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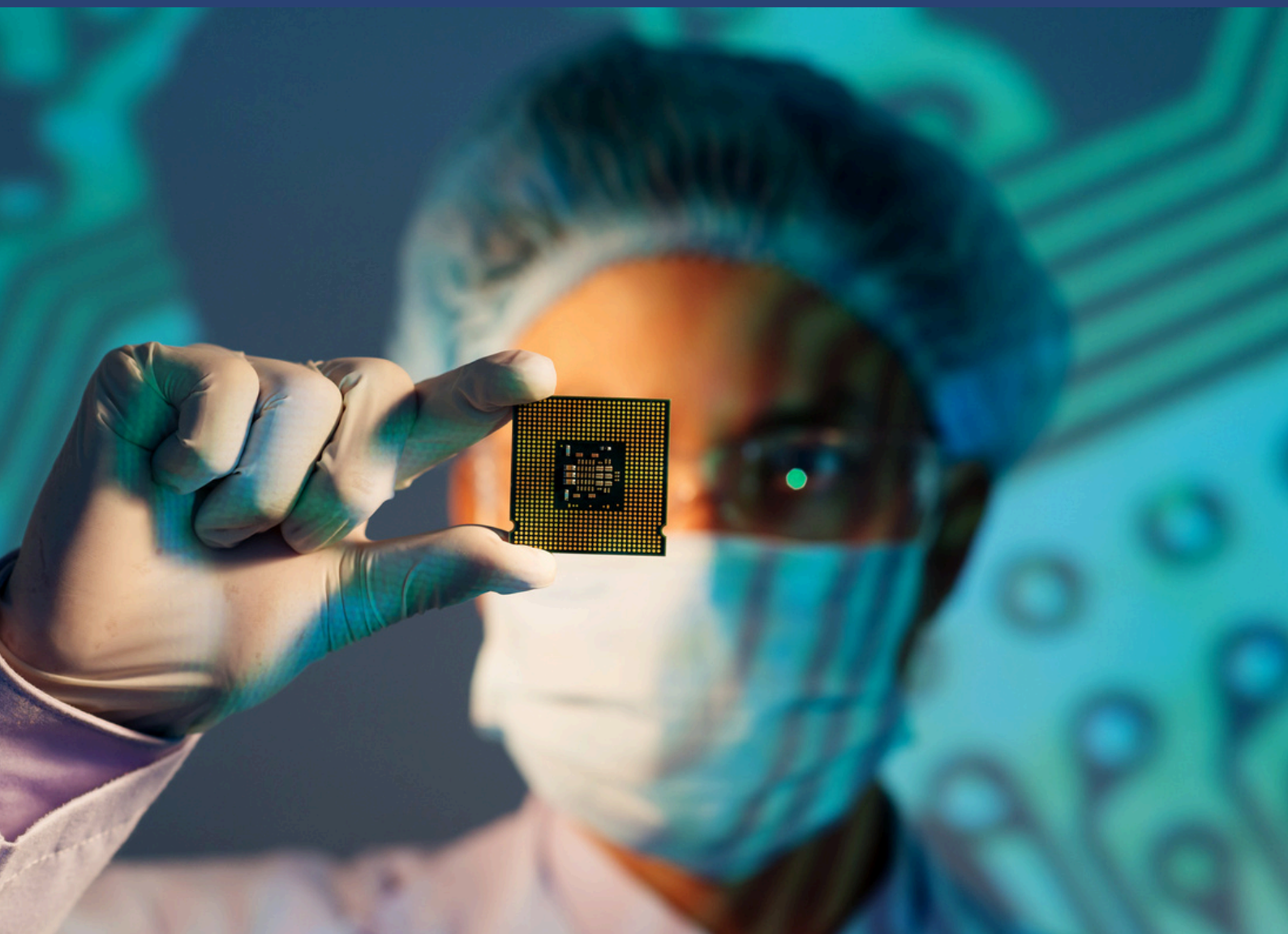
UK Electronics Skills Foundation

Semiconductors in Scotland

Industry | Innovation | Careers | Opportunity

From building the industries of the past to fabricating the chips and lasers that drive the future, Scotland has always been a nation of makers. Today, its Central Belt glows with innovation.



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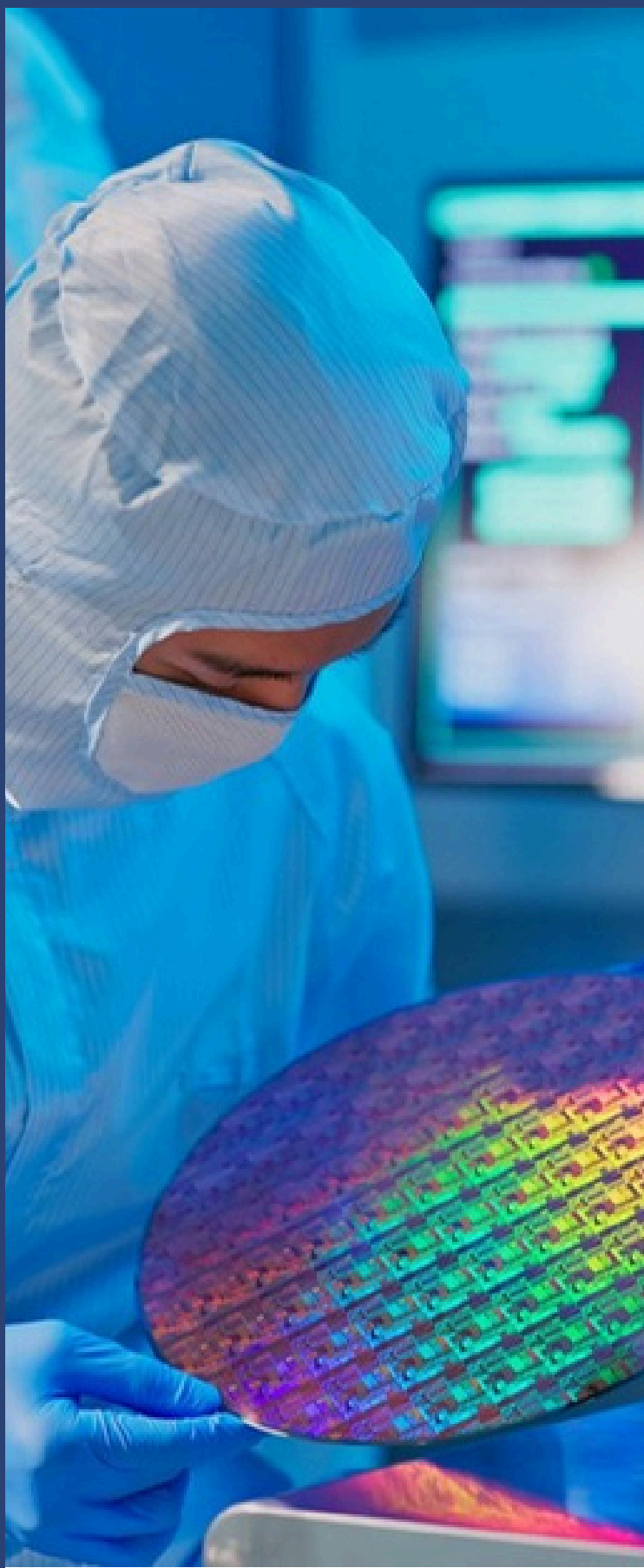
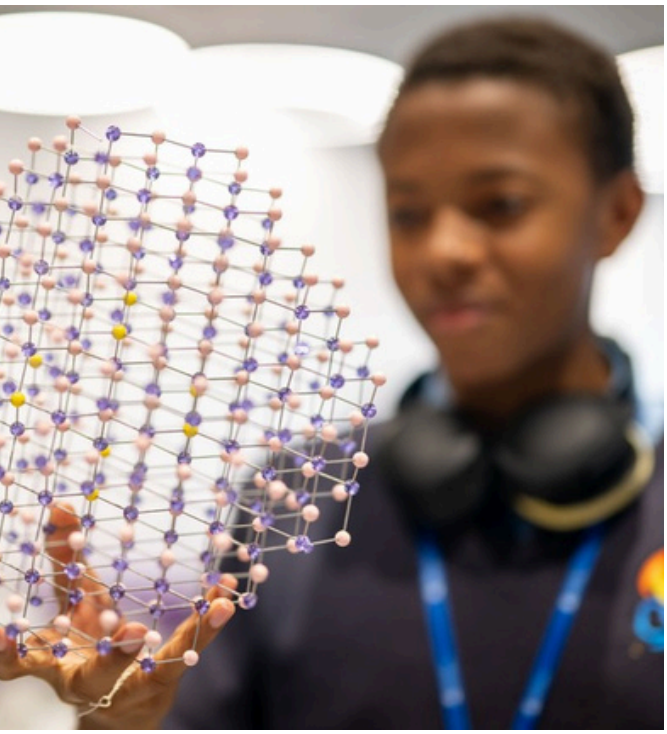


Learn here »
Work here »
Change the world »

Stretching from coast to coast, across Glasgow and Edinburgh, the Central Belt of Scotland is now home to some of the UK's most advanced fabrication and photonics facilities.



Here, scientists, engineers, and technicians work with cutting-edge materials like silicon carbide (SiC) and gallium nitride (GaN) to produce chips that power everything from electric cars to satellites.

What makes this region special is the way traditional engineering know-how has evolved into precision technology. Supported by universities, emerging start-ups, and established global manufacturers, the sector works together not only to build, test, and create real working devices but to ship them across the globe.

With clear pathways into industry, you can begin your journey here and see your skills applied both close to home and internationally. If you also look at how local science centres and outreach organisations work towards introducing STEM to young people from an early age, it is easy to see why Scotland's Central Belt currently shines brighter than ever!

STEM in 10: Introducing an Electronic Revolution, Glasgow University

When ideas take shape

In Scotland, great ideas don't just stay in the lab, they're fabricated into reality. From the bustling streets of Glasgow to the creative hubs of Edinburgh, the Central Belt thrives on collaboration. Students and apprentices gain hands-on experience while researchers and engineers turn theory into working chips, sensors, and devices.

Companies like Semefab, Clas-SiC, and Sivers Photonics work closely with research centres such as the James Watt Nanofabrication Centre at the University of Glasgow and the Scottish Microelectronics Centre in Edinburgh. Here, innovation is measured not just in patents, but in what is actually built. This hands-on work environment is the perfect space for anyone passionate about technology, creativity, and shaping a more sustainable future.

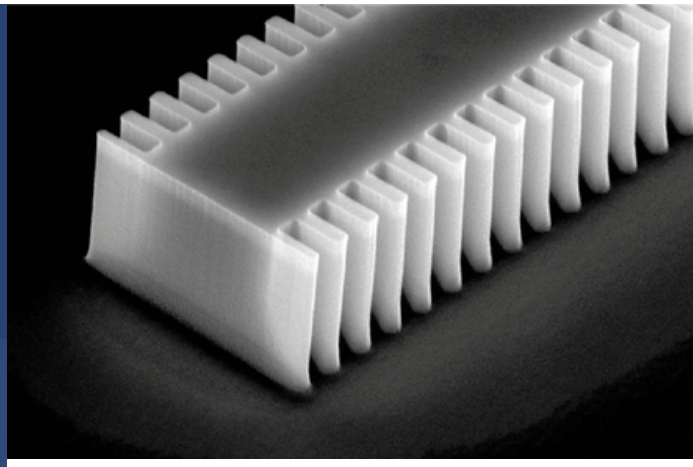


Image courtesy of the
James Watt Nanofabrication Centre
University of Glasgow

Curious about studying Electronics Engineering? Explore local opportunities

- James Watt Nanofabrication Centre
- Scottish Microelectronics Centre
- University of Edinburgh
- University of Glasgow
  - ANALOGUE - Advanced Semiconductor Packaging Facility
  - Semiconductor Device Group
- University of Strathclyde
  - Semiconductor Spectroscopy and Devices research group
  - SEQUEL Lab
- Central Manufacturing Institute Scotland
- Glasgow Kelvin College
- Glasgow Clyde College
- City of Glasgow College
- West Lothian College
- Dundee and Angus College
- West College Scotland
- National Manufacturing Institute Scotland
- Glasgow Science Centre
- Aberdeen Science Centre
- Dundee Science Centre

Local organisations

Clas-SiC

Lochgelly KY5 9HQ

Clas-SiC Wafer Fab is a specialist manufacturing facility in Lochgelly, Fife, that produces silicon carbide (SiC) wafers. a very thin, flat slice of a special crystal made from silicon and carbon. Their wafers are the foundation for making powerful Electronics.

They represent the new generation of semiconductor materials because compared to normal silicon, SiC can survive higher temperatures and wastes less energy, making electronics more efficient. They are essential for technologies like electric vehicles, fast-charging systems, renewable-energy converters, aerospace electronics, and industrial power equipment. By making SiC wafers here in Scotland, Clas-SiC helps the UK create cleaner and more efficient electronic devices. This means less wasted energy and fewer carbon emissions, which is better for the environment.

If you are interested in engineering, materials science, Electronics, or hands-on manufacturing, Clas-SiC offers future career paths in cleanroom fabrication, process engineering, equipment maintenance, quality control, and technician roles.

© Clas-SiC

ST Microelectronics

Edinburgh EH3 5DA

ST Microelectronics' Edinburgh Design Centre is a hub for chip design, where engineers create the smart electronic systems used in everything from smartphones to industrial automation.

The Edinburgh team focuses on designing how a chip "thinks" and reacts to what's happening around it. They work on things like imaging (helping devices see), sensing (helping devices detect changes), power devices (managing energy), and signal processing (helping devices understand and use information). ST Microelectronics is home to talented engineers such as Sara Pellegrini, whose work helps develop technologies that make everyday Electronics faster, safer, and more energy-efficient.

If you enjoy problem-solving, coding, maths, or physics, this design centre offers exciting pathways into roles such as electronic design engineer, software developer, data specialist, or systems architect. ST's Edinburgh office also works closely with Scottish universities. That means, you can follow routes like apprenticeships, engineering degrees, or postgraduate study and reach high-level careers, right here in the Central Belt.

Local stories

HI, MY NAME IS DANI

My job title is “Manufacturing Excellence Assistant Engineer”. My responsibilities as an equipment engineer includes carrying out tasks such as preventative maintenance, fault diagnosis and testing on both mechanical and electrical equipment.

I am working on improving our Laser Anneal machine. We are unable to run this machine automatically due to the wafer edge not being detected, so it’s having to be run manually for now. This is not ideal, as it means an operator needs to stand at the machine, reducing productivity elsewhere in the fab. By resolving this challenge, it means more wafers will be processed throughout the fab, resulting in more devices being shipped out for use in renewable applications!

Something I am very proud of is achieving my HNC in Electrical Engineering and getting to where I am today as an Assistant Engineer. When I was younger, school wasn’t my strong point as I didn’t feel academically capable so to be where I am today is something I would have never imagined - I will always be proud of myself.

I like that everyday is different, we are a development fab so there are always challenges to improve current processes and our state-of-the-art machinery, this gives me opportunities to expand my knowledge through hands on experience and training.

At Clas-SiC, I have been able to gain a wide variety of experience by working alongside a very knowledgeable process, equipment and facility engineers who have guided and mentored me. I have also had the opportunity to travel to China to help set up Equipment for one of our customers.

Curiosity is the perfect place to start. You don’t need to know if Electronics is ‘for you’ yet, just try a small project and see how it feels.

Electronics is such a broad field that most people eventually find a part of it that sparks their interest, and even exploring it gives you valuable problem-solving skills!

Hands on science for all

Scotland has a long history of engineering education, and today local science centres and outreach programmes also help bring the world of semiconductors to life!

At Glasgow Science Centre or through Edinburgh University Students Association, curious minds can take part in exiting workshops and hands-on engineering sessions that show how classroom learning connects to real life solutions. If you're visiting Dundee, Dundee Science Centre also offers Electronics and robotics workshops where you can try things out and explore science in a really practical way.

Inside the mysterious world of compound semiconductors, Cardiff University CPD Unit

UKESF Classroom Resources
Electronics Everywhere

Everyday impact

Across Scotland's Central Belt, innovations made in labs and fabrication plants are shaping how people live, travel, and communicate.

Everyday Tech

From smart-sensor start-ups to photonics companies making tiny lasers for barcode scanners, Scottish innovation helps create the devices we use every day.

Transport

Chips made here help electric vehicles run further and charge faster, supporting a cleaner, more efficient future.

Healthcare

Light-based technologies developed in research centres improve medical imaging, diagnostics, and wearable health monitors.

Communications

Carefully putting chips together, also known as semiconductor packaging, helps make sure Electronics run reliably.

Energy

Power devices and control systems designed in the Central Belt reduce energy waste and support the transition to renewable power.

Opportunity in action

Do you see yourself as a technician, engineer, designer, researcher, or maybe an innovator who loves to make things that work?

From making and protecting chips to designing, testing, and developing new materials, the Central Belt is a place where ideas become real technology. With opportunities across the whole process, there are hands-on roles available at every level. This cluster supports collaborations that connect research with real production, helping anyone interested in learning the craft of making all the way from the cleanroom to the factory floor.

Photonics in Scotland 2025 Report

© Clas-SiC Wafer Fab Limited

Want to explore local opportunities?

- AMD Edinburgh
- Clas-sic
- Diodes
- Edinburgh Sensors
- Fraunhofer
- FTDI
- Power Photonic
- Pyreos
- Quartztec
- Semefab
- Sivers
- STMicroelectronics

Scotland's Central Belt is where imagination meets fabrication. Could the next big breakthrough be yours?

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The UK has a long heritage of technological innovation and has a world-class Electronics sector. It has the potential to grow and innovate to provide solutions to some of the biggest challenges facing society today.

It is our mission to inspire more young people to pursue rewarding careers in this important industry, and give them the skills to thrive.

We are an independent, UK based charity, and we work collaboratively employers, universities and schools to raise awareness of, and promote interest in, Electronics and Semiconductors.

Find out more about our educational resources for:
Aspiring engineers
Teachers

Get in touch
ukesf.org
01285 862381
education@ukesf.org

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Registered Charity SC043940