England Squash assesses squash clubs around the country and identifies clubs that have extensive club development programmes and that provide opportunities to develop players, coaches, officials and volunteers in all areas. These clubs have also excelled in squash development on a local, regional and national level.

Barry Hitchcock, Sports Director at UniS, said: "This is a tremendous achievement for the Varsity Centre and the culmination of work over the past 22 years since the Squash Centre was formed."
Christopher Osborne was named Physics Student of the Year in the prestigious Science, Engineering and Technology Awards. At a gala dinner at London’s Guildhall, Christopher was presented with his award by Dr Julia King, Chief Executive of the Institute of Physics.

The seven young winners of Surrey Satellite Technology Limited’s ‘Reaching for the stars’ competition were presented with prizes by Science Minister Lord Sainsbury at the UniS campus. Attending a special event for the launch of the new Algerian Disaster Monitoring Constellation (DMC) satellite, UniS staff, families, friends and the media joined Lord Sainsbury and the young prize winners for a series of talks and presentations on the DMC.

Ravi Silva, Professor of Solid State Electronics, was awarded the 2003 Javed Husain Prize for Young Scientist and the UNESCO Albert Einstein Silver Medal. He attended a UNESCO ceremony in Budapest to receive his award.

Celebrating 40 years of service at UniS, Professor Hoshyar Nooshin from the School of Engineering received an engraved glass bowl from the Vice-Chancellor. Professor Nooshin joined 20 other long-serving member of staff at a reception hosted by the Vice-Chancellor.

Dr Nicole Rockliff has received the Isabel Hardwich Award from the Women’s Engineering Society (WES). The award recognises Dr Rockliff’s outstanding and long service to the Society and her promotion of engineering as a career for women. She is pictured (left) with Natalie Wiseman from WES who presented the award.

The Year in Brief...

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The Centre for Environmental Strategy (CES) held an open day to celebrate their tenth anniversary. Recognised for their high profile, multidisciplinary research on the relationships between human activities and the environment, CES is currently working on new fields of research including industrial ecology and sustainable consumption.

The Mayor of Guildford, Councillor Gordon Bridger, performed the official opening of International House, a new student residence comprising over 250 ensuite bedrooms. Mrs Museveni, the First Lady of Uganda, was also present at the opening.

The Students’ Union was transformed with authentic hangings and decorations to celebrate Chinese New Year. Students from China, Taiwan and Singapore led the celebrations to welcome in the Year of the Monkey. Pictured at the celebrations are Lian Deng, Danyang Wang, Dan Xiao and Xiaohan Wang.

Dr Qiang Zhao and Dr Jim Al-Khalili of the Department of Physics hit the headlines with their formula for helping people to understand the art of using chopsticks.

Jimmy Page, lead guitarist with legendary rock band Led Zeppelin, returned to UniS to unveil a plaque celebrating the band’s debut gig at UniS in 1968. He is pictured (left) here with Deputy Vice-Chancellor Professor John Turner and Professor Allan Moore, Head of Music and Sound Recording.

The Students’ Union (USSU) became the third part of the University – together with UniSPORT and the Library – to receive an Investor in People award. The award was presented by Sandra Cole from Business Link Surrey (second right) to Peter Tivers, Caroline Royle and the Vice-Chancellor.
UniS students from across the globe celebrated International Week in style. The Mayors and Mayoresses of Guildford and Woking attended the International Reception where students from the Tamil Society are pictured showing some of the traditions of their culture.

UniS announced the joint winners of its new Young Alumnus of the Year Award. Mathematics graduate Ross Brewer (left) is the British Champion for Men’s Artistic Gymnastics 2003 and has won two gold medals at the Commonwealth Games. Tonmeister graduate Becca Gatrell (right) has worked on scores for several major films, including the Oscar-winning Lord of the Rings trilogy.

Professor Angela Danil de Namor presented her professorial lecture on supramolecular chemistry. The lecture was well attended with some members of the audience travelling from as far afield as Latvia, Russia and South America. Angela is pictured with the Vice-Chancellor (right) and Professor Peter Tasker from Edinburgh University who gave the vote of thanks.

The University’s interactive undergraduate prospectus won a prestigious International Visual Communication Association (IVCA) Bronze Award in the Best External Multimedia category. Pictured with the award are Tim Juby (right) of Ubiquity Communications who produced the CD-ROM, Pauline Elliott and Trevor Thorne from Marketing and Public Affairs at UniS and Brian Johnson (left) of UniS TV.

Two UniS engineers are to become role models for science and engineering students. Civil Engineering postgraduate students Alex McKie and Alex Katsanos (left) were chosen by the Engineering and Physical Sciences Research Council (EPSRC) to act as ambassadors by raising the profile of science and engineering with young people.
For the second year running, the UniS Big Band won a Gold Award at the BASBWE National Festival held at the Royal Northern College of Music in Manchester. The band was awarded full marks in all categories.

Two students on the MSc Health Ergonomics programme won a ‘Back in Work’ award from the Department of Health. Julie Kelly (left) and Pauline Cole were awarded first prize in the Innovative Programme category for their ‘Positive Back Care’ project.

Evolutionary psychologist Steven Pinker, together with novelists Ian McEwan and Philip Pullman, attended a symposium on Literature, Science and Human Nature, organised by UniS and Roehampton University. Pictured here (left to right) are science writer Kenan Malik, Professor Johnjoe McFadden from UniS, Philip Pullman and Dr Bernadette Porter, Rector of Roehampton.

UnS staff and students started work with Brooklands Museum in Weybridge on a project to restore Concorde 202 to its former glory. Over 80 UnS volunteers have signed up for the project, contributing their expertise to jobs ranging from fundraising to rewiring the cockpit of the aircraft which has not flown since 1981.

The Earl of Wessex was invited to UniS to unveil a new bronze statue of the Guildford scientist Alan Turing who led the team that broke high-level secret German codes in World War II. While on campus, the Earl also visited the Performing Arts Technology Studios, student radio station GU2 and Surrey Satellite Technology Limited.

The Year in Brief...
Financial Statements

The University has achieved a consolidated financial surplus of £2.843 million which exceeded budgetary expectations. The University continues with its extensive investment programme.

The improved result for 2003/2004 came from all sections of the University’s accounts. Academic Schools have more than met their budget targets without need for recourse to centrally held contingency provisions. The University’s Research Park, which largely comprises the Foundation Fund, has achieved a surplus better than forecast despite challenging trading conditions in the current property letting market.

The University’s subsidiary companies also achieved profits in excess of forecast, mainly due to the improved performance of Surrey Satellite Technology Ltd (SSTL), the University’s principal trading subsidiary.

The University’s Executive Board operates an incentive scheme as part of devolved financial arrangements which rewards those Schools which achieve outturns better than budget.
Facts and Figures:
Numbers of Staff and Students

Total Student Numbers 2003/2004

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduates</td>
<td>7,062</td>
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<tr>
<td>Undergraduates (part-time)*</td>
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<tr>
<td>Postgraduates Taught</td>
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<tr>
<td>Postgraduate Research</td>
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</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>13,730</td>
</tr>
</tbody>
</table>

5,311 students undertook Continuing Professional Development provided by UniS or pursued other programmes not leading to an award at the University.

At our Associated Institutions (not including University of Surrey Roehampton), 5,118 students were registered for awards of UniS.

* The majority of part-time undergraduate students are pursuing programmes in Combined Studies.

Academic Awards 2003/2004

<table>
<thead>
<tr>
<th>Category</th>
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<tbody>
<tr>
<td>First Degrees</td>
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<tr>
<td>Undergraduate Diplomas and Certificates</td>
<td>532</td>
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<tr>
<td>Postgraduate Diplomas and Certificates</td>
<td>232</td>
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<tr>
<td>Masters Degrees</td>
<td>1,554</td>
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<tr>
<td>Doctorates</td>
<td>225</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>3,915</td>
</tr>
</tbody>
</table>

Students registered at the University of Surrey Roehampton gained 2,385 awards: 1,448 First Degrees, 31 Undergraduate Diplomas and Certificates, 693 Postgraduate Diplomas and Certificates, 194 Masters Degrees and 19 Doctorates.

In addition, students registered at our Associated Institutions gained 1,947 awards: 1,146 First Degrees, 265 Undergraduate Diplomas and Certificates, 397 Postgraduate Diplomas and Certificates, 137 Masters Degrees and 2 Doctorates.

Total Staff Numbers 2003/2004 (Effective 1 August 2004)

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<th>Category</th>
<th>Full-time</th>
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<td><strong>TOTALS</strong></td>
<td>1,794</td>
<td>707</td>
<td>2,501</td>
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</tbody>
</table>
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...in Innovation and Enterprise
...in Research in the Centre for Communication Systems Research
...in Research in the University Materials Institute
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Farnborough College of Technology
- Vocationally oriented institution offering a wide range of FE and HE programmes
- Accredited institution since 2002
- Foundation, BA, BSc and MSc degrees validated by the University
- Research degree provision in School of Applied and Health Sciences

Guildford College of Further and Higher Education
- Wide range of vocational, professional and academic qualifications
- Associated institution since 1964
- Associated institution since 1993

HMS Sultan, Gosport, Nuclear Department
- MSc and PG Diplomas validated by the University
- Associated institution since 1995

King Edward VII Hospital, Department of Staff Development
- Undergraduate programmes in Health Studies
- Associated institution since 1990

North East Surrey College of Technology (NESCOL)
- Specialises in vocational education with a full range of FE and HE programmes
- Associated institution since 1979
- BEng and MSc, degrees validated by the University

The Pre-Retirement Association (PRA)
- Specialises in mid-career and pre-retirement education
- Associated institution since 1996
- Offers PG Certificate and MScs validated by the University

SHL (UK) Ltd
- International firm specialising in HR, management consultancy, assessment and training with PG Diploma validated by the University
- Associated institution since 1996

Southern Theological Education and Training Scheme (STETS)
- Certificate, Diploma and BA in Christian Ministry and Mission validated by the University
- Associated institution since 1999

St John’s Seminary
- Courses of preparation for the Roman Catholic priesthood, including Bachelor of Theology validated by the University
- Associated institution since 1995

St Mary’s College – A College of the University of Surrey
- Catholic college of HE established 1850
- BA, BA IT, BEd, PGCE, MA and MSc, degrees validated by the University
- Research degree provision

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- Catholic college of HE established 1850
- College of the University since 1990, accredited 1996
- BA, BA ITT, BEd, PGCE, MA and MSc, degrees validated by the University
- Research degree provision

Wimbledon School of Art
- Specialised school of art and design
- Associated institution since 1994
- BA and MA degrees accredited by the University
- Research degree provision

Unis Associated Institutions

The 39th Vice-Chancellor’s Annual Report gives a brief overview of major developments at the University of Surrey from 1 September 2003 to 31 August 2004 for presentation to the Court of the University. The University Charter was presented in 1965.

Published by: Marketing and Public Affairs, Unis
Text: May Communications Ltd.
Cover Image: Jeremy Batt, Steve Heritage and Brian Johnson.
Photography: Steve Heritage, Ashley Pryor, Dave Brockett, Mike O’Day.

Everyone has been made to ensure the accuracy of the information in this Annual Report but the University can accept no responsibility for errors and omissions.