

# There's no 'I' in Industrial Team Project

**Peter Mosley**, Peter Sloan, Steven Davies, and Frances Laughton  
Department of Physics

HE STEM seminar, University of Bath  
30th January 2012

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**IOP**  
Institute of Physics



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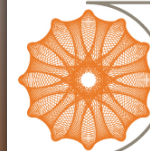
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Programme

# Physics industrial team project scheme

- Run in Physics Department at **Durham** for 20 years
- ~**6 final year students** per team
- Tackle **real-world problem** set by **industrial partner**
- **Institute of Physics** initiative to start up in **9 partner institutions**
- Funded through **HE STEM**
- **IoP framework**



**Industrial Team Projects**  
**Peter Mosley**  
**30<sup>th</sup> January 2012**



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- Funded through **HE STEM**
- **IoP framework**
  - **Project coordinator** based in Durham
  - **Progress meetings** of partner institutions twice yearly
  - Encourage **collaboration** between partners
  - Website, Google Documents, Google Group (last updated **29th July 2011!**)

# Industrial team projects in Bath

- Set up by Physics Department during **summer 2011**
- **Documentation:**
  - Project description
  - Student guide
  - Company guide
  - Marking scheme
  - IP contract



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# Industrial team projects in Bath

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- **Documentation:**

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- Run during **semester 1**
- **DS-approved** unit
- **3 students**
- Single team



# Project structure

- **Three 2-hour sessions** per week

Week	Activity
1	Project introduction, first meeting with company
2	Project management skills session (Frazer-Nash)
2-3	Generation of ideas, prepare ideas pitch
4	Ideas pitch to company, agree project plan, start main phase
5-11	Main phase, weekly team meetings assessed by supervisor
17	Final presentation



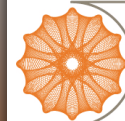
# Project assessment

	Category	Weighting (%)
<b>Group (80%)</b>	Meetings	10
	Ideas pitch	5
	Report	20
	Presentation	20
	Company feedback	25
<b>Individual (20%)</b>	Meetings	5
	Summary	10
	Peer feedback	5



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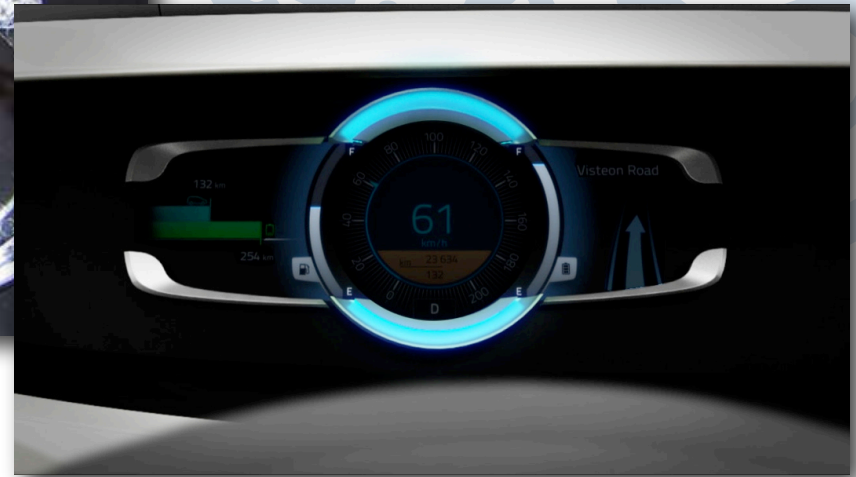


# Finding an industrial partner

- **Email sent to alumni** to find project partners - only **2 responses!**
- Separate contact through recent **alumnus** from...
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**Characterization and control of optical properties in injection molded light guides**

# Project outcomes - who benefits?

- For **students**...
- For **department**...
- For **companies**...

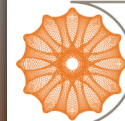
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- For **students...**
  - **do more** than sit in lecture theatre/lab
  - valuable **experience** of “real world”
  - **transferrable skills** - teamwork and project management
  - looks good on **CV** - something to talk about at interview
- For **department...**
- For **companies...**



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  - **motivates** and enthuses students
  - **UCAS** days
- For **companies**...



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- For **companies**...
  - **first look** at students before graduation or interviews
  - free **labour**...
  - ...but **don't expect too much!**



# Project outcomes - student feedback

“Our group was very fortunate as the Physics Department was **highly supportive** of our project as was Visteon”

“The course has the advantages of **real life interaction** with a company, working on team related skills and writing a report with a **broader range** than normal”

“I really **enjoyed** the **freedom** we had in approaching it”

“Overall I have found this project to be excellent at developing **skills** in **teamwork** as well as **management**”

“I really enjoyed this project. Unlike most of the lab work until now, it had a **clear purpose**”





# Future directions

- **Current** academic year
  - **new unit**, only 3 students...
  - ...but all very **engaged**
  - just **finished first project**



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- **Current** academic year
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  - just **finished first project**
- **Next** academic year
  - **standard** optional unit
  - **all Y3** Physics, Maths and Physics
  - **unit choices** in March
  - in **workload model** for academic supervisors
  - **more projects, more students!**



# Summary - Industrial Team Projects...

- **Successfully piloted** in Department of Physics
- Fully-integrated as **optional unit next year**
- **Great opportunity** for **students** to increase employability...
- ...and for **companies** to employ them!



# Comparison with existing units

- **Problem-solving skills**
  - Groups of 6 students
  - Work on different problem each week, then single problem for 5 weeks
  - Based on fictional space missions
- **Undergraduate research projects**
  - Individual or in pairs
  - Work on research problem within department
  - 1 semester, 1 day per week