Computer Science MSc

Dr Raul Garcia-Patron Sanchez
Programme Director

This session will begin at 3pm

THE UNIVERSITY of EDINBURGH

Open to the world

THE UNIVERSITY of EDINBURGH
informatics

Meet Computer Science MSc

Raul Garcia-Patron Sanchez

THE UNIVERSITY of EDINBURGH
informatics

Welcome to Edinburgh

Pictures by Raul Garcia-Patron Sanchez

THE UNIVERSITY of EDINBURGH
informatics

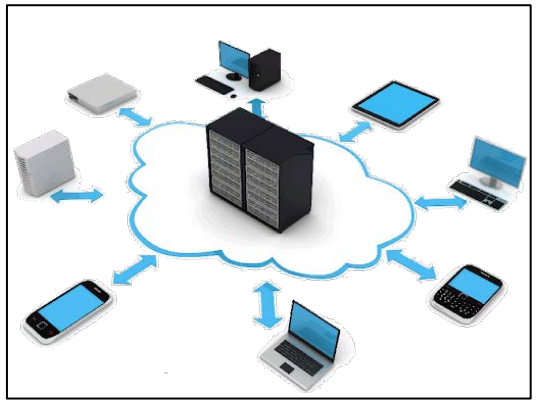
School of Informatics

THE UNIVERSITY of EDINBURGH
informatics

Computer Science MSc Program

"Spans the range from computer architecture through theoretical computer science."

Computer Systems
HPC, IoT, Architectures



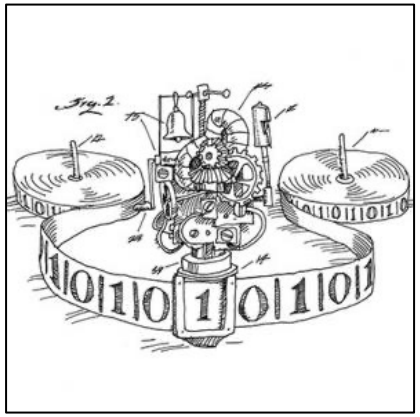
Databases and Data Management

Markus Spiske

Software Engineering

Cyber Security and Privacy

Quantum Informatics



Theoretical Computer Science

THE UNIVERSITY of EDINBURGH
informatics

Computer Science MSc Program

"Spans the range from computer architecture through theoretical computer science."

Computer Systems
HPC, IoT, Architectures

- Theory and the practice of designing, optimising and programming computer systems
- Parallel Architectures
- Internet of Things (IoT)
- High Performance Computation (HPC)

THE UNIVERSITY of EDINBURGH
informatics

Computer Science MSc Program

"Spans the range from computer architecture through theoretical computer science."

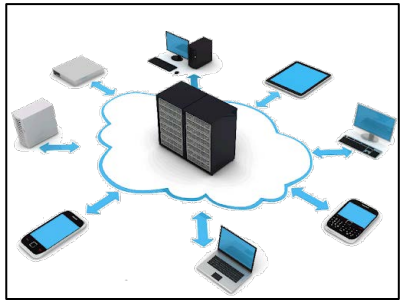
Cyber Security and Privacy

- Cyber Security: Protecting computers and their data against malicious or accidental damage.
- Cyber Privacy: limiting personal information and protecting it from abuse, even when data is shared.
- Security of Internet of Things
- Blockchain

THE UNIVERSITY of EDINBURGH
informatics

Computer Science MSc Program

"Spans the range from computer architecture through theoretical computer science."



Databases and Data Management

- Algorithms for dealing with big data
  - Databases
  - Data management
- Theoretical analysis of database systems
  - Data structures
- Practical approaches for dealing with distributed data

THE UNIVERSITY of EDINBURGH
informatics

Computer Science MSc Program

"Spans the range from computer architecture through theoretical computer science."

Markus Spiske

Software Engineering

- Usability and design
- Security
- Performance optimization
- Software quality control:
  - Testing and formal verification
  - Data management
- Software management

THE UNIVERSITY of EDINBURGH
informatics

Computer Science MSc Program

"Spans the range from computer architecture through theoretical computer science."

Quantum Informatics

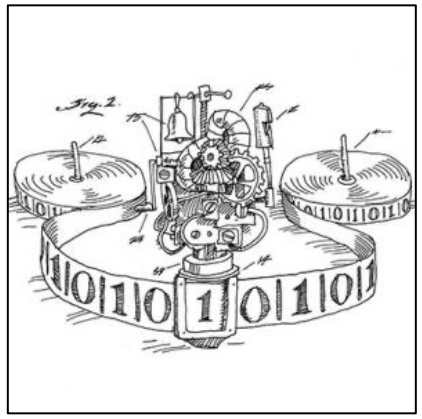
Exploiting quantum effects to manipulate information in novel ways.

- Introduction to Quantum computing
- Quantum Cyber Security
- Categories and Quantum Informatics
- Quantum Information Theory (Physics)

THE UNIVERSITY of EDINBURGH
informatics

Computer Science MSc Program

"Spans the range from computer architecture through theoretical computer science."



Theoretical Computer Science

Theoretical Computer Science (TCS) is the use of mathematical thinking and techniques to understand computer science.

- What is Computation?
- Design of new Algorithms.
- How can we know whether our algorithm is the fastest
- Computation Complexity
- Algorithmic Game Theory

THE UNIVERSITY of EDINBURGH
informatics

Choice of Courses

Computer Science MSc (180 credits)

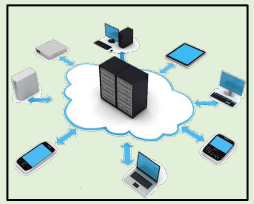
Mandatory courses (80 credits)

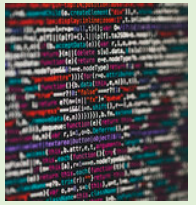
Informatics Research Review (IRR, S1, 10 credits)

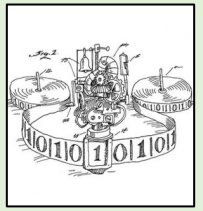
Informatics Project Proposal (IPP, S2, 10 credits)

MSc Dissertation (Summer 60 credits)

Computer Science Foundations (60-100 credits)







Other courses (40 credits)

1. Computer Science Foundations, Systems and Software
2. Programming
3. Other topics from School of Informatics
4. Other Schools at University of Edinburgh
5. Entrepreneurship

1. Would benefit from taking one of these courses to improve your **programming** skills?
2. Up to 20 credits for most degrees level 10 courses (third year and fourth year undergraduates).
3. Up to 20 credits in other Schools.

SCHOOL OF INFORMATICS

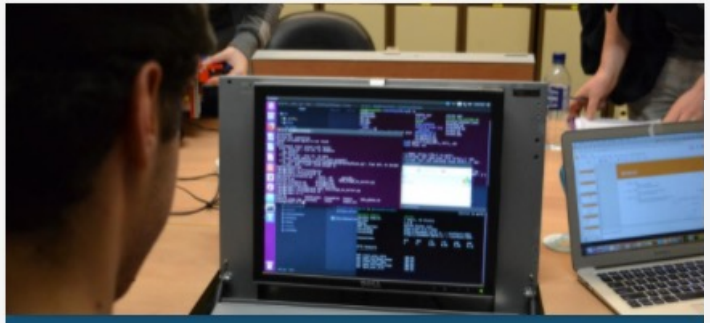
Coronavirus (COVID-19) updates

The latest information and advice for students, staff and prospective students.

Postgraduate Virtual Open Days | 9-11 November 2021

Learn more about our postgraduate taught programmes and research degrees.

Book your place



Study with us

Join a vibrant student community in a world-class department

- Rankings

Choose from a wide range of single and joint honours degrees

- Degree finder
- Learn more about UG studies in the School of Informatics

Check our taught postgraduate opportunities

- Masters programmes
- Centres for Doctoral Training

Learn about our research postgraduate degrees

- Research degrees
- Learn more about PG studies in the School of Informatics

Latest news

Selection deadlines

September 2022 entry is now open for applications. The selection deadline will be 31st March 2022.

Our MSc programmes

Advanced Technology for Financial Computing MSc	This programme will provide you with a critical and practical appreciation of how data, computing and artificial intelligence technologies can be used and developed to deliver value in organisations with finance, risk and decision-making related digitalisation from both technology and business perspectives.
Artificial Intelligence MSc	AI research is interdisciplinary by nature and draws on neuroscience, cognitive science, linguistics, computer science, mathematics and statistics, psychology.
Cognitive Science MSc	Cognitive Science investigates human cognitive functions such as perception and action, memory and learning, language and communication, reasoning and problem-solving.
Computer Science MSc	The scope of Computer Science ranges from the design of programming languages and algorithms to models of computation, such as distributed, parallel and quantum computing, and the study of the limits of computation. We also offer specialist area courses in computer security.
Cyber Security, Privacy and Trust MSc	Cyber security and privacy is the study of the computational principles, methods and mechanisms for safe-guarding these sensitive applications. Graduates of the programme will learn how to evaluate, design, and implement secure and trustworthy systems in complex distributed systems.
Data Science MSc	Data science is the study of the computational principles, methods, and systems for extracting knowledge from data. Large data sets are now generated by almost every activity in science, society, and commerce.
Design Informatics MSc	Students are given an understanding of how to build computational systems as well as being taught the relevant principles of design thinking and making.
Advanced Design Informatics MSc	Students are given an advanced understanding of how to build computational systems as well as being taught the relevant principles of design thinking and making - Two-year programme.

THE UNIVERSITY of EDINBURGH
informatics

Additional Information

- Prospective undergraduates
- Prospective postgraduates
- About us
- Research
- People
- News & events
- Industry Engagement
- Alumni
- Staff and student intranet

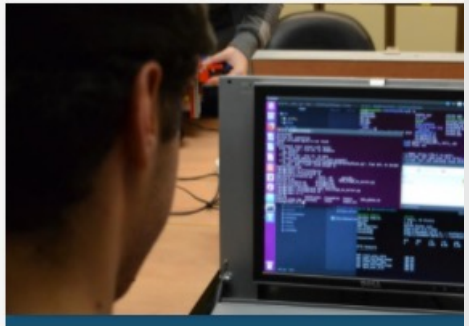
Coronavirus (COVID-19) updat

The latest information and advice for students,

Postgraduate Virtual Open Da

Learn more about our postgraduate taught pro

Book your place



Study with us

Join a vibrant student community in a world-cl

- Rankings

Choose from a wide range of single and joint ho

- Degree finder
- Learn more about UG studies in the School

Check our taught postgraduate opportunities

- Masters programmes
- Centres for Doctoral Training

Learn about our research postgraduate degrees

- Research degrees
- Learn more about PG studies in the School of Informatics

Watch our videos to find out more about what we do and get to know

POSTGRADUATE STUDY

- Postgraduate study home
- Degree finder
- Subject: Computing and Informatics
- Computer Science

Home > Study > Postgraduate study > Degree finder > Subject: Computing and Informatics > Computer Science MSc

Contact us

Computer Science MSc

Awards: MSc

£ Funding opportunities

Study modes: Full-time, Part-time

Programme website: Computer Science

Expand all | Contract all

Programme description

Edinburgh's expertise in core computer science is recognised internationally, and spans the range from computer architecture through theoretical computer science.

This MSc offers you the opportunity to obtain specialist knowledge in the design, analysis, implementation, and use of computer systems ranging from the components of a single processor to computer networks as vast as the Internet.

You can also pursue a more theoretical direction by choosing courses in areas such as:

- algorithms
- programming languages
- cryptography
- quantum informatics

The programme provides a solid foundation in theoretical understanding and a wide variety of practical techniques applicable in many career settings.

Programme structure

Career opportunities

Entry requirements

Open Days

The Postgraduate Virtual Open Days take place online between 9 – 11 November.

- Find out more and book your place

Applying

Select your programme and preferred start date to begin your application.

MSc Computer Science - 1 Year (Full-time)

Select your start date | Apply

MSc Computer Science - 2 Years (Part-time)

Select your start date | Apply

MSc Computer Science - 3 Years (Part-time)

Select your start date | Apply

Application deadlines

How to apply

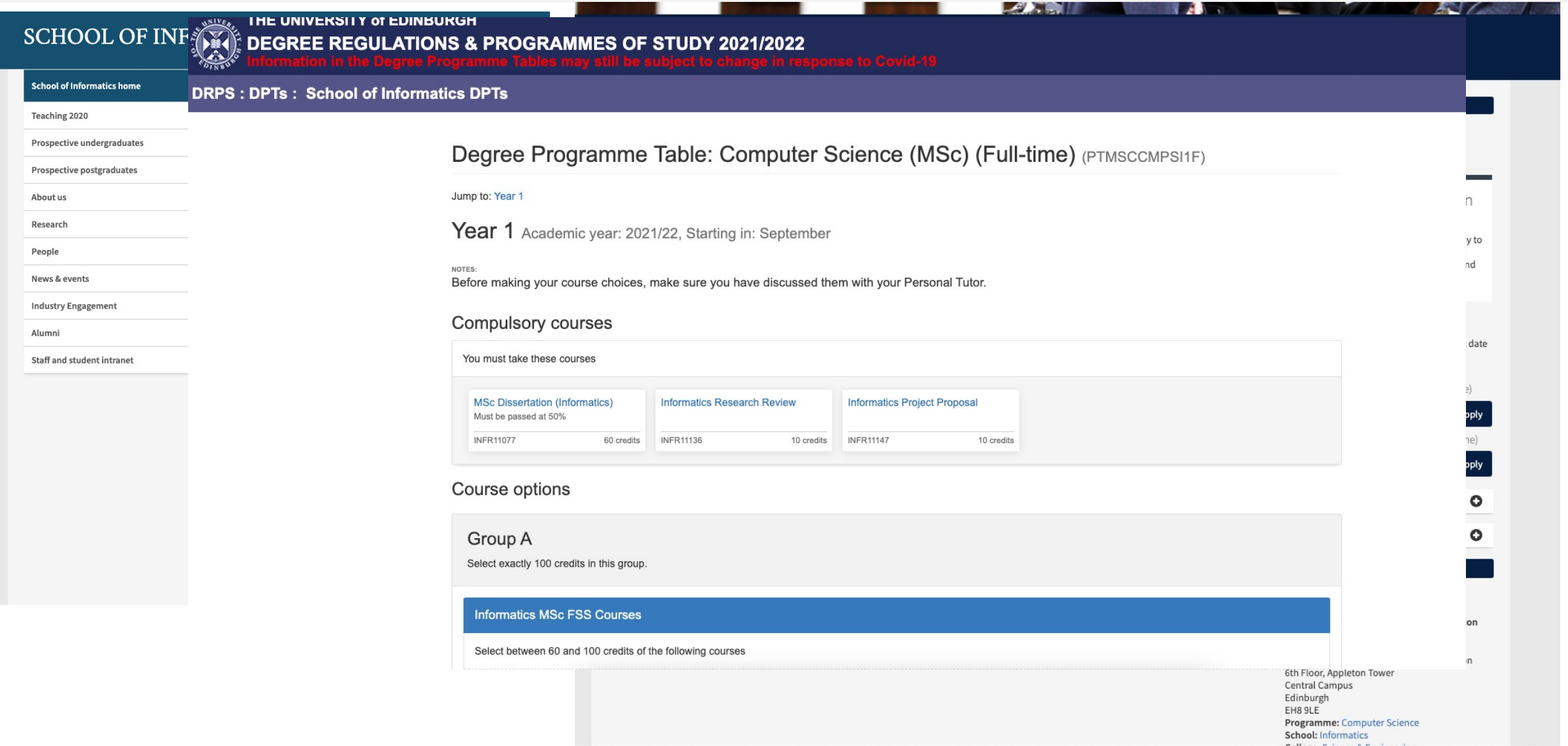
Featured funding

Further information

School of Informatics Teaching Organisation
Phone: +44 (0)131 650 5194
Contact: futurestudents@ed.ac.uk

THE UNIVERSITY of EDINBURGH
informatics

Additional Information



THE UNIVERSITY of EDINBURGH
informatics

When Computer Science MSc?

"Spans the range from computer architecture through theoretical computer science."

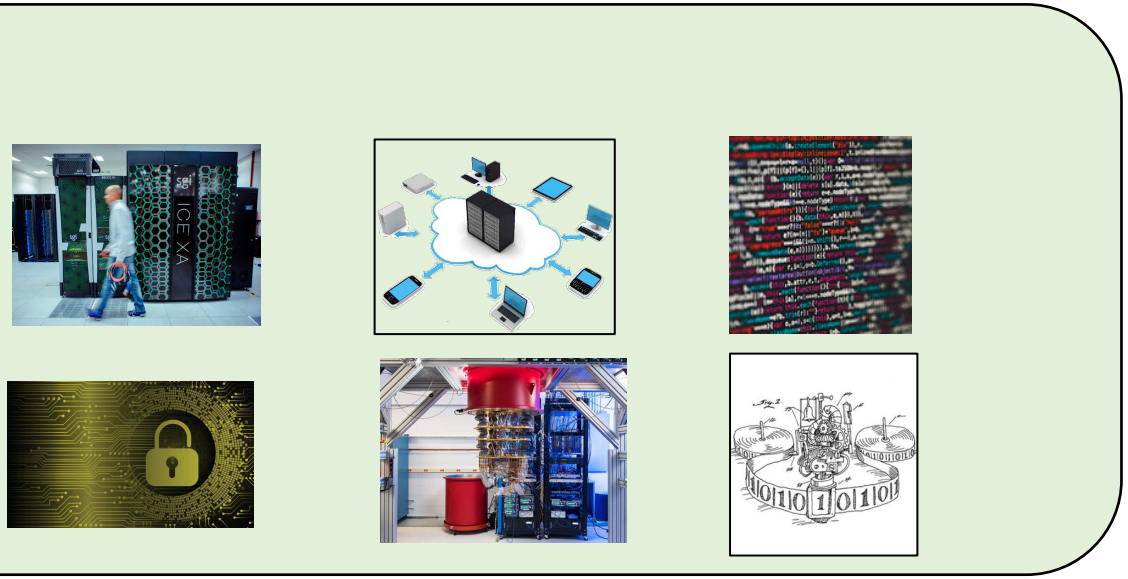
- Interest in:
  - Computer systems
  - Software Engineering
  - Theoretical Computer Science

THE UNIVERSITY of EDINBURGH
informatics

When Computer Science MSc?

"Spans the range from computer architecture through theoretical computer science."

- Interest in:
  - Computer systems
  - Software Engineering
  - Theoretical Computer Science
- You want a broad perspective
- You may not know yet exactly which niche fits you best

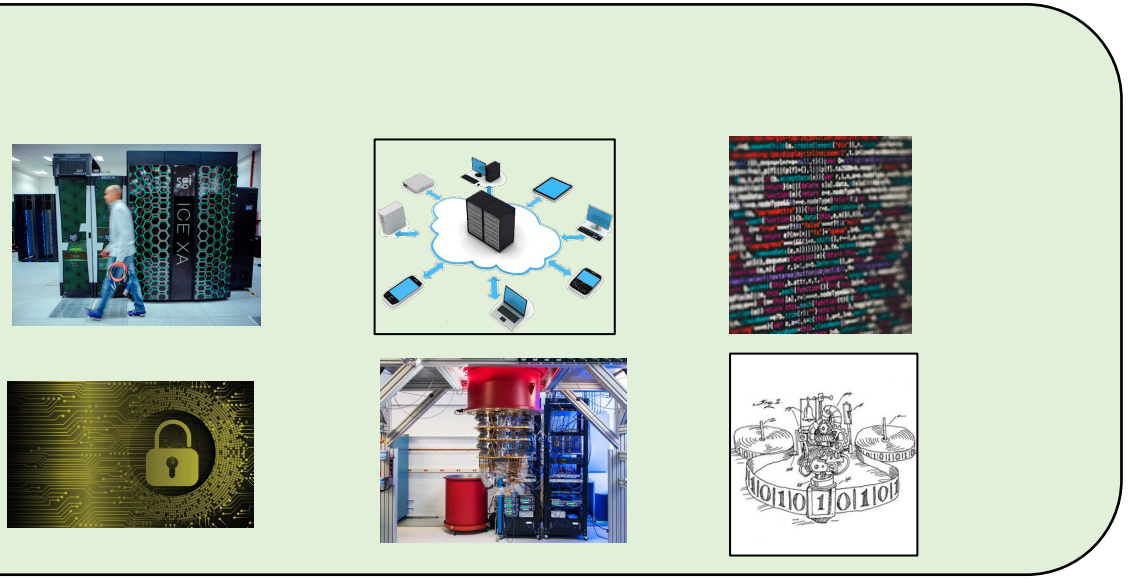


THE UNIVERSITY of EDINBURGH
informatics

When Computer Science MSc?

"Spans the range from computer architecture through theoretical computer science."

- Interest in:
  - Computer systems
  - Software Engineering
  - Theoretical Computer Science
- You want a broad perspective
- You may not know yet exactly which niche fits you best



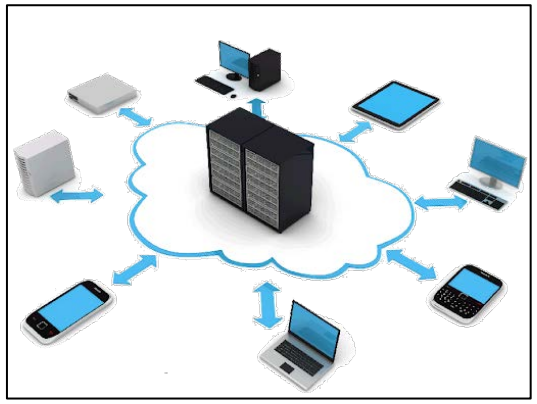
VERSATILE

THE UNIVERSITY of EDINBURGH
informatics

Q&A

"Spans the range from computer architecture through theoretical computer science."

Computer Systems
HPC, IoT, Architectures



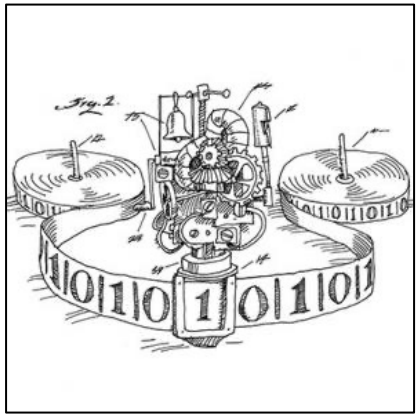
Databases and Data Management

Markus Spiske

Software Engineering

Cyber Security and Privacy

Quantum Informatics



Theoretical Computer Science

THE UNIVERSITY of EDINBURGH

Q&A

futurestudents@ed.ac.uk

Open to the world

Next steps…

virtualvisits.ed.ac.uk/pg

edin.ac/student-chat-pg

THE UNIVERSITY of EDINBURGH

Open to the world