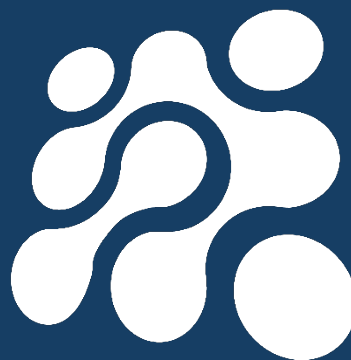




**UK Electronics
Skills Foundation**

**Semiconductor Talent Award
Induction Event
University of Glasgow 1st Sept 2026**

Whilst we
wait to
begin, here
is a puzzle.

**This lock has a 3-digit code.
Can you crack it
using only these hints?**



⑦ ⑨ ③

One number is correct
and in the right place

⑦ ② ⑤

One number is correct
but in the wrong place

③ ① ⑦

Two numbers are correct
but in the wrong place

⑧ ④ ⑨

Nothing is correct

⑧ ⑨ ①

One number is correct
but in the wrong place

Congratulations and well done!



- Achieving successful exam results
- Acceptance on University course
- Being a recipient of the Semiconductor Talent Award.
 - One of 400 students across the UK.



Agenda. What's coming up this afternoon?

- Welcome, Introductions & Housekeeping
- UK Electronics Skills Foundation (UKESF)
- Semiconductors and the UK
- University – Studying and research.
- Meet some Engineers/Networking with semiconductor companies.
- Hear from industry.
 - Arm Early Careers/Talent Team
 - Michael O'Sullivan from Cadence
- Information about the Award and plans for the programme this year.
- Any questions?
- Group Photo



PRINCESS ROYAL
TRAINING AWARD
2025

Tackling the Skills Challenge in the UK's Electronics Industry



Connecting the most
capable students from
top universities with
leading employers



University



**UK Electronics
Skills Foundation**



Industry

Skills advocacy on
behalf of the
Electronics Industry



Encouraging more
young people to
study Electronics



School

Founded in 2010, the UKESF is the only STEM organisation in the UK solely focused on Electronics and semiconductors. We are a multi award winning charity, and our purpose is to provide opportunities to young people and to encourage them to pursue study and careers in the industry.

Technology is the future

Technology depends on Electronics & Semiconductors



**UK Electronics
Skills Foundation**



Advanced transport systems



Medicine and healthcare



Smart Agriculture



Internet of things



Net Zero



Virtual reality

And so much more!

2007 – the year of the Smart Phone



On January 9, 2007, Steve Jobs announced the iPhone at the Macworld convention. He said that the first iPhone would be released later that year. On June 29, 2007, the world's first Smart Phone was released.

iPhone 14 - Processor and Transistors



**UK Electronics
Skills Foundation**

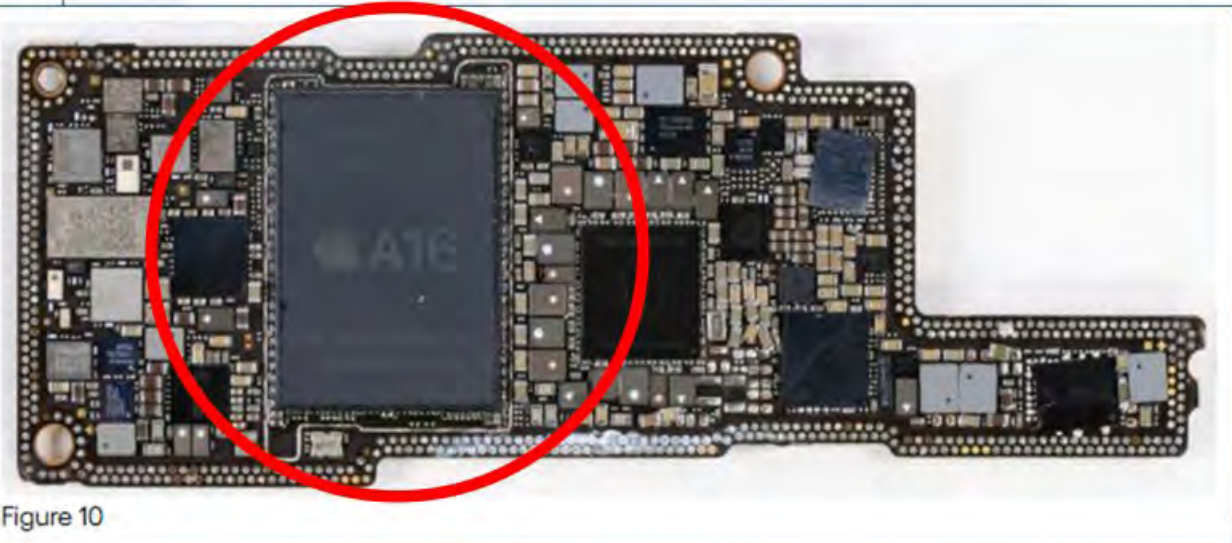
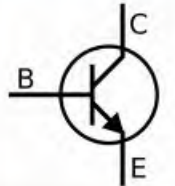


Figure 10

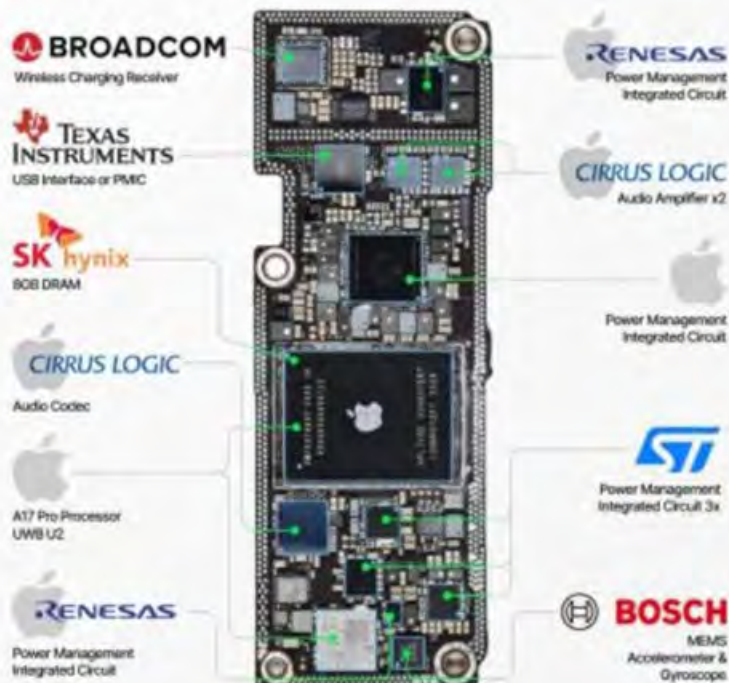


iPhone 15 – Semiconductor Suppliers



UK Electronics
Skills Foundation

Logic Board



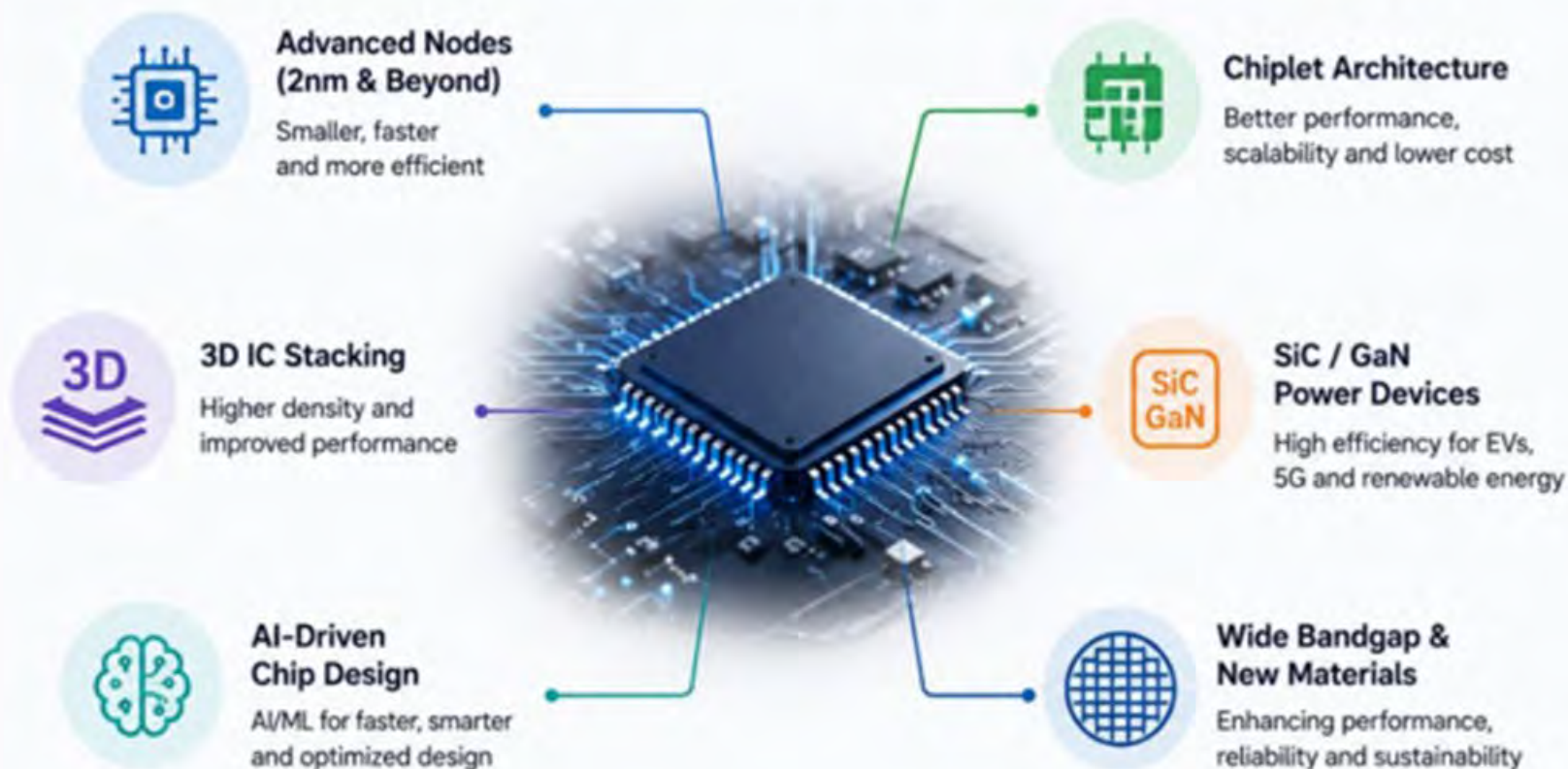
Memory Board



Radio Frequency Board



Latest Trends in Semiconductor Technology (2026)



Smaller. Smarter. Faster. More Efficient.
Driving the future of technology.



**UK Electronics
Skills Foundation**

Semiconductor Talent Award 2026



**UK Electronics
Skills Foundation**



"This Award has been phenomenal, and has made a huge difference in my first year at University. Beyond financial support, the exposure to the industry and professional development opportunities have provided me with a clearer pathway into the electronics/semiconductor industry."

Semiconductor Talent Award-holder 2025

The Semiconductor Talent Award 2026 is a Government funded initiative to address underrepresentation and improve social mobility in the UK Semiconductor Industry, to ensure that more capable and motivated students have the opportunity to enter this exciting and growing field.

For 2026/27, a total of 400 awards will be made, 300 to individuals starting an Electrical and Electronic Engineering (EEE) degree (or a closely related subject) and a further 100 Awards to individuals starting Computer Science, Materials Science or Physics degrees. To be eligible, you must be studying at a UKESF Partner University starting in September/October 2026. Read our [Application Guide](#) for the full eligibility criteria.



**Funded by
UK Government**





UK Minister for AI
Kanishka Narayan MP



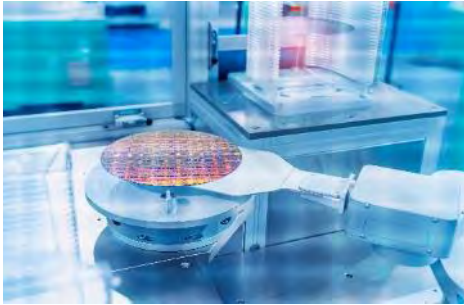
UK Electronics
Skills Foundation

Dr Jessica Dobson
UKRI/Innovate UK



UK Research
and Innovation





Outline

- **Intro**
- IUK Prospectus
- UK Semiconductor Landscape
- Section 1
- Section 2
- Conclusions
- Onwards & Upwards...

Who are Innovate UK and EPSRC within UKRI?

- We are the UK's Research & Innovation agency
- A key delivery body of HMG's R&I policies and strategies
- We support academic research and business-led innovation in all sectors, technologies and UK regions

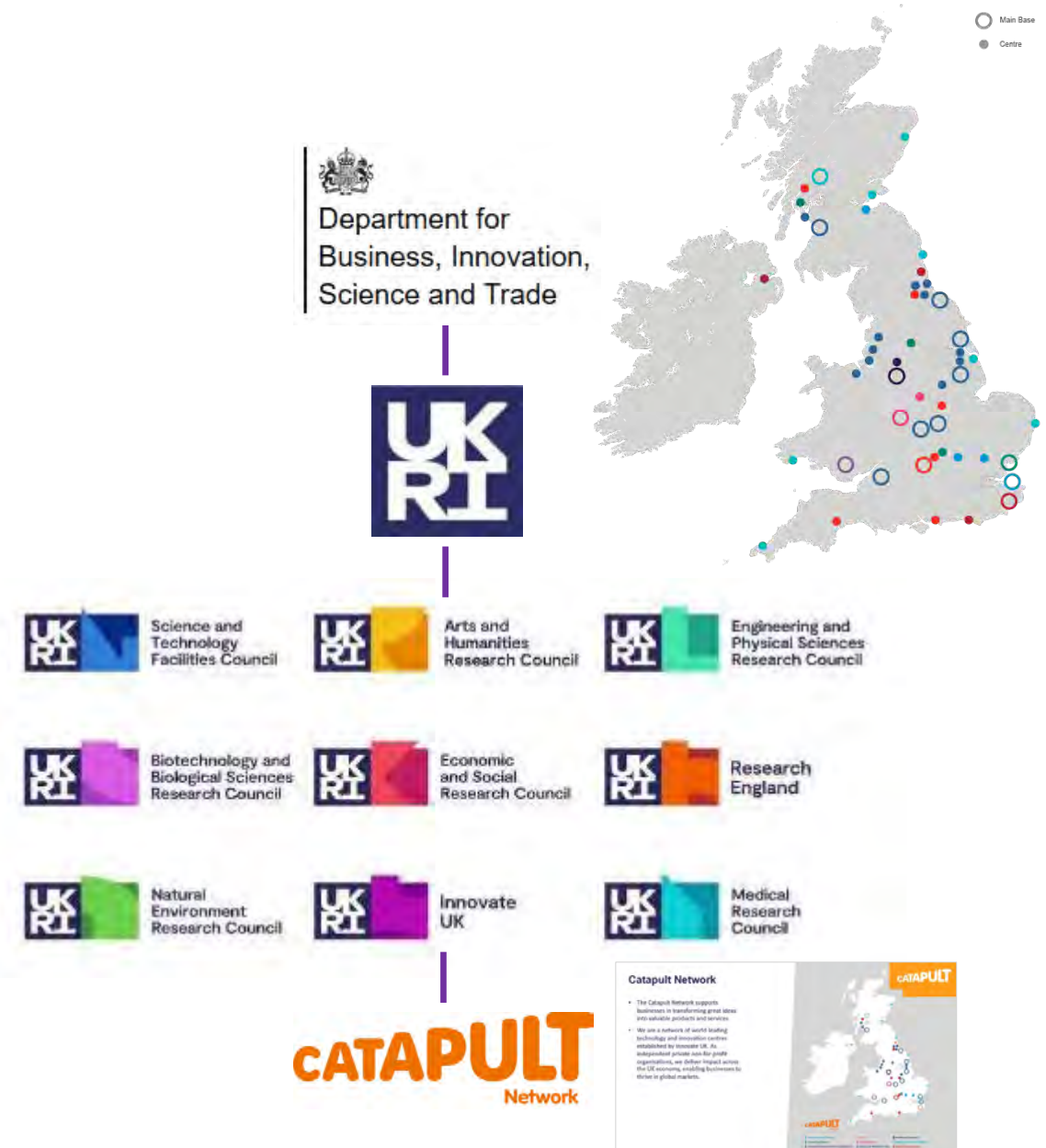
Innovate UK mission

To help UK businesses grow through the development and commercialisation of new products, processes, and services, supported by an outstanding innovation ecosystem that is agile, inclusive, and easy to navigate



EPSRC mission

To support new ideas and transformative technologies which are the foundations of innovations that improve our economy, environment and society, by investing in world-leading research and skills



OUR VISION AND MISSION

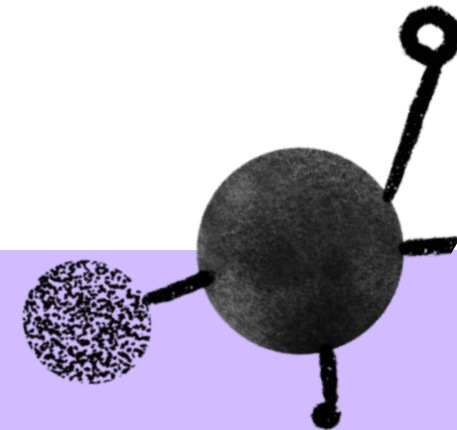
OUR VISION

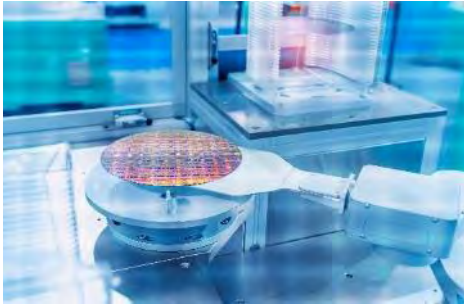
Our vision is for a UK where breakthrough ideas become industry giants.

OUR MISSION

Our mission is to accelerate business innovation for the nation.

We will help breakthrough technologies become scalable businesses – turning innovation into commercial and economic growth.





Outline

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UK Modern Industrial Strategy - Digital and Technologies

The **UK's Modern Industrial Strategy** backs 8 Sectors (*aka IS-8*)

- Advanced Manufacturing
- Clean Energy Industries,
- Creative Industries,
- Defence,
- Digital and Technologies,
- Life Sciences
- Financial Services
- Professional & Business Services

Digital and Technologies Sector Plan emphasises the importance of semiconductors as one of the “frontier technologies”, along with

- *Advanced Connectivity Technologies*
- *AI*
- *Cyber Security*
- *Engineering Biology*
- *Quantum Technologies*
- *Semiconductors*

Collection

The UK's Modern Industrial Strategy 2025

Policy papers, Sector Plans and documents in support of the UK's Modern Industrial Strategy.

Policy paper

Sector Plans

Updated 8 September 2025



Application Areas aligned to IS-6*

		Medical	Automotive	Aviation	Maritime	Space	Nuclear	Energy	Electrification	Comms	Cryogenic	Chemical	Robotics
	Advanced Manufacturing												
	Clean Energy												
	Creative Industries												
	Defence												
	Life Sciences												
	Digital and Technologies AI, ACT, EB, SC, QT, Cyber												

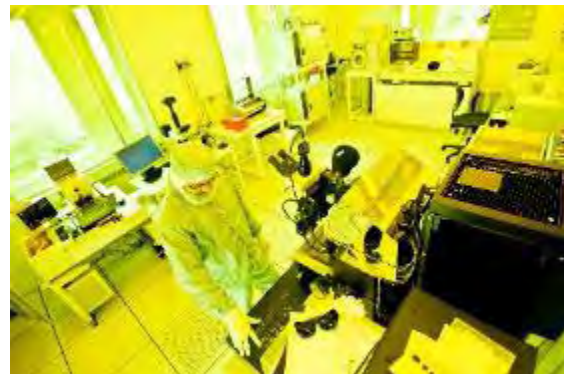
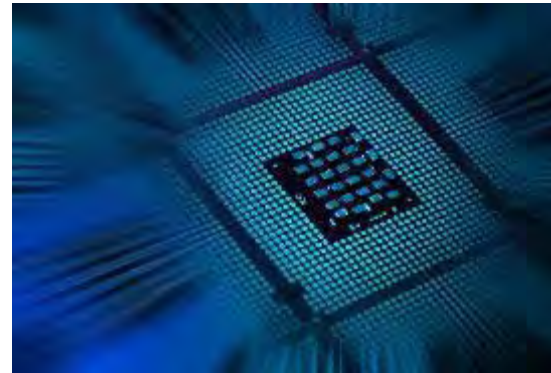
*IS-6 is the subset of IS-8 without “Financial Services” and “Professional & Business Services”, which IUK are targeting directly

What are the UK Strengths?



Research Strength

- Photonics / photonic systems integration
- Integrated circuit design
- Compound semiconductors
- Embedded security, on chip
- Polymer electronic materials
- New and advanced materials

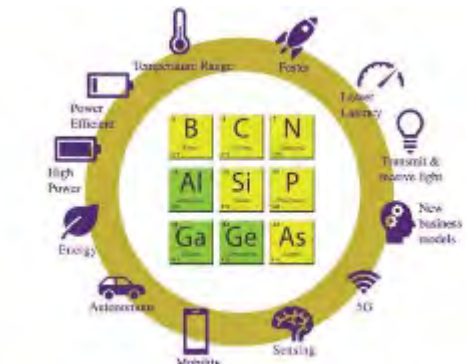


Semiconductor Design/IP

- Over 100 semiconductor design/IP companies,
- Global companies in IP, AI, SoCs, IoT, graphics
- World leading chip-design sector with clusters including Cambridge, Bristol and Edinburgh

Compound, Advanced Materials, Advanced Packaging

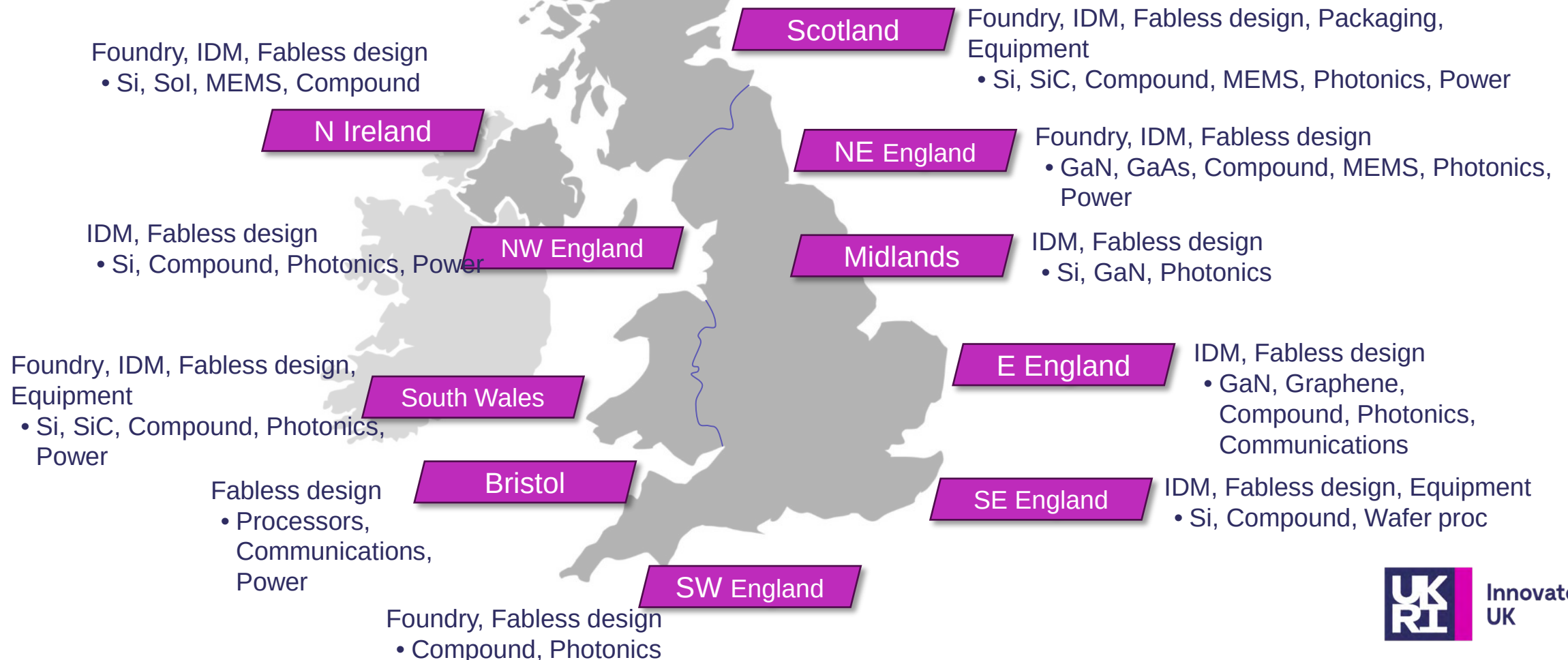
- Strengths across the UK, including South Wales, Scotland, NE England, Cambridge, SW England
- World leading advanced materials companies
- uWBG – GaN, SiC, Ga₂O₃
- Photonics, PICs, Co-Packaging
- Heterogeneous/Hybrid



Regional strengths across the UK

IP Licensing	Design	Manufacture	Packaging	Equipment & Supplies
10	160	30	10	50

Approximate number of UK Companies engaged in each stage of the value chain



The Ubiquitous AI – (*“...the AI Hardware Action Plan..... and it’s not all compute”*)

- *“AI hardware should be understood as **the chips and semiconductor technologies that underpin AI, required to enable capability across data centre, edge and embodied AI systems.**”*
 - **Compute**
 - **Photonic interconnects and data movement -**
 - **Sensing**
 - **Power and energy systems**
- *“The UK has **differentiated strengths** within industry and academia across a range of **AI enabling semiconductor technology areas**”*
 - **Leading materials science and specialist manufacturing**
 - A **world-leading research base** with a long history in computer science, electronic and photonic engineering, and quantum computing.



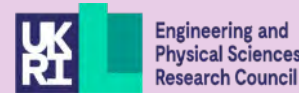
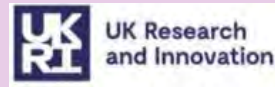
UK Semiconductor Sectoral Analysis

- Dedicated companies generated an estimated £10.6bn in revenue, £7.5bn in GVA and directly employed approximately 16,350 people in 2025 - up 7%, 9% and 9% respectively since the baseline study.
- The sector is estimated to support up to ~32,550 jobs across the economy.
- Average GVA per employee among dedicated semiconductor companies is estimated to be approximately £460k.
- Dedicated companies employ an estimated 15,000 people in the UK. UK headquartered companies account for more than 60% of this total
- There is evidence of greater government support for the sector since the publication of the National Semiconductor Strategy, at both national and regional levels, spanning R&D, skills and use of public finance institutions
- Future revenue scenarios suggest that dedicated UK semiconductor revenues could be between £13bn and £17bn by 2030. The difference in semiconductor revenues over the six years to 2030 under the low and constant (high) growth scenarios is estimated to be £13.5bn



UK Semiconductors - it's a wide ecosystem.....

Government



Trade



Missions & Outcomes

ECOSYSTEM & ADVOCACY

We will have a more
connected and visible
UK innovation
ecosystem

STRATEGY & ROADMAP

We will have an aligned
strategy including a
long-term roadmap
guiding investment

SCALE-UP

We will have
accelerated the scale-
up and growth of UK
semiconductor
companies

INTERNATIONAL

We will have stronger
global partnerships and
greater inward
investment

WORKFORCE

We will have developed
the skilled workforce
the sector needs

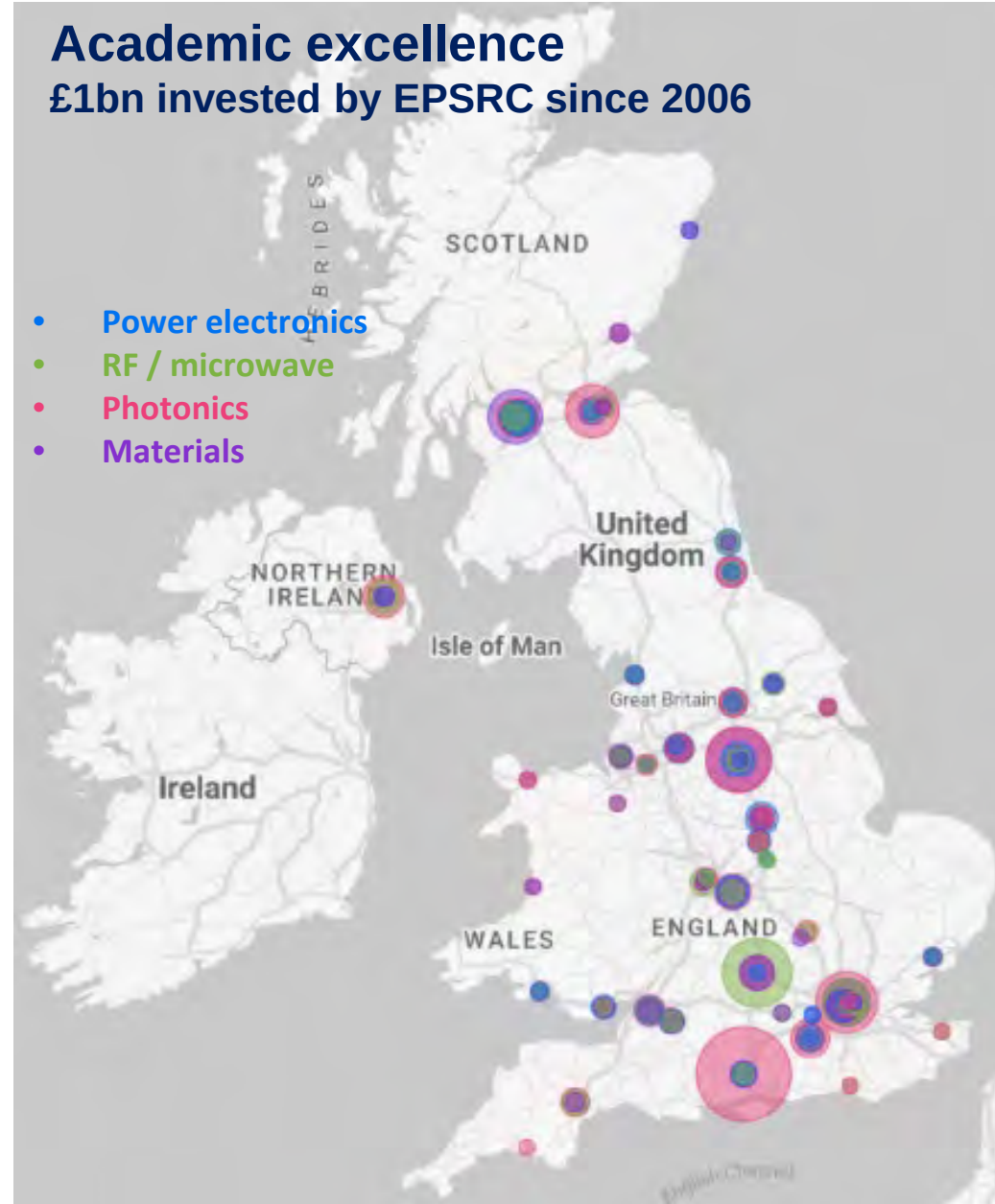
Semiconductor research & innovation capabilities

- [Future Photonics Hub](#)
- [National Epitaxy Facility](#)
- [Future Compound Semiconductor Manufacturing Hub](#)
- [Royce Institute](#) - Advanced Materials
- [REWIRE IKC](#) - Wideband Gap Semiconductors
- [C-PIC IKC](#) - Silicon Photonics
- [CHIMES IKC](#) – Heterogeneous Integration
- [NEUROWARE IKC](#) - Neuromorphic computing hardware
- [NMIS](#), [ANZIC](#), [NASPIC](#) - Manf, NZ, AdvPack
- [eFutures](#) - Academic Network for electronics



Academic excellence
£1bn invested by EPSRC since 2006

- Power electronics
- RF / microwave
- Photonics
- Materials



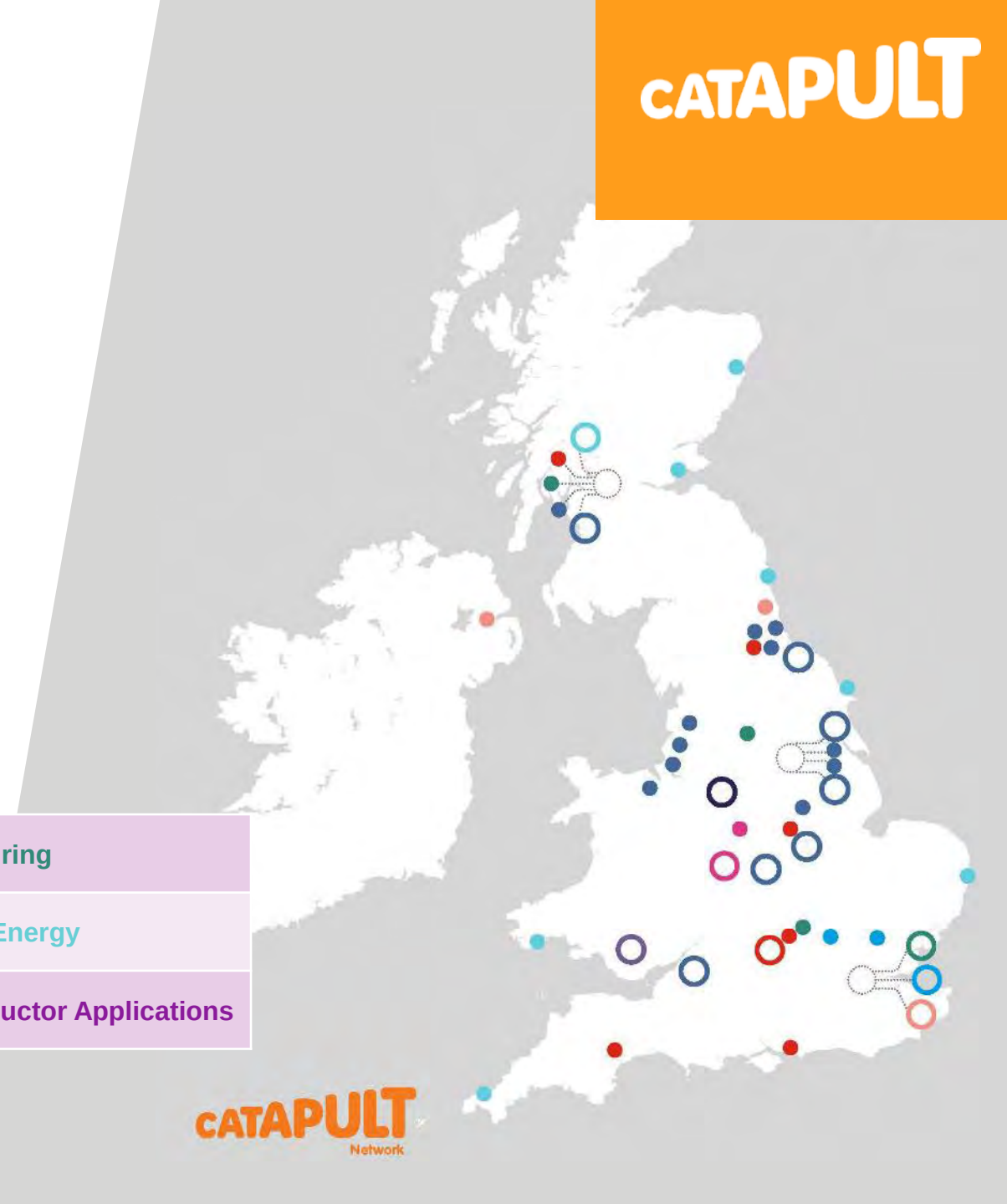
Catapult Network

- The Catapult Network supports businesses in transforming great ideas into valuable products and services.
- We are a network of world-leading technology and innovation centres established by Innovate UK. As independent private non-for-profit organisations, we deliver impact across the UK economy, enabling businesses to thrive in global markets.

o Cell & Gene Therapy	o Digital	o High Value Manufacturing
o Connected Places	o Energy Systems	o Offshore Renewable Energy
o Satellite Applications	o Medicines Discovery	o Compound Semiconductor Applications

CATAPULT

CATAPULT
Network



Recent(ish) - UK Government News

Policy paper

National semiconductor strategy

Published 19 May 2023

Corporate report

UK Space Agency Corporate Plan 2025-26

Published 13 October 2025

Collection

The UK's Modern Industrial Strategy 2025

Policy papers, Sector Plans and documents in support of the UK's Modern Industrial Strategy.

techUK news and views 17 Mar 2026

UK Government announces up to £2 billion for quantum technologies

Policy paper

Advanced Manufacturing Sector Plan

The plan to increase investment and growth in Advanced Manufacturing, as part of the UK's Modern Industrial Strategy.

Policy paper

Creative Industries Sector Plan

This Plan will ensure that the UK is the number one destination worldwide for investment in creativity and innovation and aims to significantly increase investment by 2035.

Policy paper

Clean Energy Industries Sector Plan

The UK's plan to create investment, growth, and good jobs in clean energy industries, as part of the UK's Modern Industrial Strategy.

Policy paper

Defence Industrial Strategy 2025: Making Defence an Engine for Growth

The defence sector plan of the UK's Modern Industrial Strategy.

Policy paper

Life Sciences Sector Plan

The Life Sciences Sector Plan sets out a vision and an action plan to drive growth, innovation, and better health outcomes.

Policy paper

Digital and Technologies Sector Plan

The UK's Plan to drive growth in the digital and technologies sector and unlock growth in the technologies of the future as part of the UK's Modern Industrial Strategy.



Innovate
UK

Recent - UK Government(ish) News

Area of investment and support

National Materials Innovation Programme

The National Materials Innovation Programme (NMIP) aims to establish a nationally coordinated approach to the UK advanced materials sector, driving the translation and adoption of materials across key industrial sectors.

techUK news and views 17 Mar 2026

UK Government announces up to £2 billion for quantum technologies

Correspondence

CST advice on growth and global leadership in photonics

Published 9 March 2026

Compound Semiconductor Applications Catapult to transition to Semiconductor Catapult, as part of the AI hardware plan

Press release

UK-Japan Frontier Technology Partnership

UK-Japan Frontier Technology Partnership.

Policy paper

UK AI Hardware Plan

Published 8 June 2026

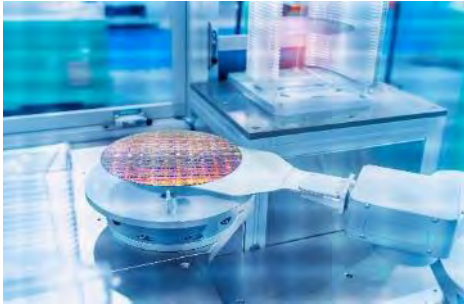


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Technology Summary

- **Technical Convergence:** High value applications for developing quickly especially at the convergence of critical technologies – AI, Quantum, Telco, Photonics, etc.....
- **Co-Design is Mandatory:** Successful deployment requires the simultaneous development of advanced WBG/UWBG crystal growth and thermo-mechanically matched packaging solutions;
- **Geopolitical and Infrastructure Imperative:** Developing sovereign capability in harsh-environment electronics directly de-risks the UK's energy, defence, and utility grids from external supply shocks, shifting the UK from a technology importer to a critical global exporter of high-reliability components.
- **Commercialisation Pathway:** Immediate R&D priorities should focus on materials developments, packaging processes and standardising metrology to accelerate the transition of lab to market with fully qualified industrial applications.
- **Advanced semiconductor packaging** is evolving into a **system-level technology platform**, integrating materials science, electromagnetics, and thermal engineering to enable **resilient, high-performance electronics in the most demanding environments.**



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- **Onwards & Upwards...**

Onward and Upward 🙌

General

- Sharing expertise and knowledge between the diverse communities and applications
- Connecting the dots.... defragmentation of ecosystem

From the wider electronics industry/community

- Fast innovative design – from Lab-to-Market

For the UK to provide

- Recognition of (*and then dedicated support for...*) the needs and opportunities

For benefit of the UK (.... and beyond)

- High technology making the world a better place... energy, comms, health....
- The UK can, and should, be a relevant part of the global ecosystem
- Creating a health ecosystem of UK anchored companies
- Economic growth – a skilled and high paid UK workforce



■ **THANK YOU**
■ Any questions?



Dr Jessica Dobson
Knowledge Transfer Manage
Emerging Technologies



UK Electronics
Skills Foundation

Professor Mahmoud Wagih

University of Glasgow



University
of Glasgow



A Career(?) In Green Radio Frequency (RF) Semiconductors

Dr Mahmoud Wagih

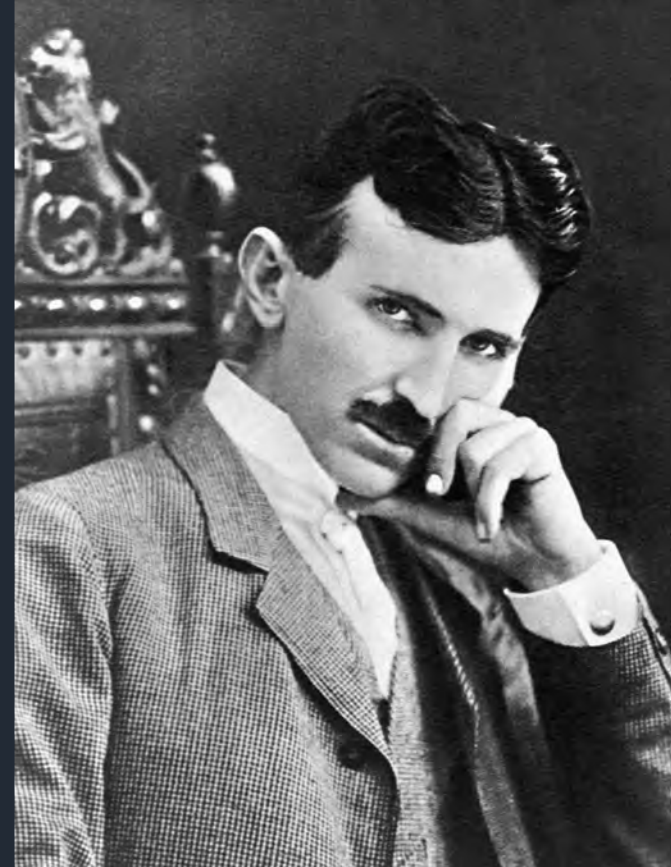
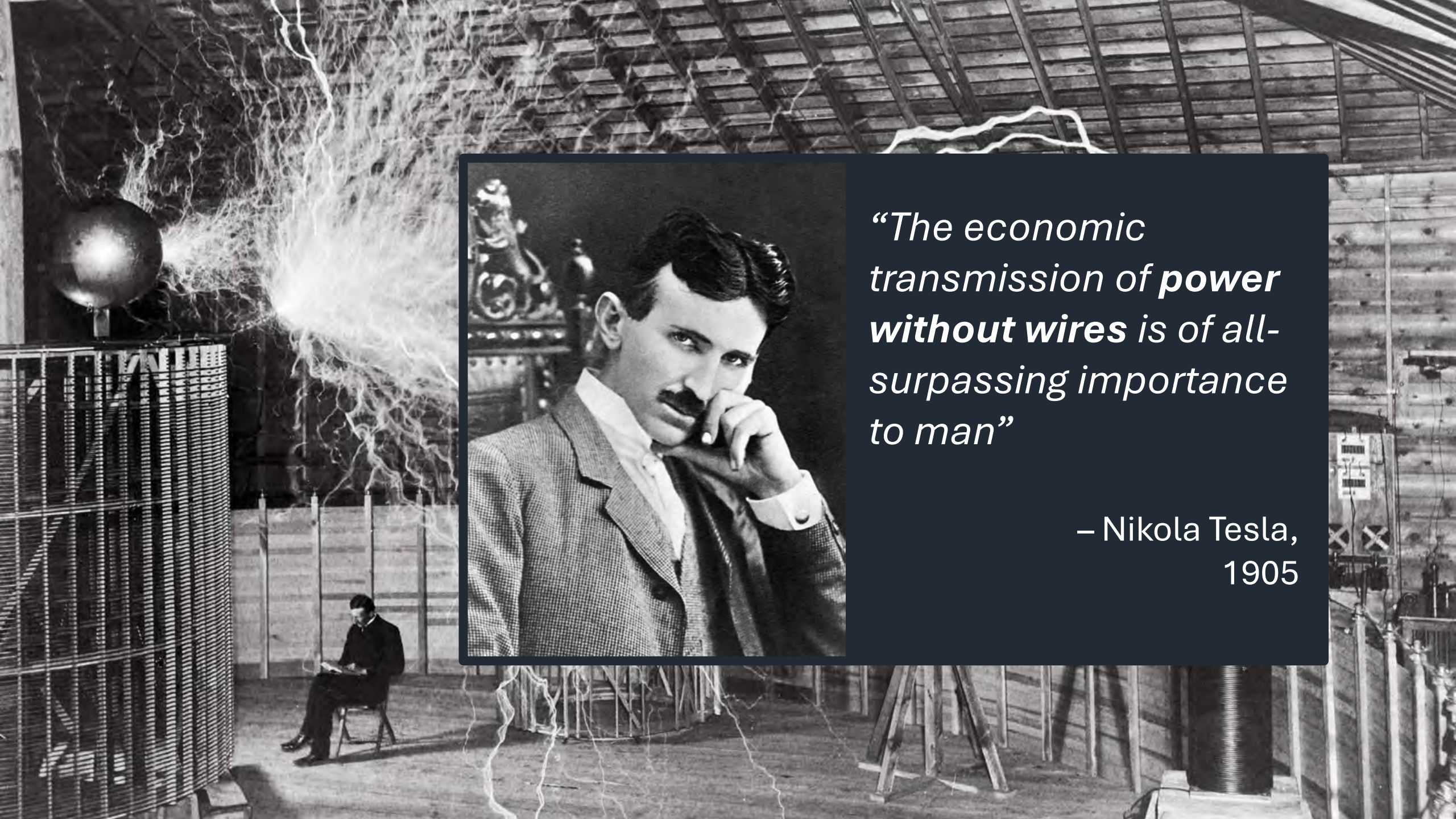
*Reader, University of Glasgow
Founder & CEO, RX Watt
IEEE Distinguished Microwave Lecturer*



University
of Glasgow



UK Research
and Innovation



*“The economic transmission of **power without wires** is of all-surpassing importance to man”*

– Nikola Tesla,
1905

A black and white photograph of Leon Theremin performing with his theremin in a concert hall. He is standing, wearing a dark suit, and gesturing with his hands above the instrument. The theremin is a boxy, wooden device with two vertical antennas and several knobs, sitting on a small table. The background shows the ornate interior of a concert hall with tiered seating and a balcony. A semi-transparent dark band across the middle of the image contains a quote in white text.

“The theremin allows us to tap into the **unseen world of electromagnetic waves and manipulate them to create music.**”

*- Leon Theremin
around 1920*



Queen Elizabeth Prize
for Engineering

Studied **EEE BEng** (2015-18)



University of
Southampton



Internship designing USB3.1
circuit boards for 20+ GBPS



arm



Studied
PhD in
Wireless-
Powered
E-Textile



arm

Putting computers in
RFID retail tag **chips**

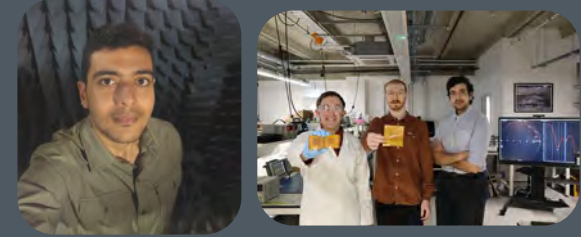
“Make computers”



Math and Physics A-Levels; A*, B, A*

**Academic (Reader)
at Glasgow Univ.**

- Started a lab making sustainable RF electronics
- **Founded a start-up** for long-range wireless charging



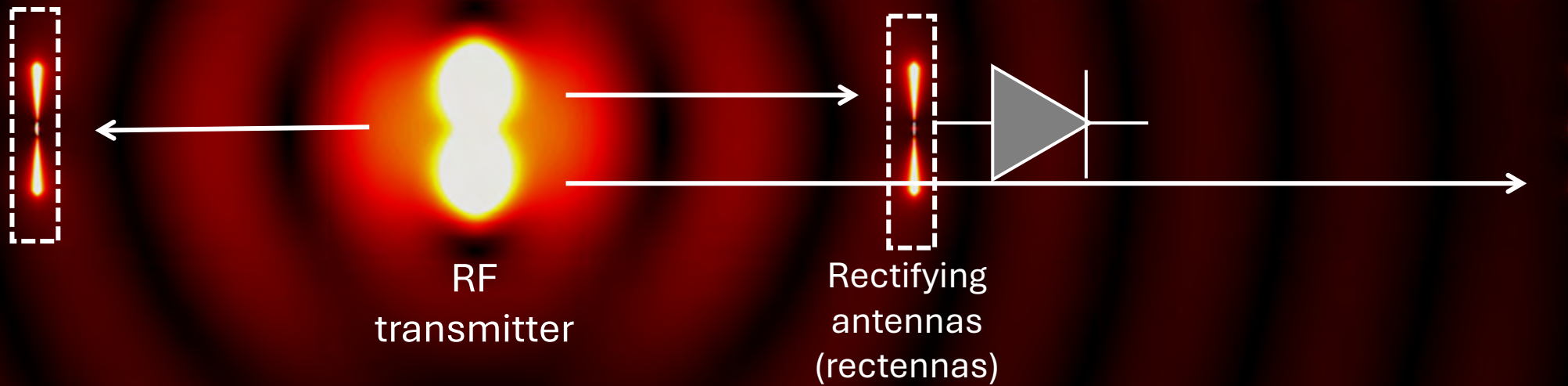
RXWaTT



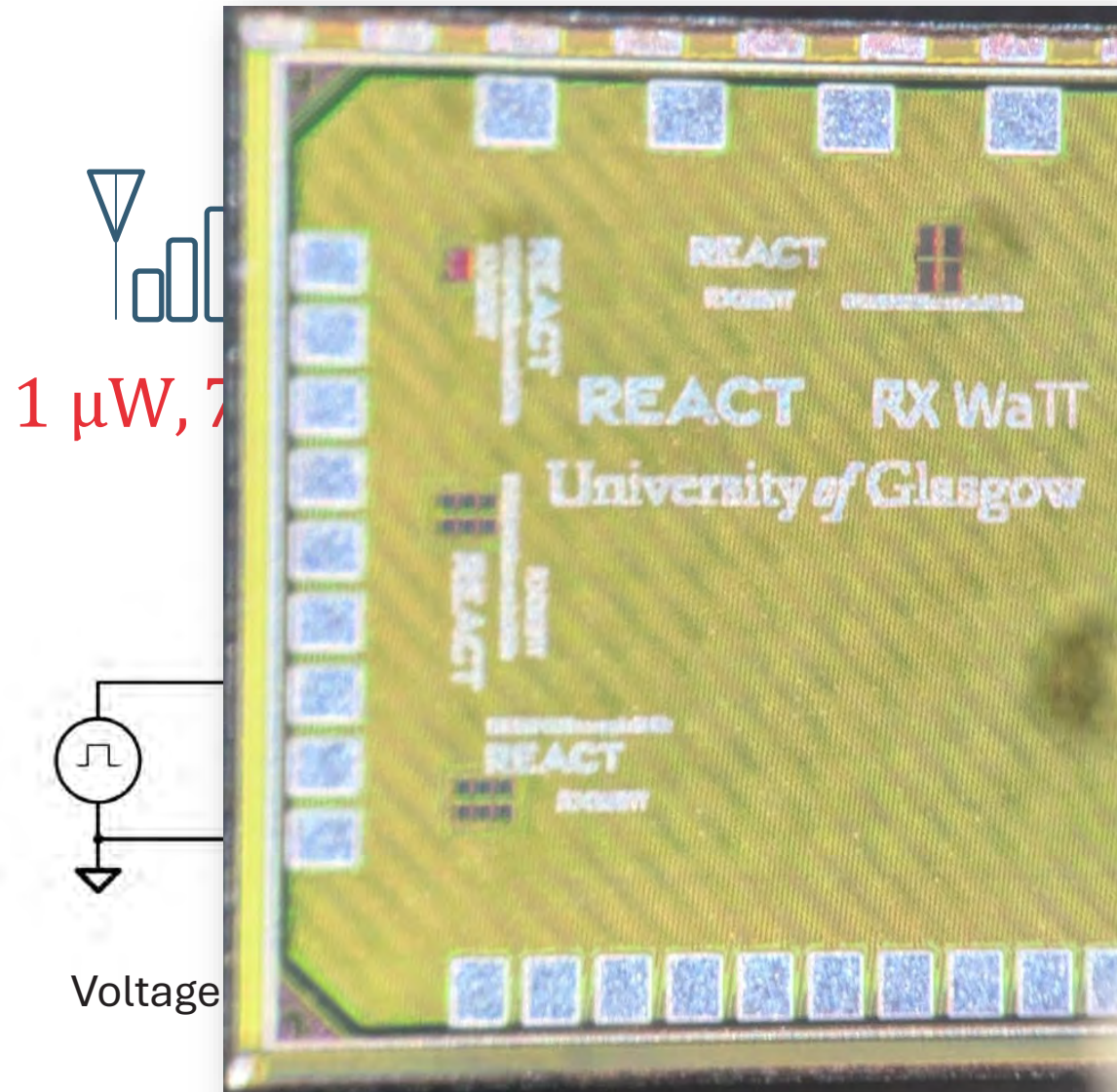
University
of Glasgow



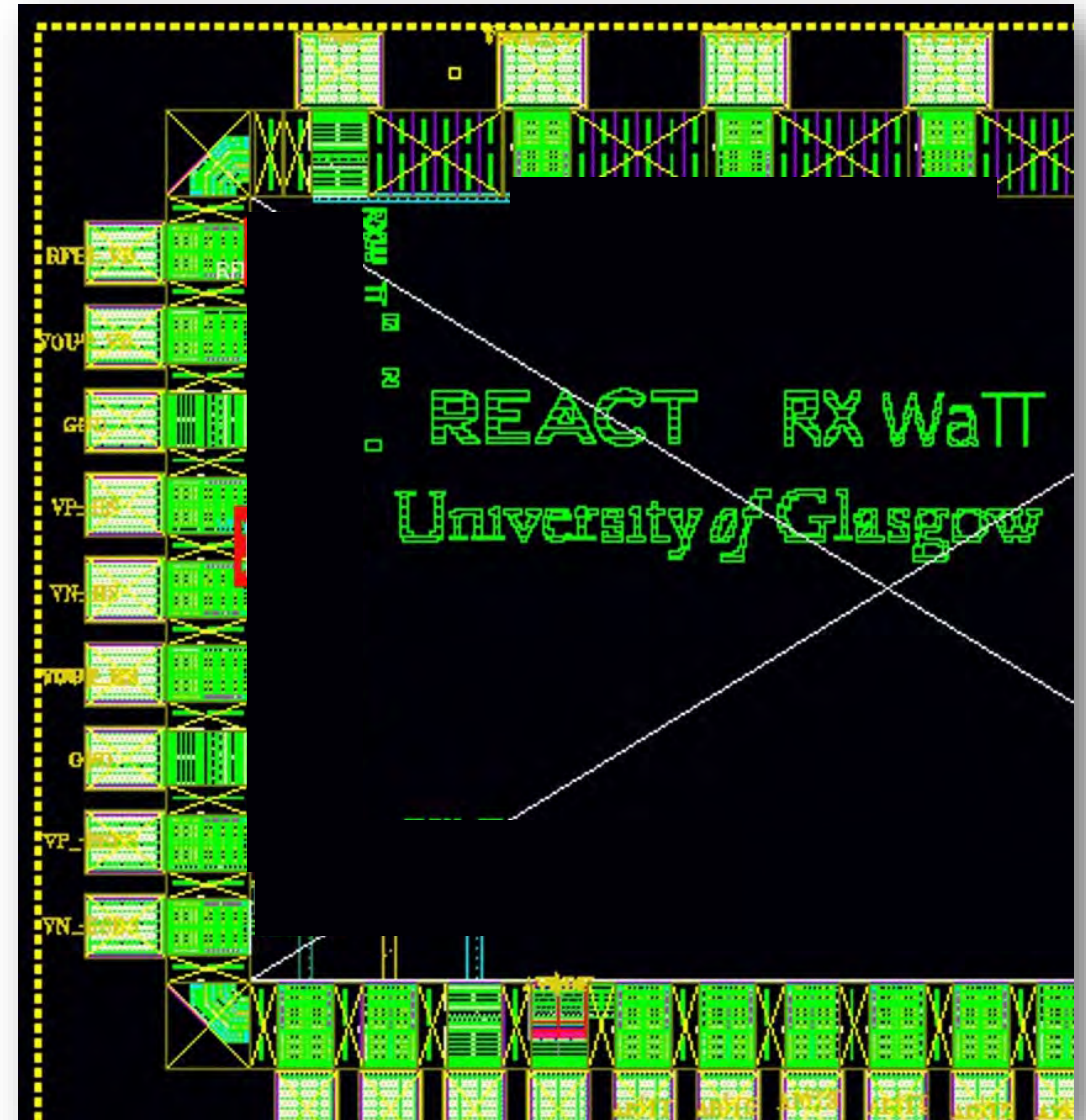
Radio Frequency (RF) Signals to DC Power, Remotely



Chips for Long-Range Wireless Power



Post-fab, silicon chip



Pre-fab., 65 nm Si chip layout

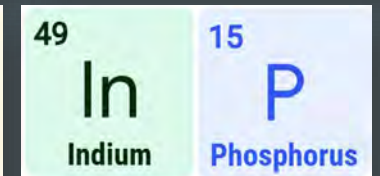
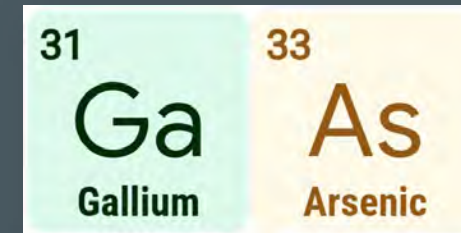
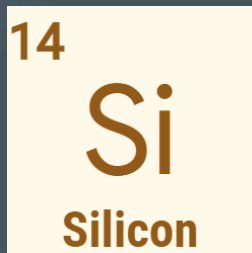
Interesting Wireless Power Demonstrators

- “Insect-scale” drones
- 4,900 Watts per kg
- 5x lighter than a battery

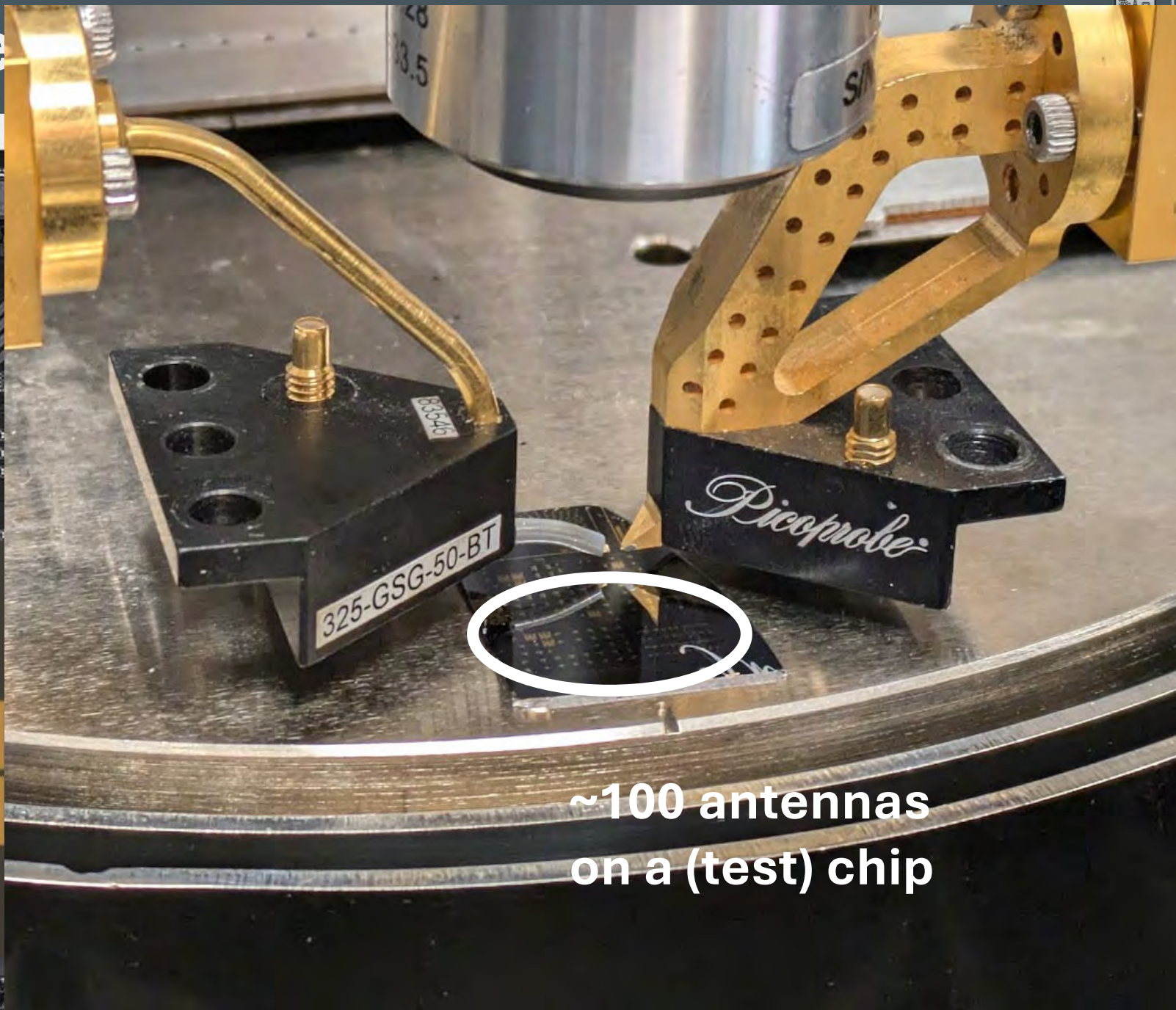
RF Power transmitter

Non-Silicon “Compound” Semiconductors

(I.e. very high power, speed, or both)



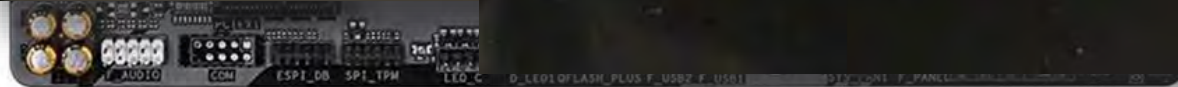
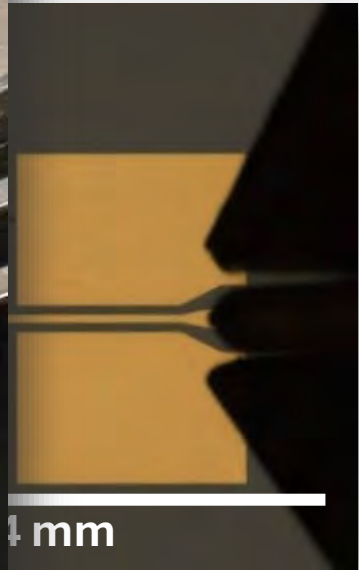
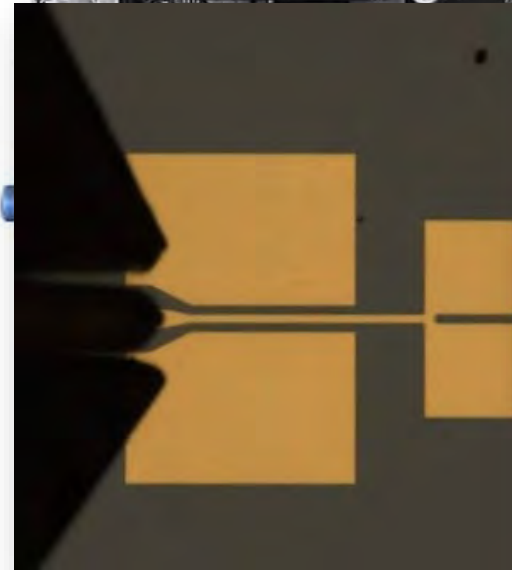
Wireless Se



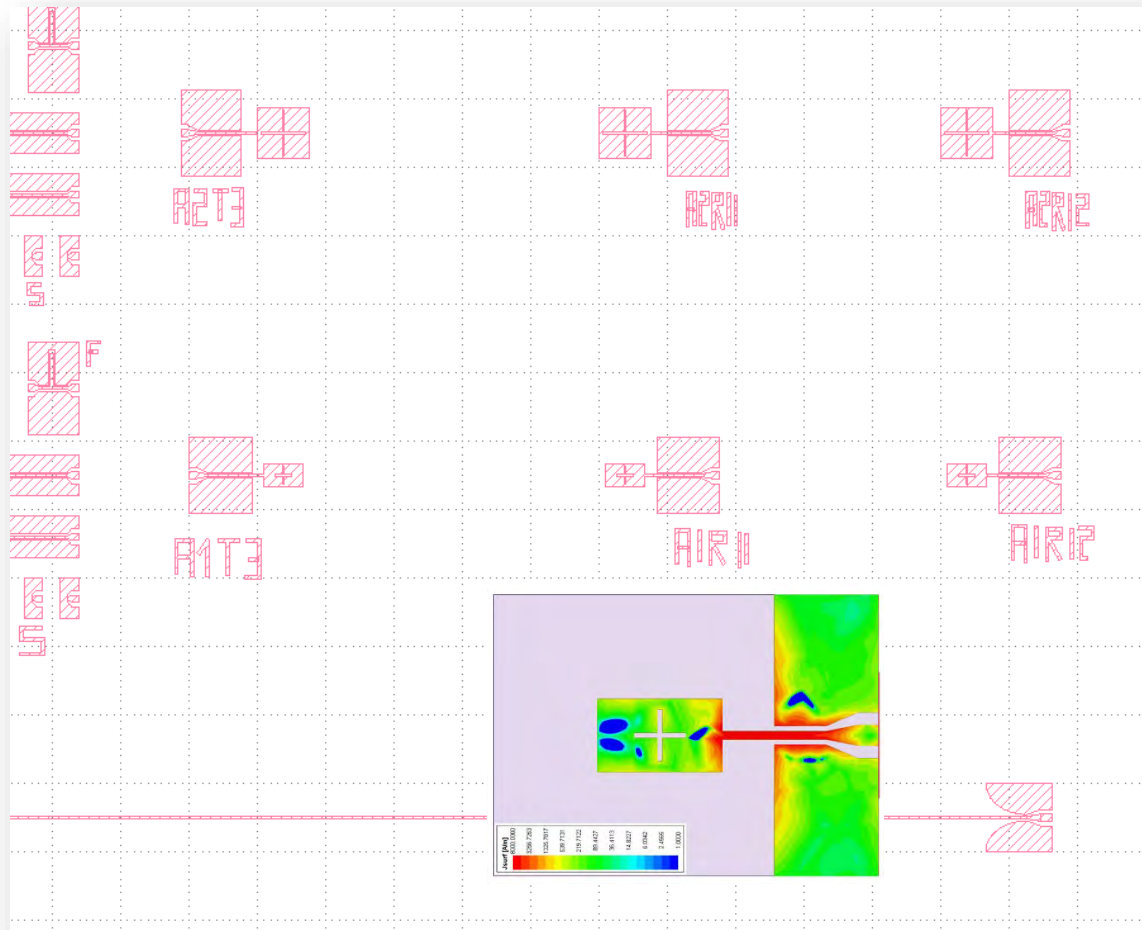
n a medium
itivity)

~100 antennas
on a (test) chip

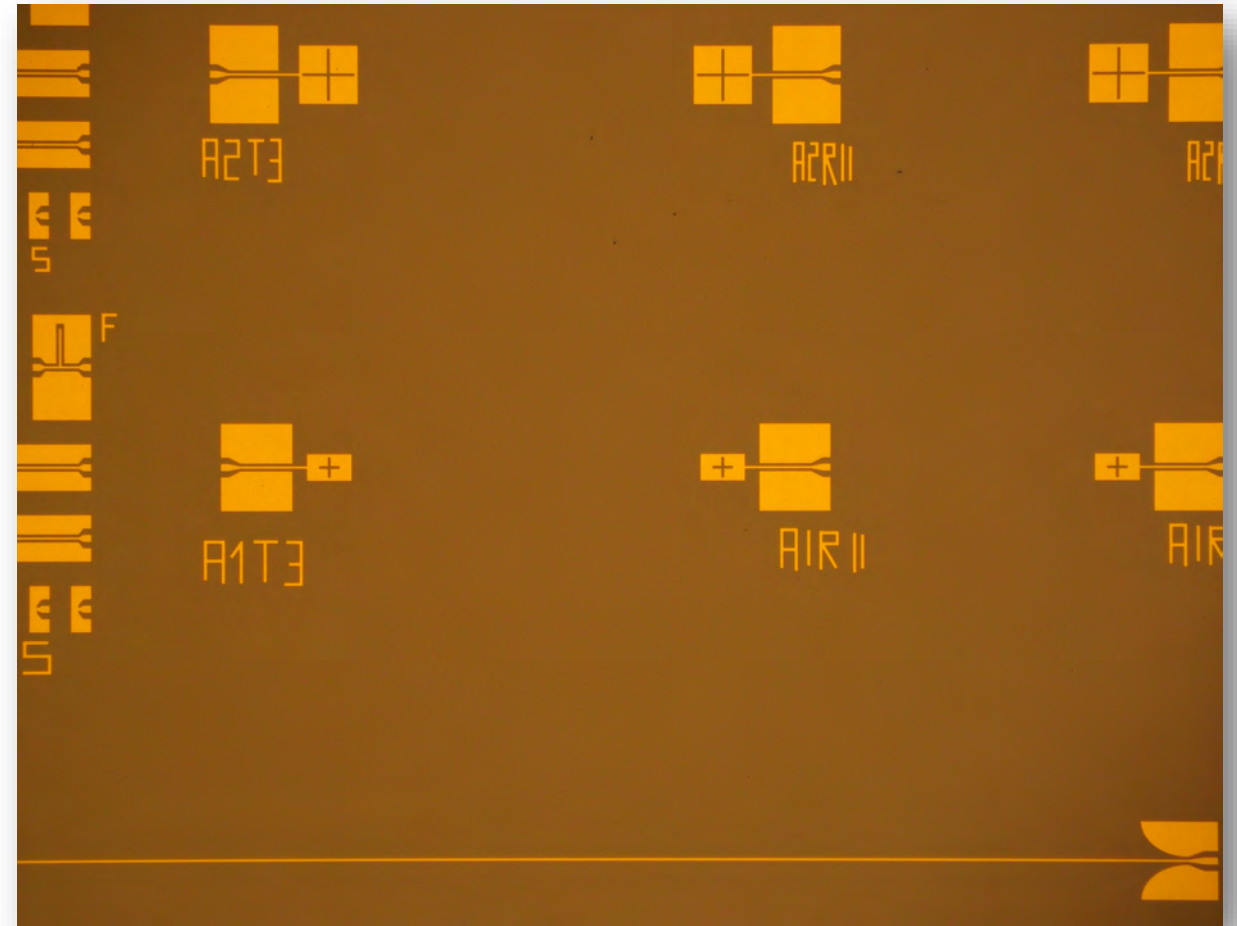
4 mm



Making Chips in Glasgow's Cleanroom



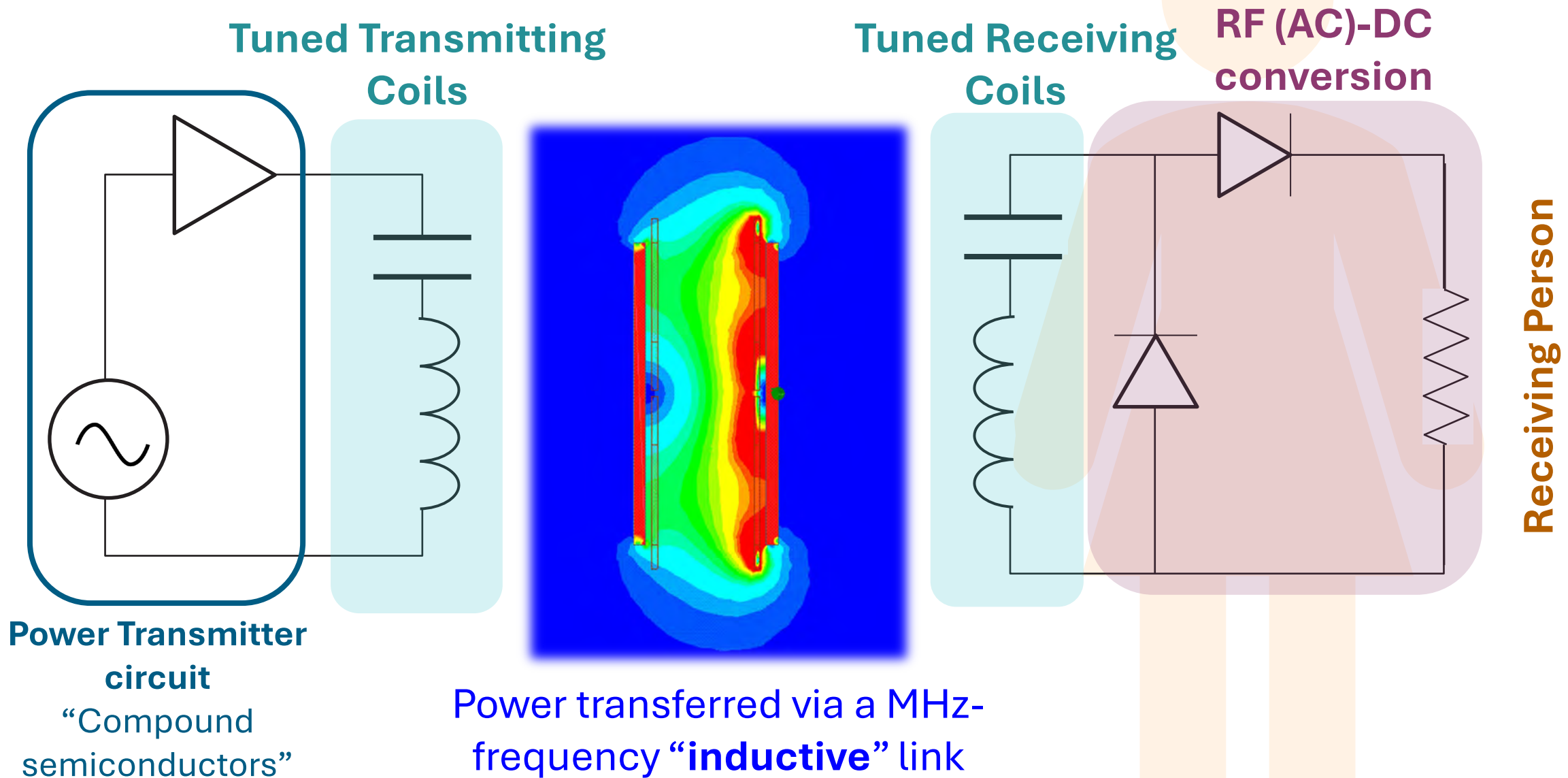
Mask with design



**Gold, titanium, on
Indium Phosphide (InP)**

How to Send >1 Watt to Textile Electronics

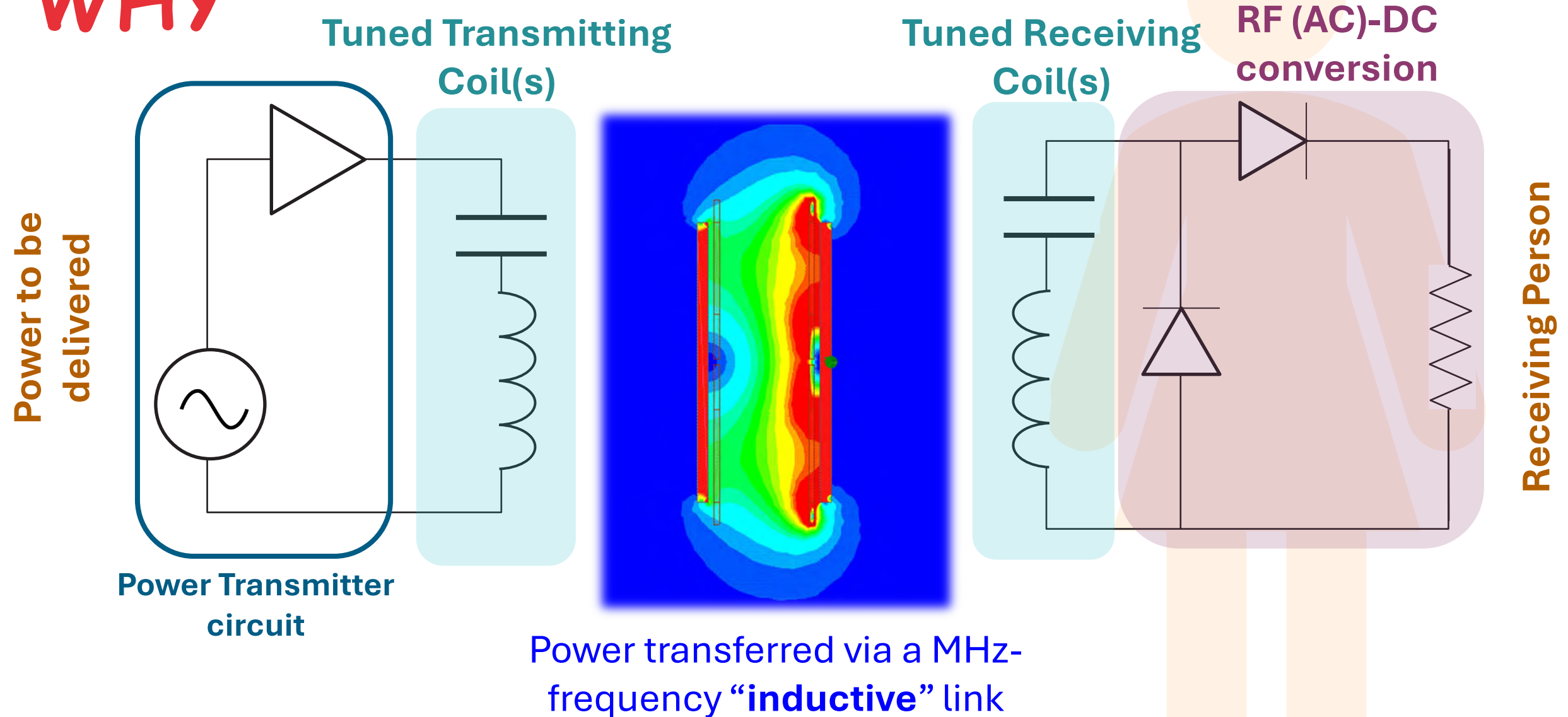
Power to be delivered



Receiving Person

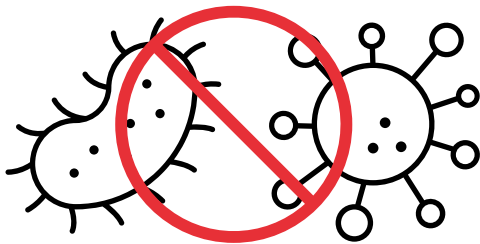
How to Send >1 Watt to Textile Electronics

WHY



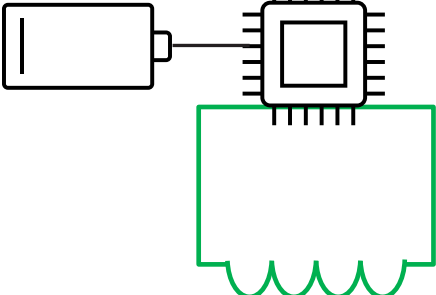
UV Anti-Bacterial Smart Bandage

With more semiconductors than your current bandage!



UV-C:
Safe anti-bacterial
effect
AlGa_N LEDs

Power
hungry
(>1 W)

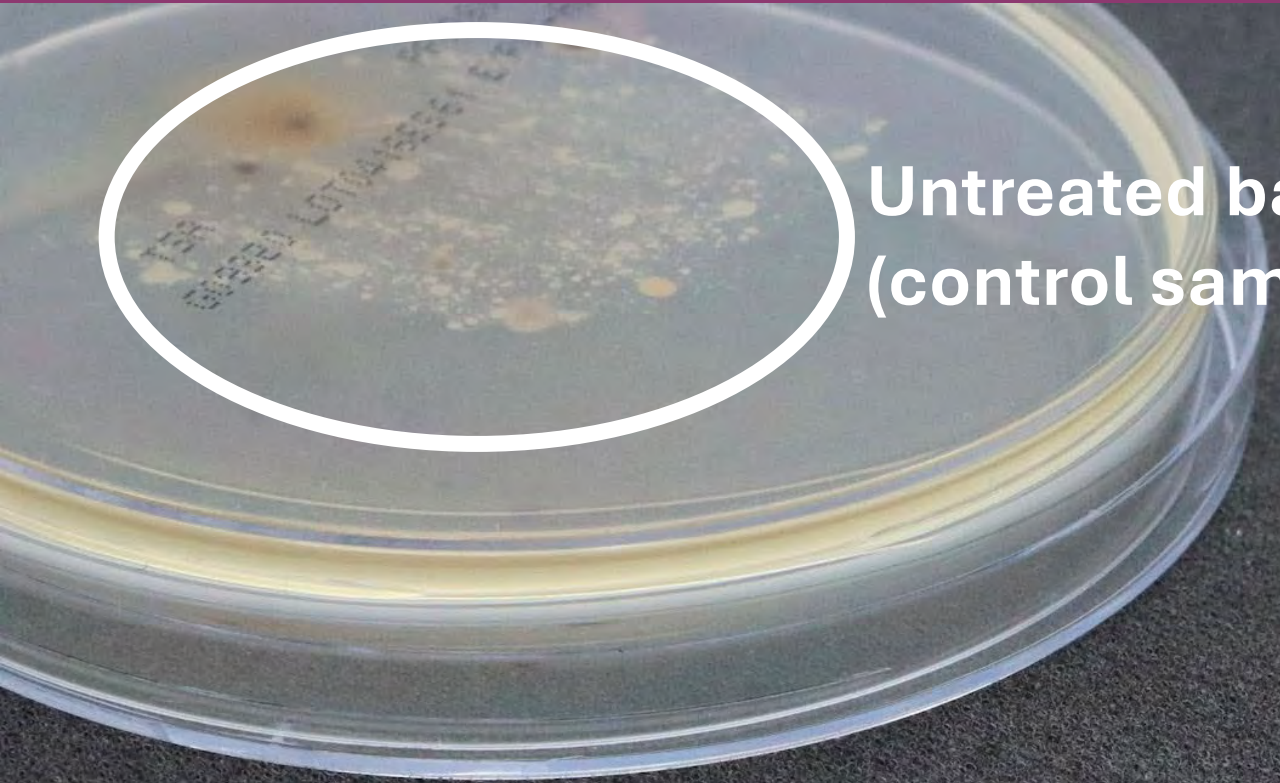


*Continuous, controlled,
power supply*
(Ga_N Amplifier)

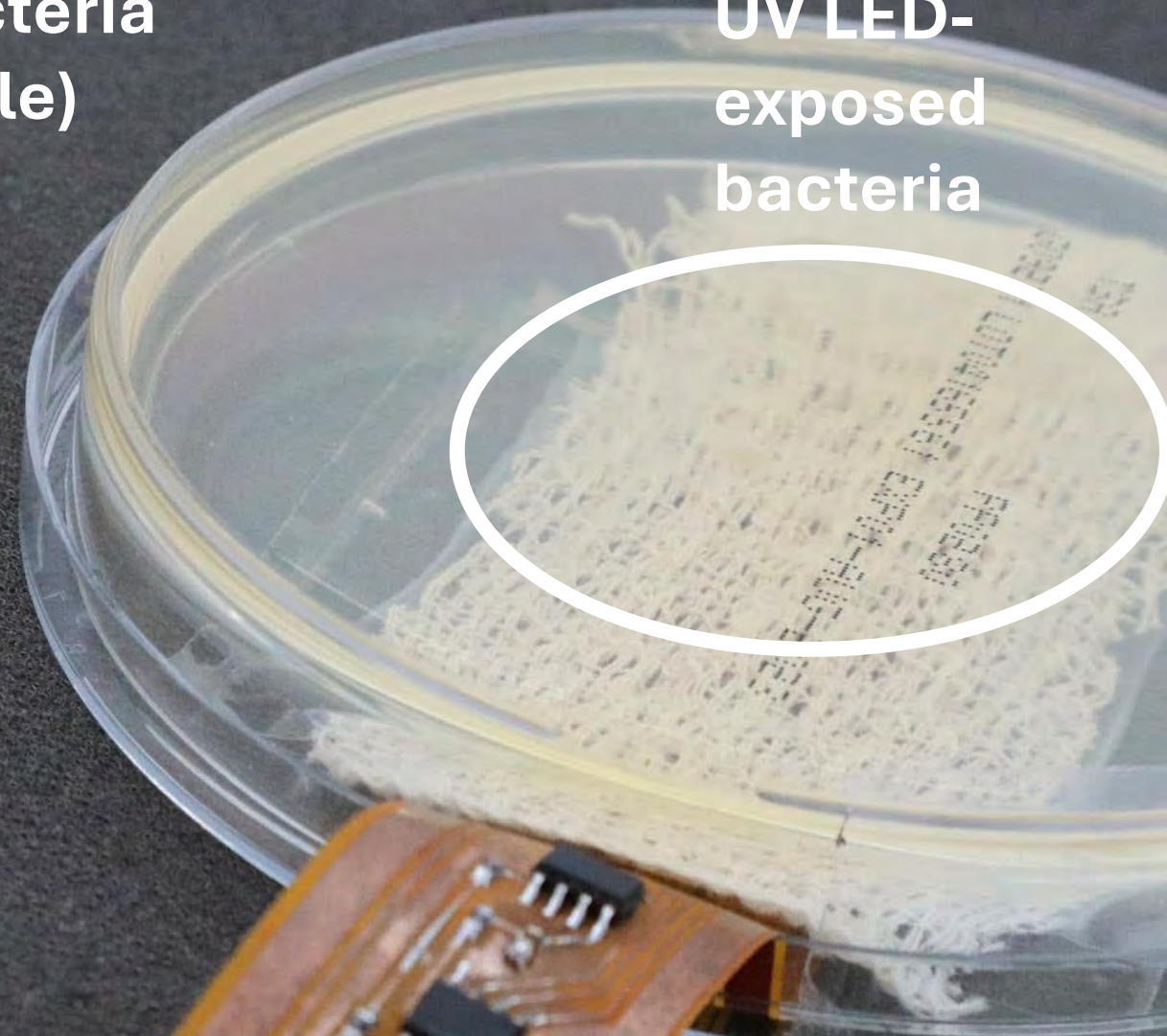
Ullah, Wagih et al. "Wirelessly powered drug-free and anti-infective smart bandage for chronic wound care," (2023) *IEEE Trans. Biomedical Circuits Sys.*



UV Anti-Bacterial Smart Bandage



Untreated bacteria
(control sample)



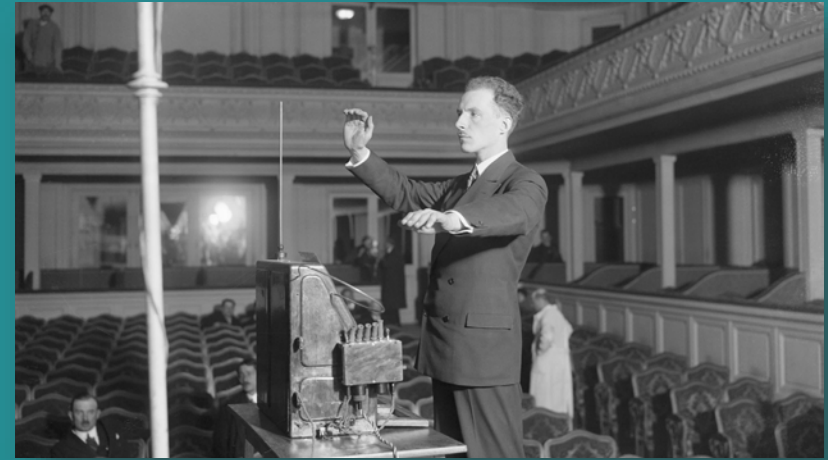
UV LED-
exposed
bacteria



Operation Ouch!

Series 12: 11. What a Pong!

There is a pong or two in the lab as the Doctors discover how smell conjures up memories, and the Time Machine lands in 1778 on a search for Mr Grumbles' missing inhaler.

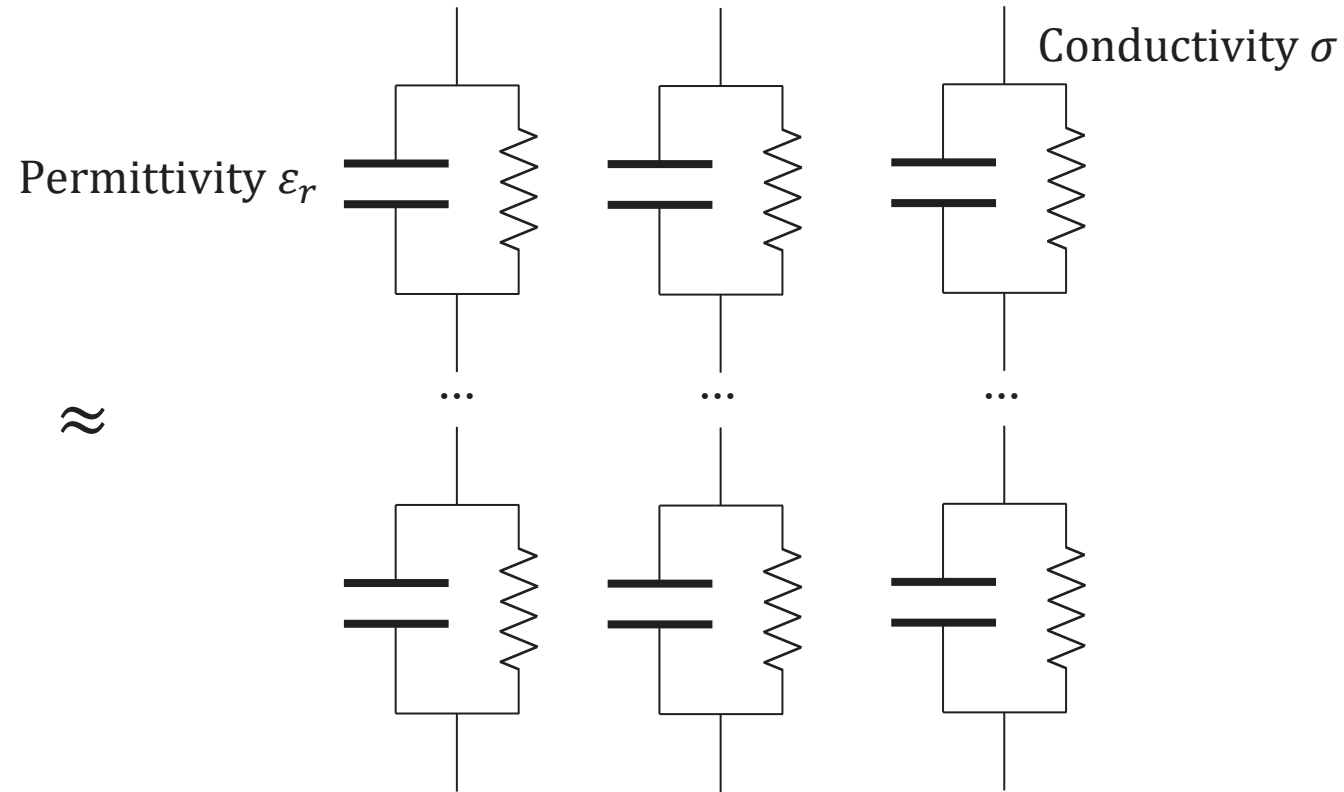
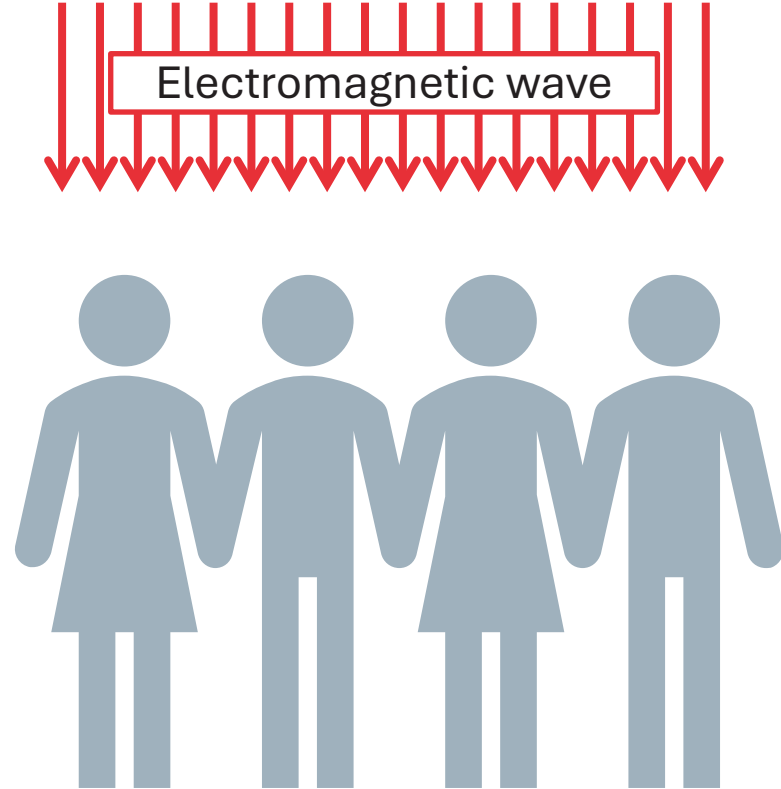


Seeing (Sensing) With RF Waves

(But not like a radar parking sensor, that's a ~~boring~~ mature field)

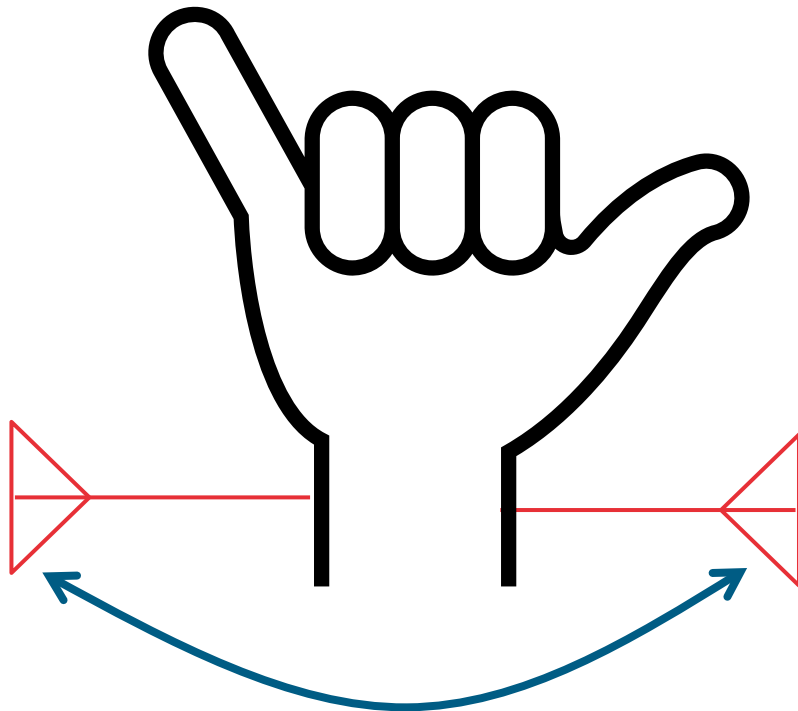
Everything is Made of ...

Resistors and Capacitors!

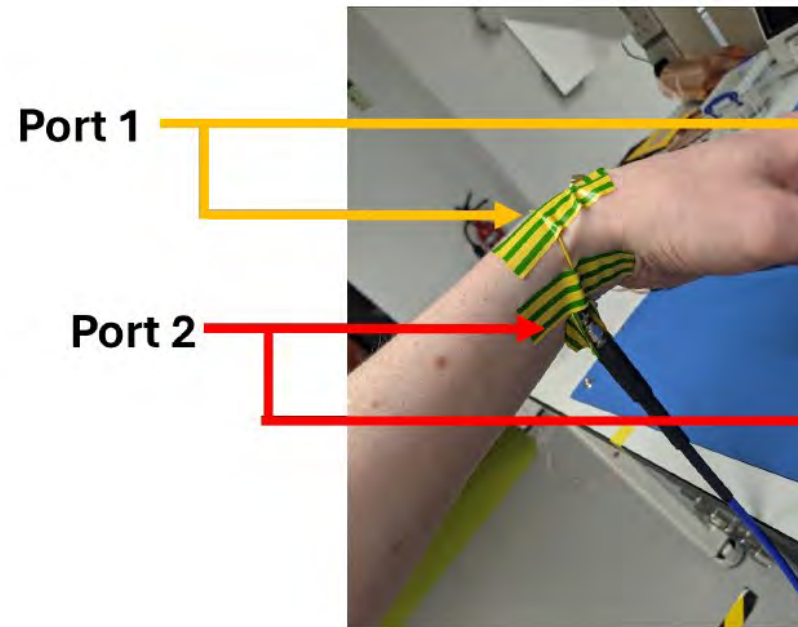


Artificial Intelligence (AI) Meets Antennas

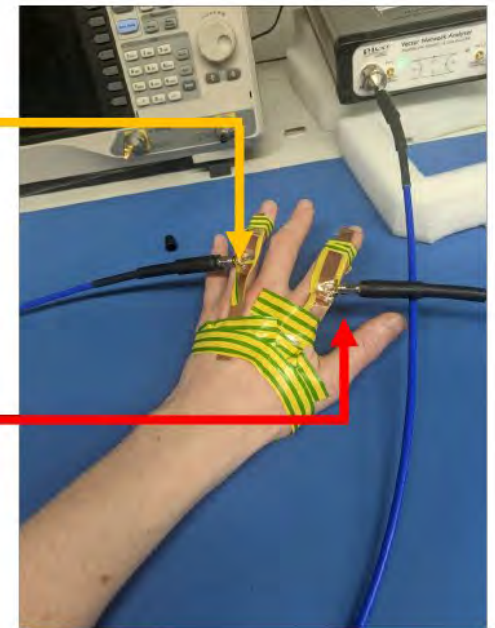
Reading British Sign Language (BSL) with wrist-worn antennas



Measuring the signal strength
between two antennas



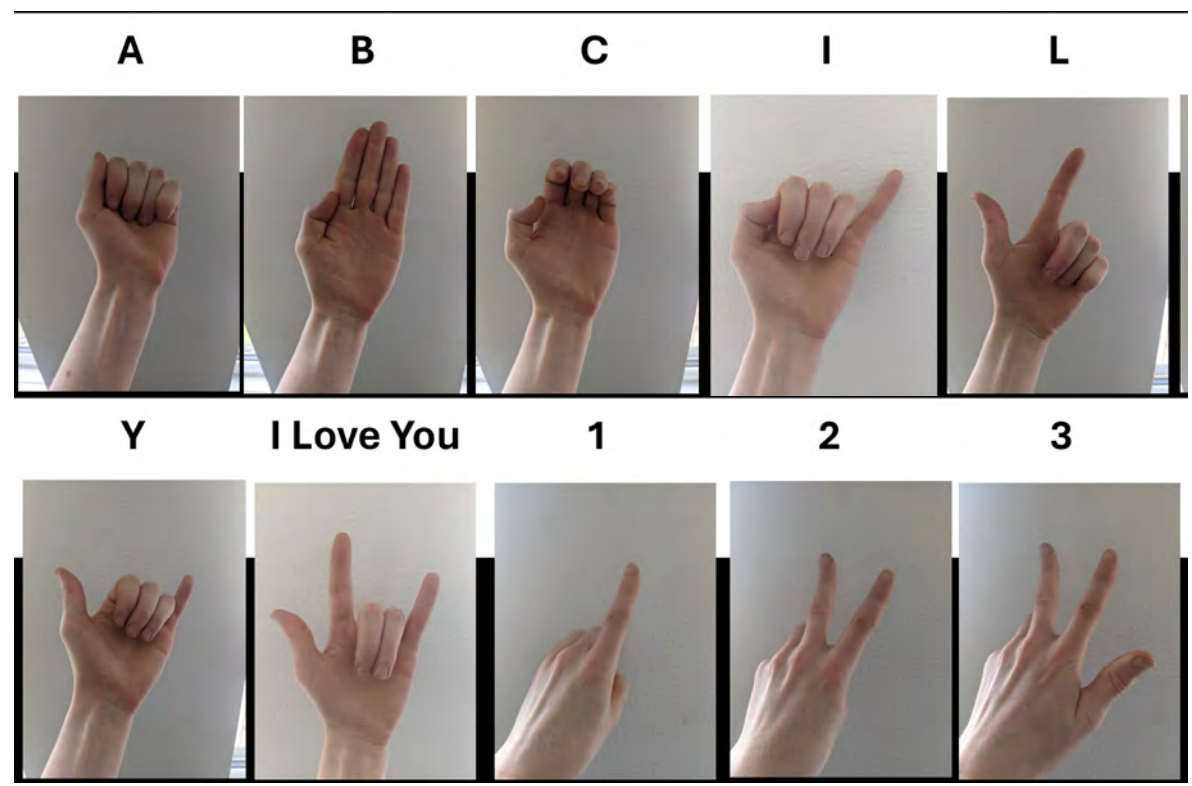
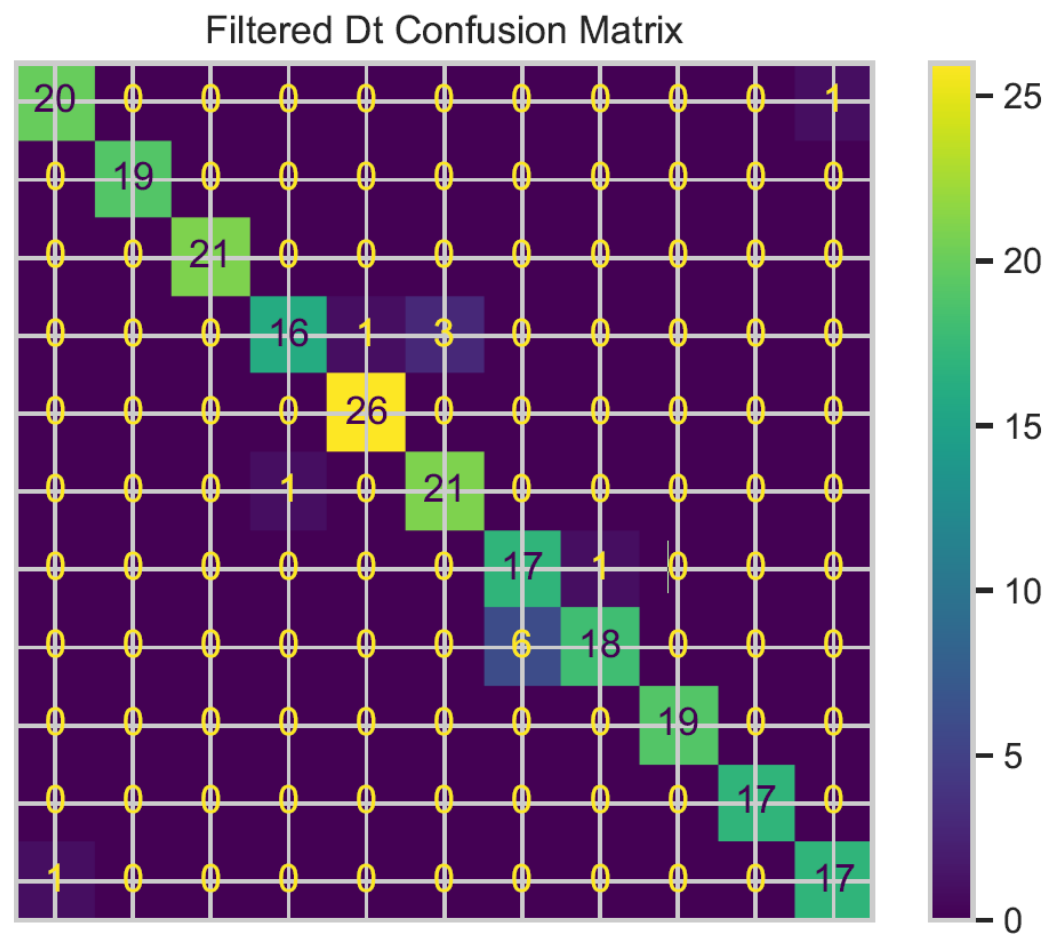
5cm



14cm

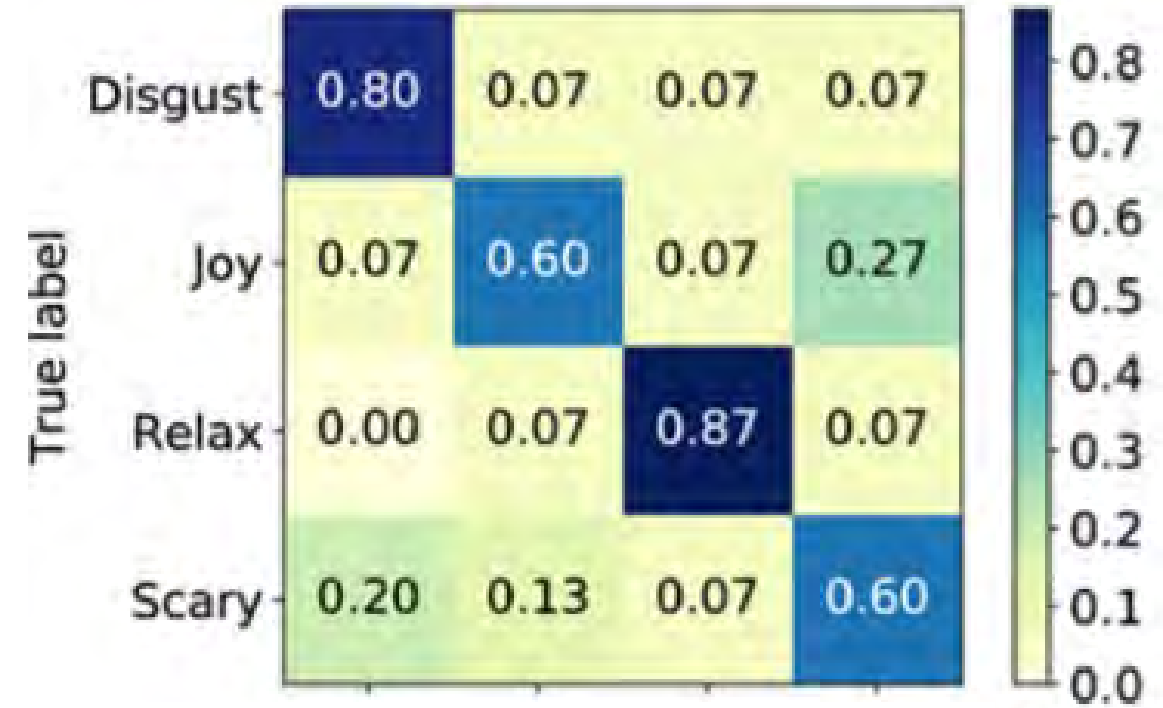
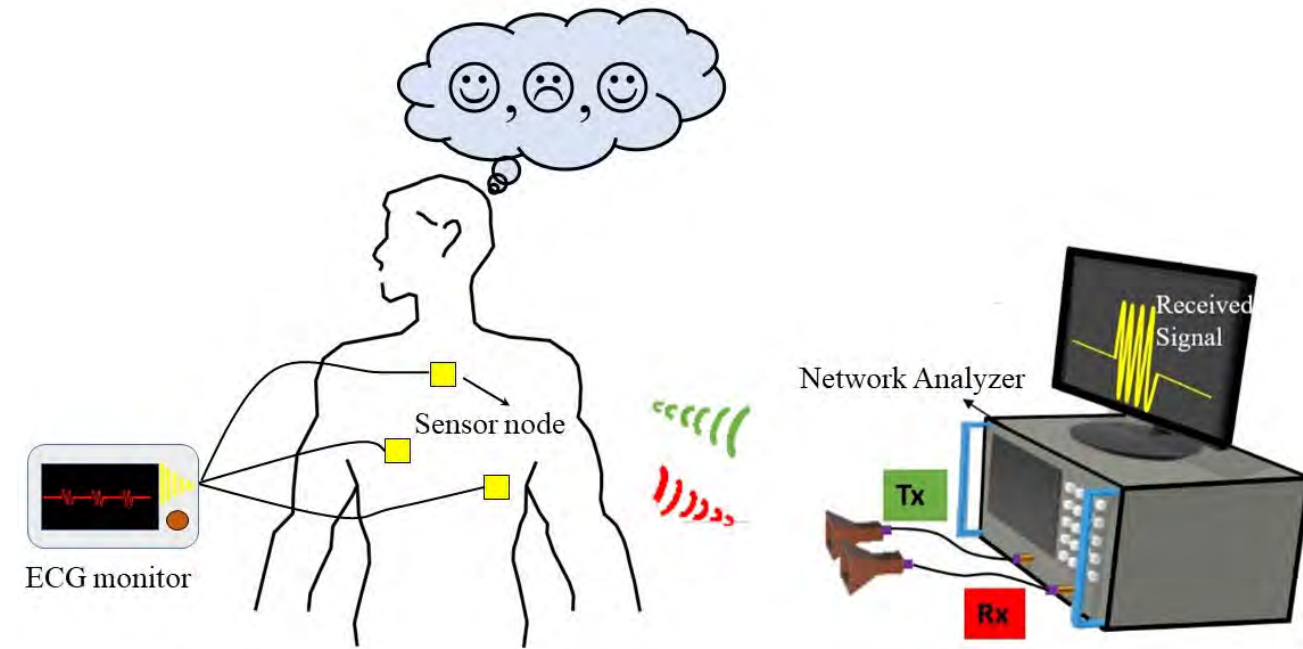
Artificial Intelligence (AI) Meets Antennas

Reading British Sign Language (BSL) with wrist-worn antennas



Reading “Emotions” with RF Time Data

ECG + Electromagnetic wave reflection data



Career ~~Advice~~ Suggestions

which might not be obvious

The Obvious “Advice”

ChatGPT ▾

That sounds like a fantastic opportunity — these students are right at the point where the right words can set their trajectory. Here's a set of **key, high-impact career advice points** tailored for UKESF scholars in semiconductors and EEE:

Core Career Advice to Give

1. Get Comfortable with Fundamentals

- Your *circuit theory, EM, device physics, and maths* are the toolkit you'll use for everything.
- Mastering fundamentals early pays off later when you're tackling cutting-edge tech (RF, semiconductors, quantum, AI hardware).

2. Balance Depth and Breadth

- Develop **deep expertise** in one area (e.g., RF, semiconductors, embedded systems).
- But also keep a **breadth of knowledge** across related fields — today's innovations happen at intersections (e.g., semiconductors + AI, power + comms, materials + circuits).

3. Learn by Building

- Don't just study; **prototype**. Whether it's a PCB, FPGA design, or device test rig, building teaches you things books can't.
- Employers and PhDs both value *hands-on engineers* who can take theory to practice.

4. Understand the Whole Stack

- From materials → devices → circuits → systems → applications.
- Knowing how your work fits into the bigger picture helps you innovate and explain your value to non-specialists.

I am giving a careers talk for the UKESF to smart undergrad students about to start EEE degrees who have a scholarship on semiconductor. I lead a research lab and a startup on green RF electronics, My talk aims to inspire and provide career advice.

Provide key career advice to give

Extra “Green RF / Startup” Angle

- **Hardware is back** – chips, comms, sensors, energy harvesting: these underpin AI and sustainability.
- **Entrepreneurship is a path too** – you don't need to start a company now, but think like a founder: spot problems, test ideas, value impact.
- **Work with purpose** – young engineers who align with climate, sustainability, or health tech will be in the strongest demand.

 I'd recommend wrapping up with a **personal story** (e.g., your first project that failed but taught you something, or how you bridged from research → startup). Students remember stories more than slides.

Would you like me to **draft a 5-minute “closing message” script** that ties these lessons into your journey so you can leave them inspired?

Electronics/EEE Might Be Hard

Come find me later for how to fix a degree like this!

Year of Study	02	Propagation
Personal Tutor		Propagation
Out of 100, in case you're wondering!		
Module Code	Module Title	Module Mark
ELEC2201	Devices	48
ELEC2208		
ELEC2217		
ELEC2219	Electromagnetism for EEE	55
ELEC2220		
ELEC2221		
ELEC2222		
MATH2047		

Out of 100, in case you're wondering!

AI Overview

Dr. Mahmoud Wagih was named Best PhD in Europe in Antennas and Propagation in 2020/21 by the European Association on Antennas and Propagation (EuRAAP) for his PhD research at the University of Southampton,



UofG researcher wins top award from Royal Academy of Engineering

→ A University of Glasgow engineer has received a prestigious award from the Royal Academy of Engineering for exceptional achievement during the early stages of his career.

*And electronic/
semiconductor engineering,
university teaching etc*

**“We don’t do business with
companies. We do business
with People”**

-Simon Sinek



University of Glasgow
GREENElectronicsLab.org

But, what is actually green about what I do?!



→
Water-Soluble



→
Biodegradable fibres



→
Paper-based circuit;
dissolvable zinc

Dissolve into benign oxides (ZnO)

Tips for having valuable conversations this afternoon

- Know that everyone here is in a similar situation
- Not sure where to start? Conversation starting questions:
 - What inspired you to apply for the Award?
 - What are you most excited to learn about this year?
- If you see someone looking lost, invite them to join in your conversation
- Make the most of employer conversations:
 - Ask about their products.
 - Ask about their work opportunities and graduate schemes

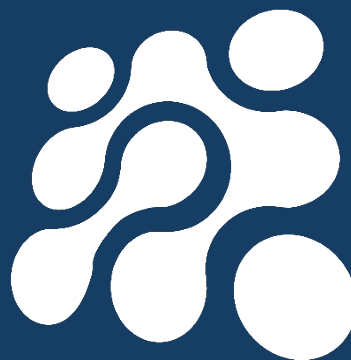






**UK Electronics
Skills Foundation**

Break



**UK Electronics
Skills Foundation**

Welcome back



UK Electronics
Skills Foundation

Harry Chinkumbi
ARM

arm



Discover life at Arm

Building the future of computing on Arm.

arm careers

IMPACT OF ARM IN THE WORLD

Arm technology is everywhere. Powering billions of experiences, every single day.

350B+

Arm-based chips shipped globally

100%

of the connected global population touches Arm-based products

22M+

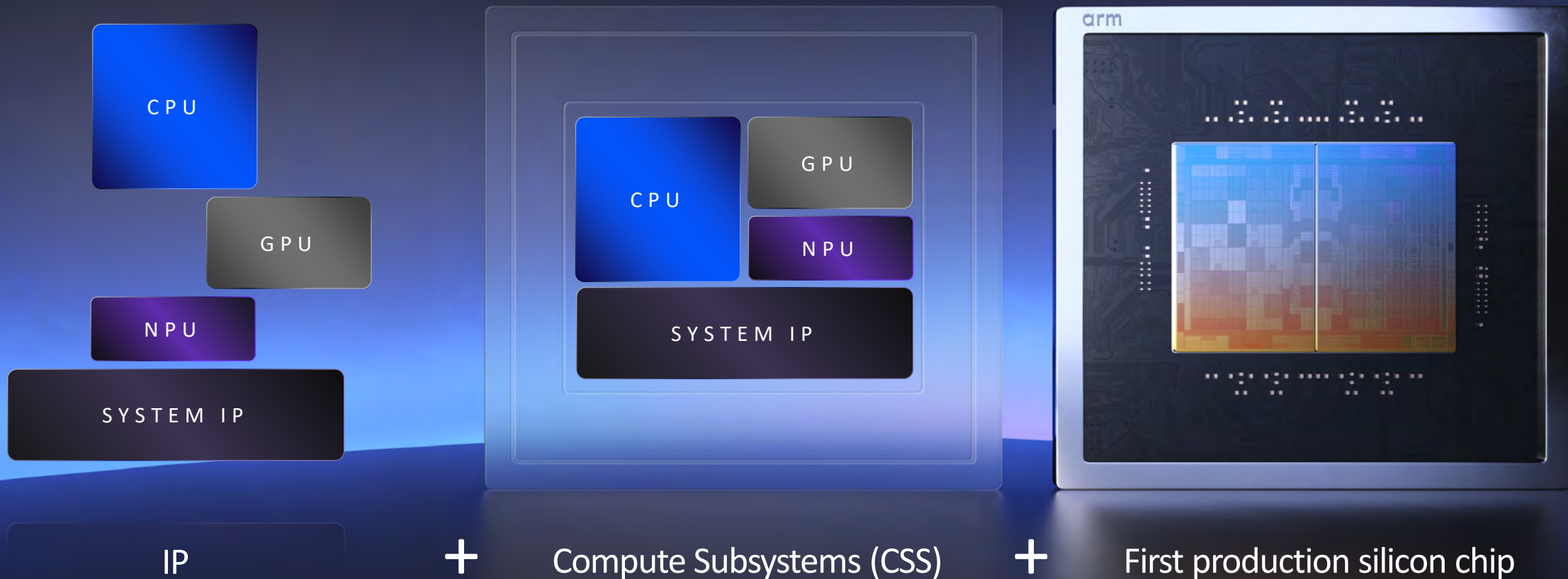
Software developers building on Arm

35+

Years of innovation and industry leadership

ARM'S PLATFORM

Only the Arm platform has the scale, performance, and power efficiency to enable AI everywhere.



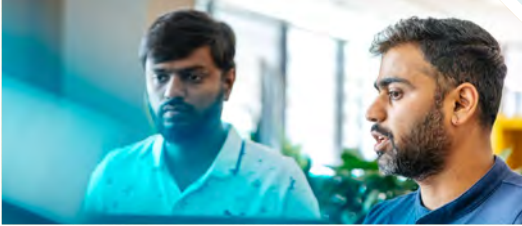


Life at Arm

arm careers



What does life at Arm look like?



A global community:

Connected teams collaborating across disciplines, technologies, and geographies



Innovation through impact:

Learning by building technology that powers billions of devices worldwide



Growth through opportunity:

Freedom to explore products, teams, and career paths across the business



Excellence with support:

High challenge, high trust, mentorship, and a culture where people help each other succeed

How can we make this 10 times better?

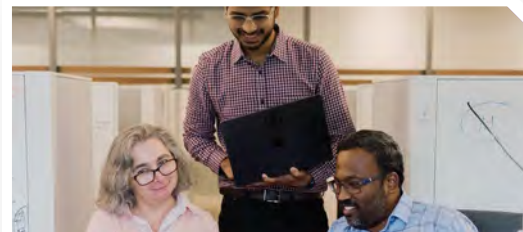
Our 10x Mindset is a challenge.
It's about thinking bigger, moving
faster, and creating impact that scales.

United in purpose. Empowered through inclusion.

We believe building the future of computing requires:

- Different perspectives
- Inclusive leadership
- Equitable opportunity
- A culture where everyone can thrive

What inclusion means at Arm:



A global workforce:

Bringing together perspectives, experiences, and ideas from around the world



Inclusive by design:

Creating an environment where people feel valued, heard, and supported.



Innovation through diversity:

The best ideas emerge when different viewpoints come together

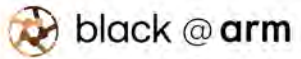


Communities that shape culture:

Employee Resource Groups, DEI councils, and networks help drive meaningful change

Community in action

How do our ERGs help build the Arm community?



black @ arm



disability @ arm



pride @ arm



asian @ arm



unidos @ arm



women @ arm



neurodiversity @ arm

Cultural celebrations:

Events recognising heritage months and global communities



Speaker sessions & panels:

Conversations on leadership, inclusion, wellbeing, and career growth



Mentoring & development

Workshops, networking, and peer support initiatives



Build what's next. And grow with it.

How will a career here support your development?



Learn by building

Hands-on experience solving complex technical challenges



Learn from others

Mentoring, collaboration, feedback, and global knowledge sharing



Continuous development

Access to LinkedIn Learning technical learning, certifications, conferences, and digital learning platforms



Grow your career your way

Explore opportunities across products, disciplines, and teams over time

SUSTAINABILITY AT ARM

Building a more sustainable future

Through Arm's partnership with Simprints, AI-enabled biometrics help healthcare workers in rural Ghana identify and deliver malaria vaccines to children at risk.



Our commitments:

Net zero by 2030



Targeting net zero carbon emissions, with 100% renewable electricity across operations since FYE23.

Efficiency at global scale



Power-efficient computing helping partners reduce use across cloud, AI and data centre infrastructure.

Technology for broader impact



Supporting access to efficient, affordable compute through initiatives like Khushi Baby.

Partnership-driven progress



Collaborating across industries to apply AI and compute to real-world challenges.

OUR GLOBAL LOCATIONS



Our Programs

arm careers



EMERGING TALENT

How to join our emerging talent programs



850+

graduates, interns &
apprentices hired globally

13%

of Arm's global workforce
is emerging talent

181

universities hired
from globally

Intern program

95%

felt they gained skills
and knowledge

Grad program

96%

are proud to work
at Arm

Graduates

Who it's for

Graduates ready to turn their knowledge into real-world impact.

What the programme includes

A permanent role from day one, with deep technical work, mentorship, tailored learning and global experiences.

What you get

- Meaningful responsibility from the start
- Support from experts and mentors
- Graduate-led social and learning activities
- Peer-to-peer development
- Access to the Global Graduate Conference in the UK

When applications open

Typically September in the US, UK, Israel and Europe.
Typically July and November in India.



Interns

Who it's for

Students looking to build practical experience and explore a future in technology.

What the programme includes

A 3, 6 or 12-month internship with hands-on experience of technology with global impact.

What you get

- Real projects and ownership from day one
- Mentoring and support from experienced colleagues
- Intern-led social and learning activities
- Networking across teams and locations
- Opportunities to return as a graduate
- Global celebrations including National Intern Day

When applications open

Typically September in the US, UK, Israel and Europe.
Typically July and November in India.



RESOURCES

Teach and Learn on Arm

Arm gives educators and learners access to:

Education kits for core Computer Engineering and STEM

Online courses on Arm and partner technologies

Books for classroom adoption and graduate reference

Developer labs for AI, embedded, cloud, and systems

Academic access to Arm tools, software, and IP

Tools for building, debugging, and optimizing systems

[Explore Arm teaching and learning resources](#)



THANK YOU

Your impact starts here

Quick links

[Sustainability at Arm](#)

[Life at Arm](#)

[Arm YouTube](#)

[Building the future with a 10x Mindset](#)

[Arm Education](#)

[Diversity Equity & Inclusion at Arm](#)

QR placeholder

arm careers





UK Electronics
Skills Foundation



Michael O'Sullivan
Cadence





Unleash Imagination

UKESF Induction – University of Glasgow

Michael O'Sullivan – 1st Sep 2026

 **cā dence**®

Unleash Imagination



Michael O'Sullivan

Application Engineer

Who I/We Are
Innovation and Culture



cādence[®]

Michael O'Sullivan Who am I ?



- Born – Lambeth, London
- Formative years – Limerick , Ireland



- Education
 - 1986 – B.E., National University of Ireland
 - 1990 – M.Eng.Sc., National University of Ireland



- Pre Cadence Career
 - 1986 – 1988
 - Philips Eindhoven – chip design for TV
 - 1990 – 1998
 - Silicon and Software Systems, Dublin – design services
 - Two years at Texas Instruments, Nice



Cadence Career



1998 – 2005

Cadence Design Services; moved Dublin → Livingston
Technical and project manager, spec to packaged parts
Worldwide role



2005 – 2009

Field marketing, low power and logic design
EMEA role



2009 – 2018

Account manager technology, then account technical director
EMEA, UK and Ireland roles



2018 – Now

Group director, application engineering — UK, Ireland and Scandinavia
Based in Edinburgh since 2020



About Cadence



Pioneering the Future of Intelligent System Design™

- Founded 1988 · HQ San José, California
- ~13,800 employees across 30+ countries
- Software, hardware & IP for chip-to-system design
- Serving automotive, AI, 5G, aerospace, life sciences & more
- Powers chips in nearly every electronic device on Earth
- Market leader in Electronic Design Automation (EDA)

#9

World's Best Workplace
(Fortune / GPTW 2024)

11th

Fortune 100 Best
Companies 2025

\$5.2B+

Annual Revenue
(FY 2025)

What We Do

Innovating from chips to boards to intelligent systems

Building upon more than 30 years of computational software expertise, Cadence applies its underlying **Intelligent System Design™** strategy to deliver software, hardware and IP that turn design concepts into reality!



Aerospace
and Defense



Automotive



5G
Communications



Hyperscale
Computing

Cadence

Design for AI and AI for Design

OUR MISSION

Innovate technology and productivity solutions for an AI-driven world

OUR SOLUTIONS

Enable engineers and scientists to bring innovative new products to life

Infrastructure AI

Semiconductors and systems: from data centers to the edge

Physical AI

Robotics, drones, aerospace, automotive, ...

Sciences AI

AI-driven sciences, and drug discovery

Recognised Globally as a Great Place to Work

cādence®

#9

World's Best
Workplaces™ 2024

#11

Fortune 100 Best
Companies 2025

11×

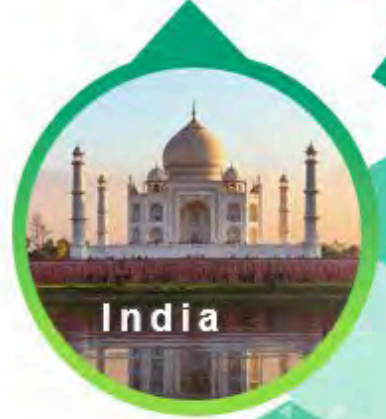
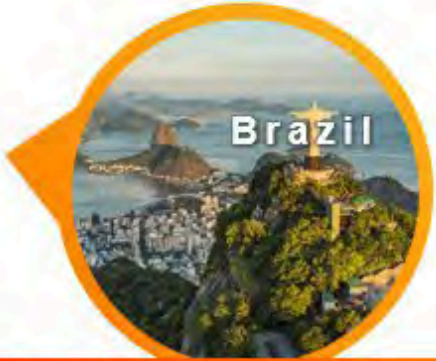
On Fortune's
100 Best List

Certified Great Place to Work in:

UK · Germany · France · Ireland · Poland · Finland · Sweden · Brazil · Canada · China · India · Japan · Korea · Taiwan ·
Singapore · North America

93% of Cadence employees say they are proud to work here · 90% say they make a difference

A Great Place to Work Around the Globe



16 COUNTRIES WITH "GREAT PLACE TO WORK" RANKINGS



Electronic Design Automation (EDA)

- Vocabulary & Acronyms
 - IP = Intellectual Property or Integrated Part

Two main parts of Electronic Design Automation

- PCB = Printed Circuit Board
- IC = Integrated Circuit (semiconductor chips)



Intelligent System Design



Intelligent System Design™

Merger of EDA, system design, AI

Pervasive intelligence throughout design

Grounded in computational engineering

Co-optimizing system, hardware, software

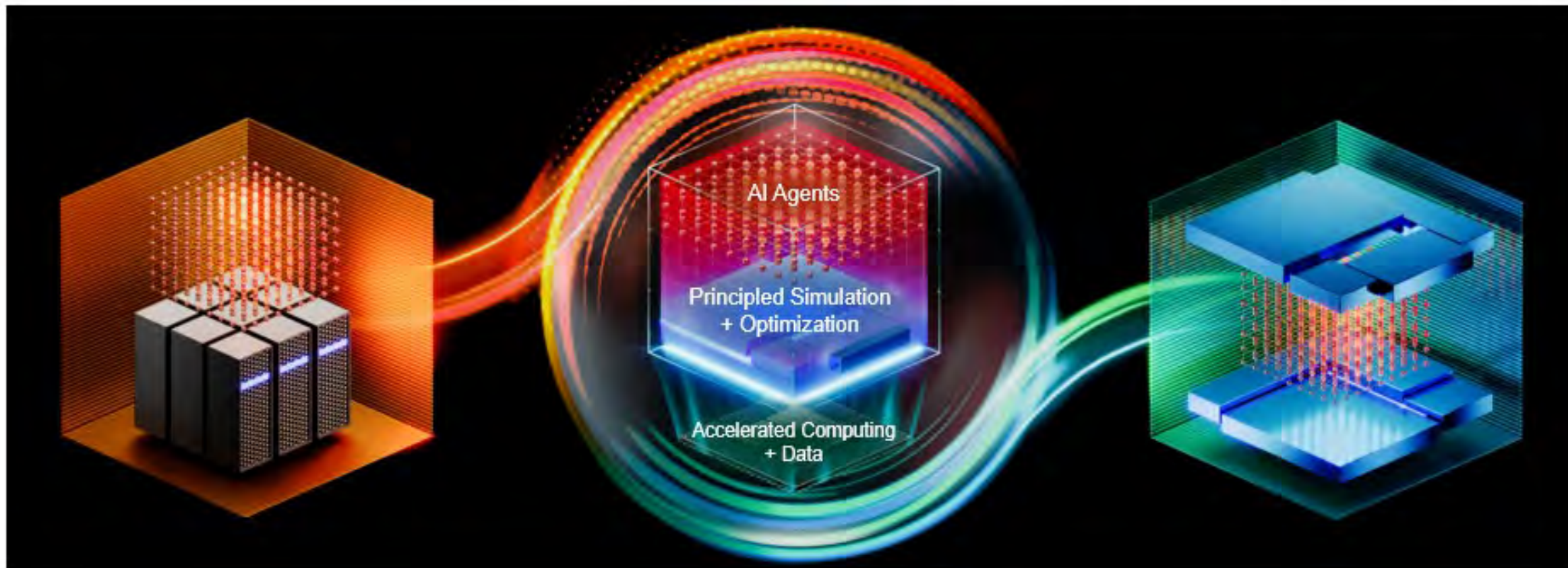
Spanning multiple system domains

Design for AI

Building the AI infrastructure

AI for Design

Using AI in our design solutions



Cadence Business Groups and Products Categories

SSG

Silicon Solutions

Compute IP

Tensilica®
NeuroEdge™ : AI co-processor
HiFi DSPs : Audio, voice, speech, AI
Vision DSPs : Vision, radar, lidar, AI
Xtensa® : Extensible CPU platform

Neo™ NPU : AI accelerator
Janus™ NoC : Chiplet backbone

Security

Securizr™ : Embedded security
Laborizr™ : Security evaluation tools

Design IP

Scale-up and -out : 224G/112G/56G SerDes,
UALink, Ultra Ethernet
Die-to-die (D2D) : UCIe®, UltraLink
Memory Interface : HBM, DDR/LP, GDDR
Interface IP : PCIe®, CXL, USB, MIPI®

Artisan® Foundation IP

Std. cell libraries, memory compilers, GPIOs

Chiplet Platforms

Physical AI, IO/Memory, Framework Foundation

Custom Silicon Services

End-to-end solution from IP to silicon
PPA-optimized advanced-node backend designs

DSG

Digital and Signoff

Front-End Design

Stratus™ : High-level synthesis
Modus : DFT Software Solution
Conformal® : Formal equivalence

IC Digital

InnoStack™ : Implementation AI Super Agent
Cadence
Cerebrus® : Intelligent chip explorer
Cadence®
JedAI : AI and Data Platform
Genus™ : RTL synthesis
Joules™ : RTL power analysis
Integrity™ : 3D-IC chiplet implementation
Innovus™ : Implementation system
Voltus™ : Power integrity analysis
Voltus™ Insight AI

: AI-driven in-design solution
improving power integrity
analysis

Silicon Signoff and Verification

Quantus™ : Extraction
Liberate™ : Library characterization
Tempus™ : Timing (STA)
Certus™ : Closure Solution
Pegasus™ : Physical signoff
DFM / OPC : Design for manufacture /
optical proximity correction

CPG

Custom IC Design

ViraStack™ : Custom/Analog AI Super Agent
Virtuoso® : Custom/RF/mixed-signal
and system design
Spectre® : Circuit simulation
Legato™ : Reliability analysis
Microwave Office® : Microwave RF design

SNV

OpenEye

Molecular Simulation

Orion® : Molecular Design Platform
Target X : Target Exploration
ROCS X™ : Hit Identification
FE-NES : Lead Optimization

SVG

System Verification

Hardware System Verification

Palladium® : Emulation
Protium™ : FPGA prototyping
SpeedBridge® : Physical adapters
VirtualBridge™ : Virtual adapters

Verification Technologies

Xcelium™ : IP and SoC simulation
VLAB : Ultra-high-performance
Virtual Development
Machines (VDMs)
Helium™ : Virtual and hybrid platform
Jasper® : Formal verification
System VIP : System Verification IP
VIP : Interface Verification IP
Perspec™ : Portable stimulus
Midas™ : FMEDA-based
functional safety

Verification AI Technologies

AgentStack™ : AI Head Agent
ChipStack™ : Verification AI Super Agent
Verisium™ : AI-driven verification
platform
Verisium Manager : Verification management
Verisium Debug : Debug automation
Verisium SimAI : Regression compression

SDA

System Design Analysis

IC Packaging and PCB

Allegro® : IC package and PCB design
AuraStack™ : AI Super Agent
OrCAD® : Mainstream PCB design

Physical AI / MSC Software

MSC Nastran™ : Finite element solver
Actran™ : Advanced acoustic simulation
Adams : Multibody dynamics simulation
VTD : Virtual Test Drive

Mechanical/Structural

Beta CAE : Mechatronic Systems Platform
Ansa® : Pre-processing
Epilysis® : Static, dynamic, optimization
Fatq™ : Fatigue Prediction
Meta® : Post processing

Multiphysics

Millennium™ Platform : Multiphysics Enterprise Platform
Fidelity™ : Comprehensive suite for
computational fluid dynamics
Clarity™ : Electromagnetic analysis
Signity™ : SI, PI, and thermal analysis
EMX® : Specialized RFIC parasitic
analysis
Celsius™ : Electrothermal analysis
Cadence Reality™ : Data center design
Optimality™ : Intelligent System Explorer

CLOUD

Managed Cloud
Service
True Hybrid Cloud

Cadence OnCloud Offerings

Palladium and
Protium Cloud
Verisium Cloud
Millennium Cloud
Orion Cloud
Pegasus True Cloud
Virtuoso ADE Cloud

Complete Cadence Tool Portfolio Enabled with OnCloud

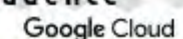
OnCloud SaaS Features

Multi-Region, E-commerce, SaaS and Flexible Models, True
Hybrid Cloud, Secure Design Collaboration, AI-Enabled Tools,
Front-End to Back-End Full Flow, Third-Party Tool Support

OnCloud Multi-Cloud Infrastructure

Cadence Data Center Cloud

cadence®



Cadence Technology

cādence®



Cerebrus AI Studio

ML-driven chip optimisation · 50+ new customers in Q1 2025 alone · Reduces PPA cycles by hours



ChipStack AI Super Agent

Domain-trained LLM for chip design orchestration · Announced Nov 2025 · Frontier of conversational EDA



Digital Twins & CFD

Fidelity platform for system-level simulation · Acquired BETA CAE 2024 · Used in automotive & aerospace



Intelligent System Design™

End-to-end silicon-to-system platform spanning AI, photonics, RF, mixed-signal & packaging



Semiconductor IP & Verification

IP blocks for hyperscale AI chips · Advanced formal verification · Used in TSMC, Samsung, Intel fabs



Life Sciences & Drug Discovery

Cadence Molecular Sciences · ROCS X virtual screening of trillions of molecules · Cross-domain expertise

Culture, Benefits & What Makes Us Different



Global Recharge Days

Company-wide mental health days – mandatory rest built into the calendar, not just wellness lip service.



Continuous Learning

Full access to Cadence University, tool certifications, technical courses and executive speaker series.



One Team Culture

Collaborative, not competitive. Ranked top in trust and fairness by Great Place to Work surveys.



Sustainability Mission

Cadence tools power more energy-efficient chips. Your work directly contributes to a greener planet.



Meaningful Work

Your algorithms run in spacecraft, AI servers, medical devices, and autonomous vehicles worldwide.

By the Numbers

93%

Proud to work at Cadence

90%

Feel they make a difference

4.2★

Glassdoor rating (2,800+ reviews)

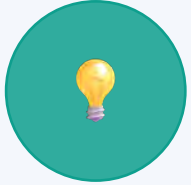
10+

Years on Fortune 100 Best list

30+

Countries with GPTW certification

The Roles We Hire For



Project Scope

- Program Manager
- Product Manager
- Technical Project Manager

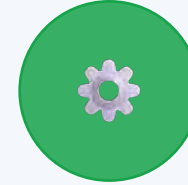
Shape what gets built and why. Drive product strategy from concept to market.



Development

- Software Engineer
- Design Engineer
- R&D Engineer
- Algorithms Engineer

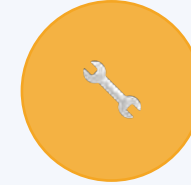
Build the tools that power global chip design. Deep technical work at the frontier of EDA and AI.



Implementation

- Product Engineer
- Application Engineer
- Build & Release Engineer
- Technical Writer

Turn engineering innovations into working solutions for the world's leading semiconductor companies.



Operations

- Sales Engineer
- Account Manager
- Field Application Engineer
- Customer Support Engineer

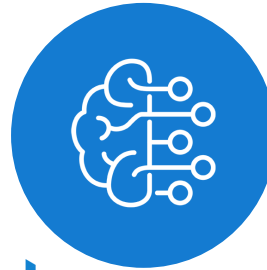
Partner with customers globally, delivering technical expertise and ensuring adoption of Cadence tools.

Software Engineer



Role Description

- Software development, validation, maintenance and documentation
- Complex data analysis - requires an evaluation of intangible variance factors
- Automation – AI/ML



Required Skills & Experience

- C++, Python, etc.
- Hardware Description Languages like Verilog, VHDL, etc.
- Experience in one or more of the following: Computational geometry / numerical analysis / graph theory / applied linear algebra / parallel and distributed algorithms



Education

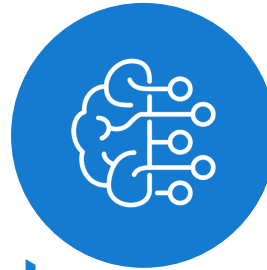
- Bachelors, Masters, or PhD in Computer Science, Electrical Engineering or a related field (Physics!)

Application Engineer



Role Description

- Deliver customer satisfaction and achieve project deliverables by providing expertise and support for Cadence tools
- Develop and improve methodologies that leverage Cadence technology and services
- Create and conduct technical presentations and product demonstrations to customers



Required Skills & Experience

- Working knowledge of Cadence tools in one of the following technical areas: Digital Design and Signoff, Custom Analog IC and PCB, RF (wireless) and/or System Verification



Education

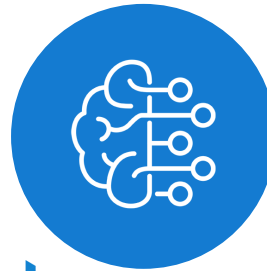
- Bachelors (or higher) in Electrical Engineering or Computer Engineering or a related field (Physics!)

Product Engineer



Role Description

- Bridges the gap between R&D, Application Engineers, and the customer to optimize the quality and functionality of software tools developed by Cadence
- Works as a cross-functional domain expert, focusing on the success of a specific Cadence product line



Required Skills & Experience

- Experience with software development & Cadence tools
- Skilled in debugging and problem solving
- More specific skills will be required depending on the product line in one of the following technical areas: Digital Design and Signoff, Custom IC and PCB, and/or System Verification



Education

- Masters, or PhD in Electrical Engineering or Computer Science or a related field (Physics!)

cādence[®]

Ready to Build What's Next?

We're hiring across UK & Europe

Software engineers · Technical leads · Application engineers · Hardware/Digital Design Engineers



cadence.com/careers



**Search: Cadence Design
Systems**

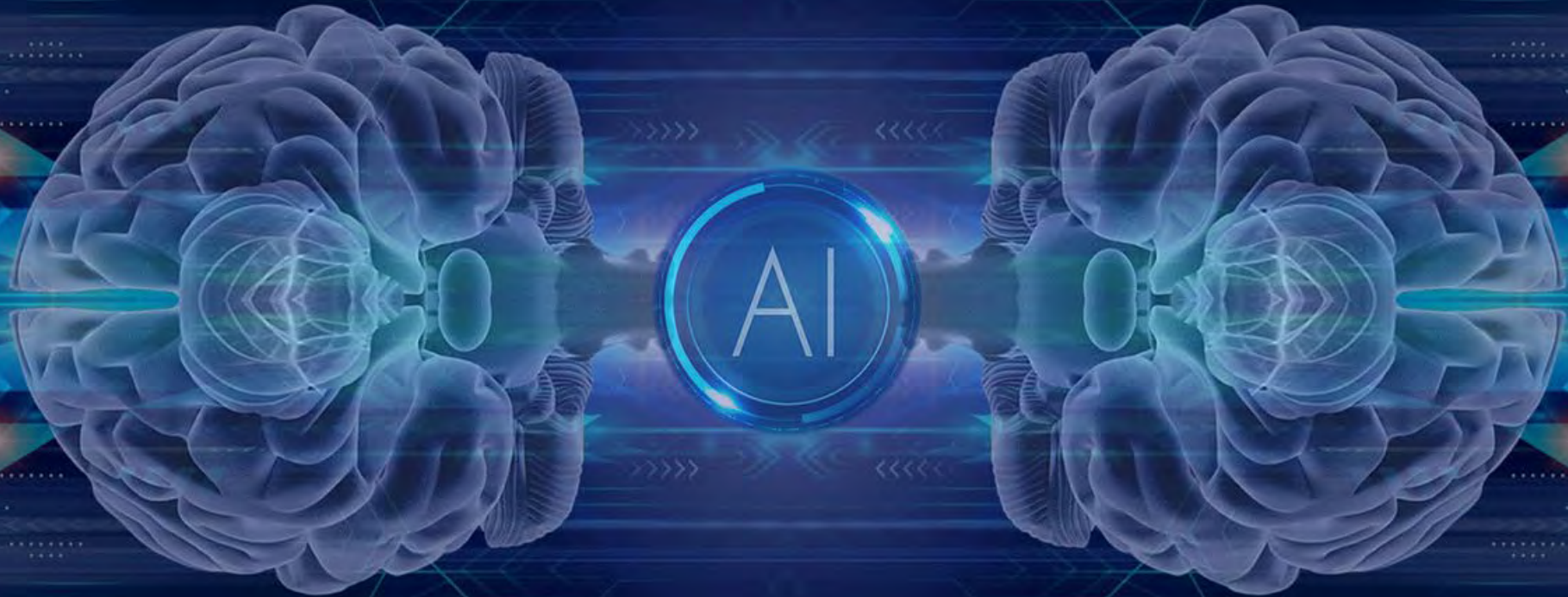


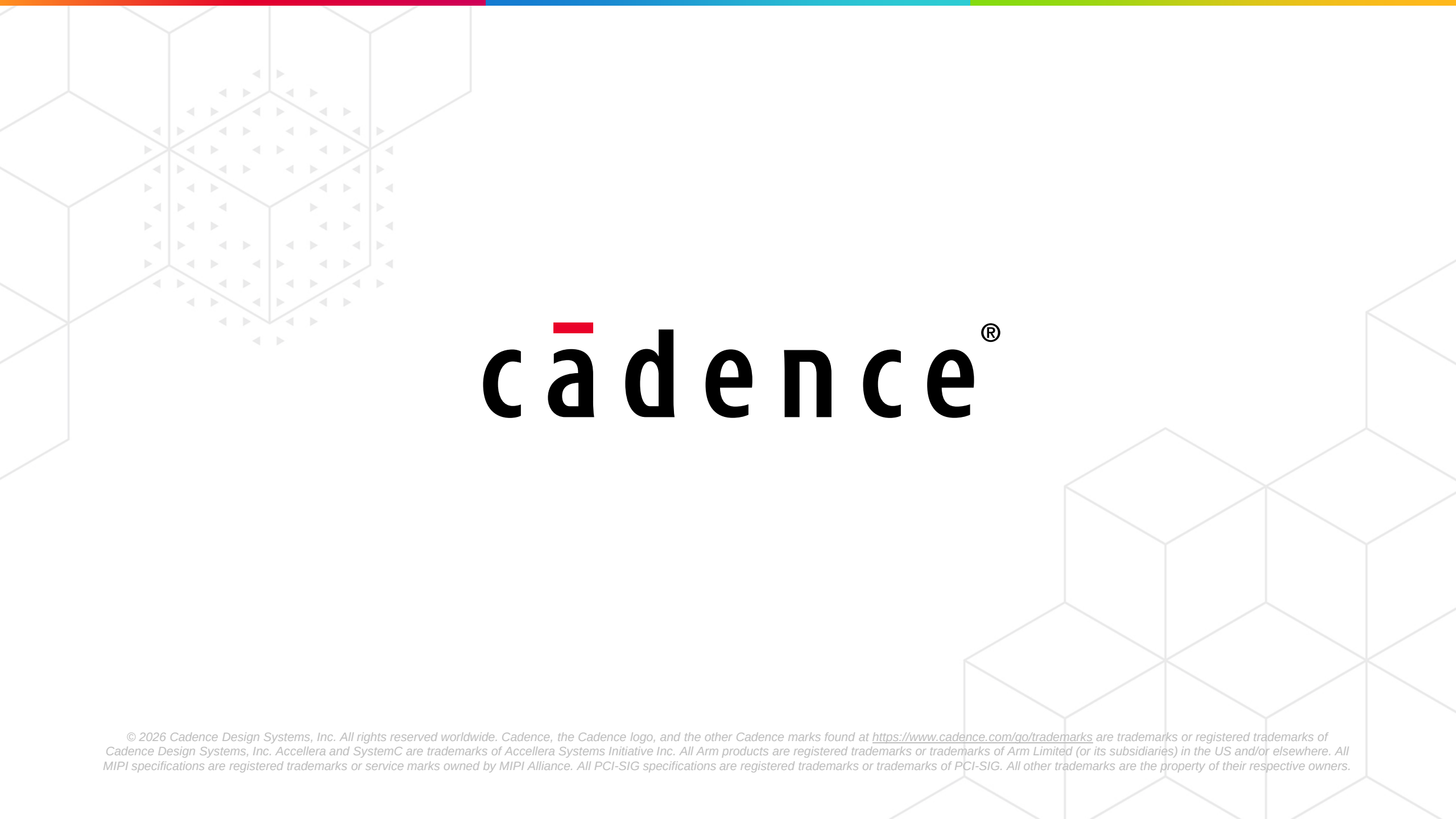
Contact Talent Acquisition Team

Fortune #11 Best Company · World's Best Workplace · Best Workplace in Europe · 13,800 Employees · 30+ Countries

My Advice to you – Embrace AI.

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An Overview of the Semiconductor Talent Award



**UK Electronics
Skills Foundation**



- £4,000 bursary in academic year 2026/27
- Payment through TechFirst Payment Partner, not UKESF



- Build understanding of the semiconductor industry, careers and professional skills
- Explore areas most relevant to your interests and future goals



- Meet and learn from people working across the semiconductor industry through events, mentoring, site visits and residential activities



- Part of a community of 700 Award-holders
- Learn from each other, share experiences and build your network

How you'll learn



**UK Electronics
Skills Foundation**



Online Learning

Access flexible content in your own time to build your knowledge and revisit topics as needed.



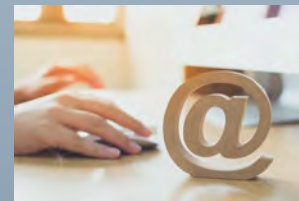
Webinars

Join live webinars and interactive expert sessions where possible to ask questions



In Person

Attend events, workshops, site visits and other face-to-face opportunities to meet people, experience different environments and build your network.



Stay Connected

Look out for our Friday emails for upcoming opportunities, as some are first come, first served while others require an application.

SEMICONDUCTOR TALENT AWARD • STUDENT INDUCTION 2026



The UKESF Mentoring Programme

Someone in the industry, in your corner

Every student on the Semiconductor Talent Award gets a mentor who already works in the sector. It is built into the Award, so your place is already there. Here is what it looks like.

● A few hours per term

● 1 academic year

● Across the UK

What you are being offered

1

A mentor from industry

Someone working in electronics or semiconductors who volunteered to help students like you. Vetted, trained, and there because they want to be.

2

A small circle

You will be in a group of around six students from different universities across the UK, so you meet people outside your own course.

3

The whole academic year

It runs across all three terms, from now through to the summer. It is not a one-off talk and then nothing.

This is built into the Talent Award for every student – nothing to apply for, your place is already held.

How the year runs

TERM 1

One group session

You meet your mentor and your circle online. Introductions, how you all want to use the time, and anything you want to ask.

TERM 2

One group session

A second session with the same group – how the year is going, placements, internships, and what is coming next.

TERM 3

One 1:1 meeting

The group sessions stop and it becomes just you and your mentor – one meeting, one to one, at the point in the year it matters most.

All of it is online, and there is a WhatsApp group for your circle in between – use it as much or as little as you like.

What it asks of you

Mentoring is part of the Award rather than an optional add-on, so here is exactly what it involves.

2

group sessions

one each in terms one and two

1

one-to-one

with your mentor, in term three

0

prep required

no homework, no
presentations

100%

of the cohort

every student takes part

Supportive and no pressure. You do not have to arrive with a plan. Turning up is the whole ask.

Why this is worth your time



A head start

Direct access to someone already doing the job you are studying for. Ask them the things you cannot ask a lecturer.



It is who you know

A real contact inside the sector – plus five other students going through exactly the same year as you.



Things on your radar

Career paths, companies and specialisms you would never find on your own – most useful while you are still working it out.



No pressure, just support

The time is yours. Use it for technical questions, career worries, or working out what you are aiming at.

Time with someone inside the industry, across a whole year – it is already yours, so it is worth making it count.

Who is behind this, and is it safe?

UKESF

runs the Semiconductor Talent Award, funded by the Department for Science, Innovation and Technology through UKRI. UKESF has been building the UK electronics talent pipeline for over fifteen years.

Goal 17

is UKESF's specialist mentoring partner. They recruit and train the mentors, match you to one, and look after the programme while it runs. Every student on the Award has a place from the start.

The safeguarding bit

- Every mentor is vetted and completes accredited training before they meet you.
- Sessions happen on supported online platforms, not private channels.
- There is a named team behind this, and someone to talk to if anything ever feels off – at any point, for any reason.

NEXT STEPS

What happens from here

1

Watch your inbox

An email from the mentoring team, with everything you need to get set up. Do not let it sit unread.

2

A short call

A quick chat to get you set up and answer anything. You do not need to know what you want to do yet.

3

Meet your circle

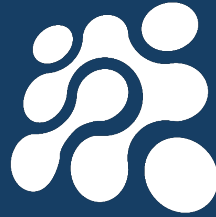
Online, in term one – your mentor and five other students starting out just like you.

Questions before then? Grab any of the Goal 17 or UKESF team while you are here today.

Q&A



We welcome your questions!



**UK Electronics
Skills Foundation**

Best of luck with your degree course!

Thank you



Please scan the
QR code to
complete the
Semiconductor
Talent Award
Induction
Event feedback
form.