18:00 - Arrival
18:05 – Welcome and introduction to UCL SECReT – UCL’s Centre for Doctoral Training in Security Science – Mr Vaseem Khan, Strategic Alliance Director, UCL SECReT
18:20 – The Dawes Centre for Future Crime at UCL – Prof Shane Johnson, Director
18:35 - Current student
18:50 – The application process – Vaseem Khan
19:00 - Questions
19:15 - Meet our academics and students over drinks
20:00 - Close
UCL SECReT is part of the **UCL Jill Dando Institute of Security and Crime Science (JDI)** which was set up in 2001 after the murder of Jill Dando, BBC *Crimewatch* presenter
The JDI has grown to multiple centres of excellence such as:

- UCL Security Science Centre for Doctoral Training (UCL SECReT)
- Dawes Centre for Future Crime
- Institute of Global City Policing
- UCL Centre for the Forensic Sciences
The Dawes Centre for Future Crime works closely with the Centre for Doctoral Training in Cybersecurity
What makes crime science different?

We are dedicated to:

• Finding new ways to reduce crime and security problems by focusing on the crime event rather than on the offender

• Thinking about crime and security in a scientific way

• Bringing disciplines together from across the social and physical sciences

• Working directly with policymakers, police and related agencies to have real world impact
Why at UCL?

- One of Europe’s largest multi-faculty research universities
- 30 Nobel prize winners since 1826; 42000 students, incl. 12000 research students
- Consistently ranked one of the world’s top universities
UCL SECReT Vision

‘We aim to train research leaders in integrated, ethical, and socially sensitive security.’
Our students

Recruited for academic excellence, from leading universities.

Multidisciplinary cohort – Criminology, Psychology, Computer Science, Engineering, Chemistry, Physics, Anthropology…

Wider skills and real-world focus – future leaders bridging academia and industry
Our research areas...
CRIME & SECURITY ANALYSIS

Big data analysis
Scripting and process analysis
Social network analysis

Ecological modelling
Geographical analysis
Human error analysis

Terrorism/Extremism
Organised Crime

DESIGN & TECHNOLOGY

UAVs
Chemical sensors
Cyber (malware)

Radar
X-ray scanners
Ethics and technology

FORENSIC SCIENCES

Forensic geoscience
Fingerprints
Inference and Interpretation

DNA
Trace evidence
Cognitive Forensics

FUTURE CRIME (via our Dawes Centre for Future Crime)

Blockchain
IOT
Smart cities & vehicles
Biohacking

Robotics
Mass migration
Climate change & crime
Artificial Intelligence

Cybercrime/security
Cryptocurrency crime
The SECReT programme – ROUTE A

Year 1 is a preparation year (MRes)

Years 2-4 are research project years

Our experience shows the extra year leads to a better PhD proposal, and an excellent foundation for the PhD itself.
Year 1: Foundation - Aims

• To acquire a broad-ranging foundation in security and crime science

• To provide time and guidance to develop an ambitious PhD proposal.

• To develop research and professional skills.

• To foster a multidisciplinary mindset.
Year 1: Foundation – Taught modules

• Six modules, 3 compulsory and 3 optional:

• Compulsory modules are:
  – Foundations in security and crime science
  – Risk and contingency planning
  – Doing research in security science

• (can be adjusted based on students background though)
Year 1: Foundation – Optional modules

Horizon scanning and the changing nature of crime
Perspectives on Organised Crime
Perspectives on Terrorism
Introduction to cybersecurity
Spatial-temporal data analysis and data mining (STDM)*
International Law and Human Rights*
Anthropology of Politics, Violence and Crime*
Introduction to Machine Learning*
Global Monitoring and Security*
Disaster Risk Reduction in Cities*
Emergency and Crisis Planning*
Making, Designing & Building Connected Sensor Systems*
Science Journalism*

... and hundreds of other possibilities from around UCL, subject to the below*

*These modules are taught by other departments at UCL and their availability is solely subject to the discretion of the module convenor. We cannot guarantee availability in advance.
Year 1: Foundation – MRes project

• Multidisciplinary research project.
• Various group activities

• Progression point at end of Year 1
Year 2: Preparing for research

- Identify relevant sources of information
- Scope the study
- Map the research conducted in your field,
- Develop specialised skills, and
- Address some of the more complex issues associated with security research.

- Progression point (Upgrade)
Year 3: Research intensive period

- Collect data, experimental work, etc.
- Fine-tune your research direction

- Internship in industry/public sector/academic centre of excellence outside of UCL
Year 4: Analysing, writing, submitting.

- Complete the research project
- Dissemination: Writing, Presenting, Conferences
- Public Engagement
- Submit thesis
- PhD Viva
The SECReT programme – ROUTE B

You directly begin your PhD. We expect you to take ‘Foundations in Security and Crime Science’ and one optional module. These modules are not assessed.
CDT (Centre for Doctoral Training) in Cybersecurity

Run by three UCL departments - Computer Science, Security and Crime Science, and Science, Technology, Engineering and Public Policy - in order to increase the capacity of the UK to respond to future information and cybersecurity challenges.

The CDT runs an integrated 4-year programme including taught modules – but no MRes is awarded.
Our SECReT students....
Xmas Party, 2009
Seminars and events
Our students present posters and talks each year; even run sessions
Transferable skills...

UCL’s Doctoral Skills Development Programme has over 200 FREE skills courses to help expand your research and transferable skills in order to support your research, professional development and employability. They include...

• Public speaking
• How to network
• Introduction to mindfulness
• Job interview skills
• Project management
• Digital languages
• Teaching skills
• Writing and giving conference papers
• Writing for the media
• Creative thinking
• Python programming
Media Training
LAB WORK
ACCESS TO OUR DATALAB – Handling secure data
FIELD WORK

A Study Determining the Use of Gunshot Residue upon Clothing as an Item of Evidence

M. Regan
EXCITING WORK!

The Effect of Cognitive Bias in Forensic Anthropology: A Study of Confirmation Bias within Visual Assessments on Skeletal Remains, Sherry Nakhaeizadeh
EXCITING COLLEAGUES!
Winning forensic science awards in Australia!
The SECReT Society.... Making friends is easy
Our partners

ATLAS ELEKTRONIK
A joint company of ThyssenKrupp and EADS

VEOLIA TRANSPORT RATP INDIA

Rapiscan systems
An OSI Systems Company

3DX-RAY

L3 communications
TRL Technology

AWE

satalia
the solve engine

SELEX GALILEO
A Finmeccanica Company

WYNYARD
At SECReT you are more likely to:

• Have access to the data you need
• Meet inspiring people
• Access labs, facilities, software, training
• Build a professional network
• Be accepted for an internship → job
• Develop innovative ideas
• Obtain funding for your research
• Make friends
Going on to great careers...

- Home Office
- National Crime Agency
- Security consultancy
- NHS Scientist
- Ministry of Defence DSTL (Defence, Science and Technology Lab)
- Rapiscan (global scanners and sensors)
- Darktrace (cybersecurity company)
- Top academic institutions around the world
- Non-security jobs in finance sector, telecomms
The take home message ... This PhD will...
APPLICATIONS

Mr Vaseem Khan
Strategic Alliance Director
It’s a hard course to get on to . . .

Only 10-15% of applicants taken onto the course
Who should apply?

Minimum 2.1 degree (or expected).

The subject area should be grounded in a science based subject widely defined (e.g. computer science, chemistry, engineering, information and communications technologies, materials, mathematical sciences, physics and some life and social sciences).
Step 1 – Identify TWO academics at UCL who may be willing to review your application ie. potential supervisors. We recommend you establish contact & explore overlapping interests at that stage.

Step 2 – Complete your application online

Step 3 – We conduct basic checks. This takes 2-3 weeks. You must provide references!

Step 4 – Your named academics are invited to assess application, and recommend for offer and/or funding, or reject.

Step 5 – An interview will be organised for you at UCL or via Teams

Step 6 – Final decision rests with SECReT.

Step 7 – Email offer made, followed by written offer from UCL Registry. Offer is either with or without scholarship.

Step 8 – You accept offer ... and start course in late Sept!
TIPS!

• Apply early – we award as we go

• Personal statement is critical:
  – How does your research fit in with our programme?
  – Will your research area have impact?
  – Will you excel in that area?
  – Will it be interdisciplinary?

• References are important!
Course Fees

• Home/EU students
  • £5860 per annum
    (for each of three or four years)

• Overseas students
  • £32100 per annum
    (for each of three or four years)
Funding mechanisms

Students can be accepted onto this programme under a number of different funding regimes:

- Our scholarships
- Other government and academic scholarships
- Industry funded scholarships
- Self funding
Our scholarships for the current year ie. to start this September
Dawes-UCL SECREt PhD scholarship

• **Eligibility** - Home (UK) fee payers only
• **What it includes** - Home (UK) level fees for three OR four years + stipend of approx. £17,000 PA + annual conference and project costs budget
• **Deadline** – 15th July (However, we advise that you apply early, as we will be awarding the studentships as soon as we identify excellent candidates)
• **Research areas / topics** - The studentships available apply to both the topics set out in the ‘pre-set topics’ section of our scholarships webpage OR if you have a topic that you would like to explore that is not covered by the pre-set topics, you may apply for an ‘open topic’ studentship.
Pre-set versus Open Topics

Our studentships are available for ‘pre-set' topics or for ‘open topics’.

Pre-set topics are specific topics that have been suggested by supervisors here at UCL and which they will be happy to supervise.

Open topics are topics proposed by the applicant.
Pre-set topics for this year include:

- Exploring and evaluating policy and regulatory methods, strategies and techniques to anticipate and address future crimes

- Preventing and responding to future crime in converging digital and physical worlds

- Anticipating and governing new threats around autonomous vehicles
Open topics can cover many areas such as:

<table>
<thead>
<tr>
<th>Applications</th>
<th>Generic Technologies</th>
<th>Background changes</th>
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<tbody>
<tr>
<td>Drones</td>
<td>Hyper-connectivity</td>
<td>Climate change:</td>
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<td></td>
<td></td>
<td>• Temperature</td>
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<td></td>
<td></td>
<td>• Sea level/acidification</td>
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<td>• Water, food shortage</td>
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<tr>
<td>Autonomous vehicles</td>
<td>AI</td>
<td>Mass migration</td>
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<tr>
<td>Smart rail signalling</td>
<td>Robotics/Nanobots</td>
<td>Antimicrobial resistance</td>
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<tr>
<td>systems</td>
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<tr>
<td>Non-GPS navigation</td>
<td>Quantum computing</td>
<td>Commodity scarcities</td>
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<tr>
<td>Blockchain</td>
<td>SCADA</td>
<td>Commodity substitution e.g. Mo for Pt catalysts</td>
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<tr>
<td>Brainwave reading/control</td>
<td>3D printing</td>
<td>Universal wage</td>
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<tr>
<td>Smart lighting</td>
<td>Mass customisation</td>
<td>New finance/banking models</td>
</tr>
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<th>New finance/banking models</th>
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</thead>
<tbody>
<tr>
<td>Performance-enhancing prosthetics</td>
<td>Portable, renewable power</td>
<td>New working patterns</td>
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<tr>
<td>Instructional technology</td>
<td>Wearable ICT</td>
<td>New transport/movement patterns</td>
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<tr>
<td>Smart materials</td>
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<td>Any concentration or dispersal of value, anywhere in the value chain</td>
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<tr>
<td>Stealth technologies</td>
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<tr>
<td>Sensors, sensor fusion</td>
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<td>IOT</td>
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<td>Pharma</td>
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<td>Chemical synthesis</td>
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<td>GM/CRISPR</td>
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<td>Advanced optics</td>
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<tr>
<td>Hacking (both senses)</td>
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Pre-set and Open topics

The details of all pre-set and open topics are available on our PhD Scholarships page here:

https://www.ucl.ac.uk/security-crime-science/study/postgraduate-research/phd-scholarships
CDT in Cybersecurity scholarships

• **Eligibility** - Home (UK) fee payers *and* overseas – but overseas are limited!

• **What it includes** - Fees for FOUR years + stipend of approx. £19,000 PA + annual project costs budget

• **Research areas / topics** – See the CDT website here for full details: https://www.ucl.ac.uk/cybersecurity-cdt/
Other government and academic scholarships

• Scan the market to see what you can apply for
• For example UCL offers a number of graduate research scholarships – they are very competitive
• Various funding bodies such as the British Council
• Many overseas students enter the programme through scholarships provided by government agencies in their home countries
• Eg. Chinese Scholarship Council; CONACYT - Mexico
Self-funded

Many students fund themselves onto the programme using their own resources. However, you should consider carefully how you will continue after your first year.
Some current projects...

- Money laundering and terrorist financing future directions
- Brexit and Crime
- Young people, drugs and social media
- Identifying opportunities for crime prevention in smart cities
- How has technology changed the face of human trafficking?
Some current students...

Don’t they look happy!?
APPLY NOW

https://www.ucl.ac.uk/security-crime-science/study/postgraduate-research

Join our Instagram community at:
https://www.instagram.com/scsucl/

Or Twitter:
@UCLCrimeScience  /  @UCLForensicSci