South East Physics Network (SEPnet) Employer Engagement Programme

STFC Knowledge Exchange Workshop
25 June 2014, Portsmouth

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- What is SEPnet
- Employer Engagement
- SEPnet Summer Placement Scheme
- Benefits for students and employers
- What you can do next
What is SEPnet?

- The South East Physics Network (SEPnet) is a consortium of physics departments in 9 universities (Kent, Herts, OU, Portsmouth, Queen Mary, Royal Holloway, Southampton, Surrey & Sussex)
- Part HEFCE and part SEPnet partner-funded
- The SEPnet partners work together to deliver excellence in physics through collaboration, teaching and research
- Includes an outreach programme to increase student interest in physics
- A Graduate School (GRADnet) to develop skills of postgraduate research students
- A collaborative research programme
- An employer engagement programme to develop employability skills of undergraduates and postgraduate research students
Employer Engagement – Physics Undergraduates

Aim

• To create a strong pipeline of well-qualified, employable graduates who will benefit both industry and research
• Improve employability rates of physics graduates - 71% in FT emp/study in 2012 vs 80% overall (DLHE)
• Address shortage of STEM graduates with the right skills (CBI/UKCES)

Why placements?

• One in three graduate posts are filled by people who have previously worked for that company as an intern and
• Graduates without work experience will struggle to get jobs no matter how good their grades (High Fliers 2013)
• Work experience shown to develop employability skills
What is the SEPnet Summer Placement Scheme?

- An annual scheme offering placements to 2\textsuperscript{nd} and 3\textsuperscript{rd} (non final) year physics students at partner universities
- Employers who recruit physics graduates and university supervisors offer 8-week summer projects
- Students receive a £2,000 bursary from the university or employer
- Projects are circulated to students who apply direct for roles
- Students produce a poster during their placement
- Students present their poster at the SEPnet Annual Students’ Expo in London in November
What areas and types of organisations offer SEPnet placements?

• Defence, energy, engineering, satellite communication, aerospace, science research, electronics, IT, optics, environment

• Organisations offering placements through the SEPnet scheme include large corporates, SMEs, research institutions:
  o Amec, BAE Systems, QinetiQ, Culham Centre for Fusion Energy, Good Energy, LGC Forensics, Winchester Science Centre, Selex SE, Brighton & Hove Albion Football Club, National Physical Laboratory, Met Office, partner universities and many more
Employer Engagement - Postgraduate Research Students (PGRs)

Aim
• To create a pipeline of postdoctoral graduates with the employability skills to provide leadership, entrepreneurship and innovation in industry

Why
• Only 3.5% PhDs in science become permanent research staff/17% in non HE research/79.5% in industry (HESA/DLHE/Vitae 2010)

Commitments
• Engage with employers, include real-world, problem-solving experiences to broaden employability prospects of PhDs
• Offer (2 week – 3 month consultancy projects/placements and other opportunities through GRADnet eg work shadowing, site visits, employer mentoring, employer workshops and networking events
What employers are looking for and physics students/graduates offer

- Technical skills: coding, knowledge of software programmes, data analysis
- Projects include feasibility study, product testing, upgrading a piece of kit, calibrating a new detector, modelling, website development or science communication
- Transferable skills: communication – explaining technical concepts, problem solving, team-working
- Attributes: enthusiasm, professional attitude, willingness to learn, initiative (but knowing when to ask for help), fresh ideas
- Opportunities to develop relationships with departments for knowledge exchange
Case study

**Student:** Adam Greenen, University of Southampton  
**Placement:** Selex ES  
**Role:** Infra-red detector design

**What happened next?**
After finishing his MPhys degree and receiving a first class with honours he has secured a graduate role as a research scientist at the National Physical Laboratory.

“The interviewers (at NPL) were particularly interested in my SEPnet placement as the skills I had learnt were desirable for the role I applied for.”
Case study

**Student:** Laura Benn, University of Southampton  
**Placement:** Magnetic Shields  
**Role:** Development of magnetic testing for process control  
**What happened next?** Laura was offered more work at Magnetic Shields and starting full-time with them in 2014

“I am more confident in my own ability to apply what I know to a job and less worried about my career prospects.”
What you can do next

• Offer an 8 week undergraduate summer placement
• Offer a short PhD placement
• Offer a site visit or work shadowing opportunity
• Become a mentor
• Give a talk to students
• Attend our networking events (SME networking event with PGRs and academics at Queen Mary University of London, 2 September)
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