

# CAMBRIDGE UNIVERSITY ENGINEERING DEPARTMENT

## 2002 OPEN DAYS



**! W E L C O M E !**

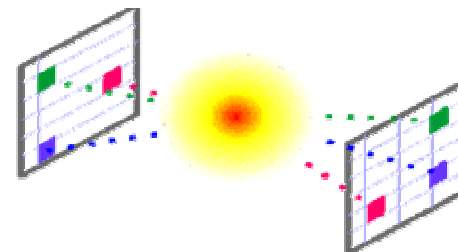
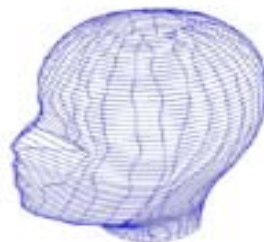
**This booklet lists the TALKS and ACTIVITIES**  
on offer for this year's CUED Open Days.

The centre pages contain a **MAP** of the Department, showing colour-coded areas open to visitors (each identified by a single-letter 'map-key').

There are **TOURS** running all afternoon (**2.15, 2.45, 3.15, 3.45, 4.15**) to show you all that's going on! If you would prefer to undertake a self-guided tour, please feel free to do so; however, please note that most demonstrations will be operating on a cycle to accommodate the tours and so you may catch them half-way through. There are **coloured arrows** on the walls to help you get where you're going, and a team of staff and students available around the Department throughout the afternoon.

***PLEASE DO NOT ENTER AREAS OTHER THAN THOSE LISTED IN THIS GUIDE***

**Please see the back cover for information on Safety, First Aid and Facilities**



# PROGRAMME OF TALKS

<i>Time</i>	<i>Talk</i>	<i>Lecture Theatre</i>	<i>Map Key</i>	<i>Notes</i>
1.15	<b>Undergraduate Engineering at Cambridge</b> Dr Geoff Parks <i>A general talk to introduce you to the Department</i>	LT0 Baker Building	a	<i>Repeated at 3.15</i>
1.45	<b>A Brief Guide to the Admissions System at Cambridge †</b> Dr Geoff Parks <i>This session is mainly for those who have not yet had contact with a College</i>	LT0 Baker Building	a	<i>Repeated at 3.45</i>
2.15	<b>Year in Industry</b> Mr Alan Gibbons	LT0 Baker Building	a	
2.45	<b>Smallpeice Trust: Engineering Careers Foundation Year</b> Mr Warren Bennett	LT0 Baker Building	a	
2.45	<b>Undergraduate Chemical Engineering at Cambridge</b> Dr Anton Middelberg (Thursday) Dr David Scott (Friday)	LT2 Inglis Building	e	
3.15	<b>Undergraduate Engineering at Cambridge</b> Dr Geoff Parks <i>A general talk to introduce you to the Department</i>	LT0 Baker Building	a	<i>Repeat of talk given at 1.15</i>
3.45	<b>Cambridge Lecture: Collapse of the World Trade Center Towers</b> Dr Chris Burgoyne	LT0 Baker Building	a	
3.45	<b>A Brief Guide to the Admissions System at Cambridge †</b> Dr Geoff Parks <i>This session is mainly for those who have not yet had contact with a College</i>	LR5 Baker Building	f	<i>Repeat of talk given at 1.45 (Video presentation)</i>

† *The Directors of Studies desk in LR4, manned from 2.45 pm, should be able to help you with any remaining queries about admissions.*

## GUIDED TOURS of the TEACHING FACILITIES

<ul style="list-style-type: none"> <li>* Library</li> <li>* Design Project Office</li> </ul>	<ul style="list-style-type: none"> <li>* Language Unit</li> <li>* Workshops</li> </ul>	<ul style="list-style-type: none"> <li>* Thermodynamics &amp; Fluid Mechanics Labs</li> </ul>	Departing from the Baker Building Foyer at <b>2.45, 3.15, 3.45 &amp; 4.15</b>
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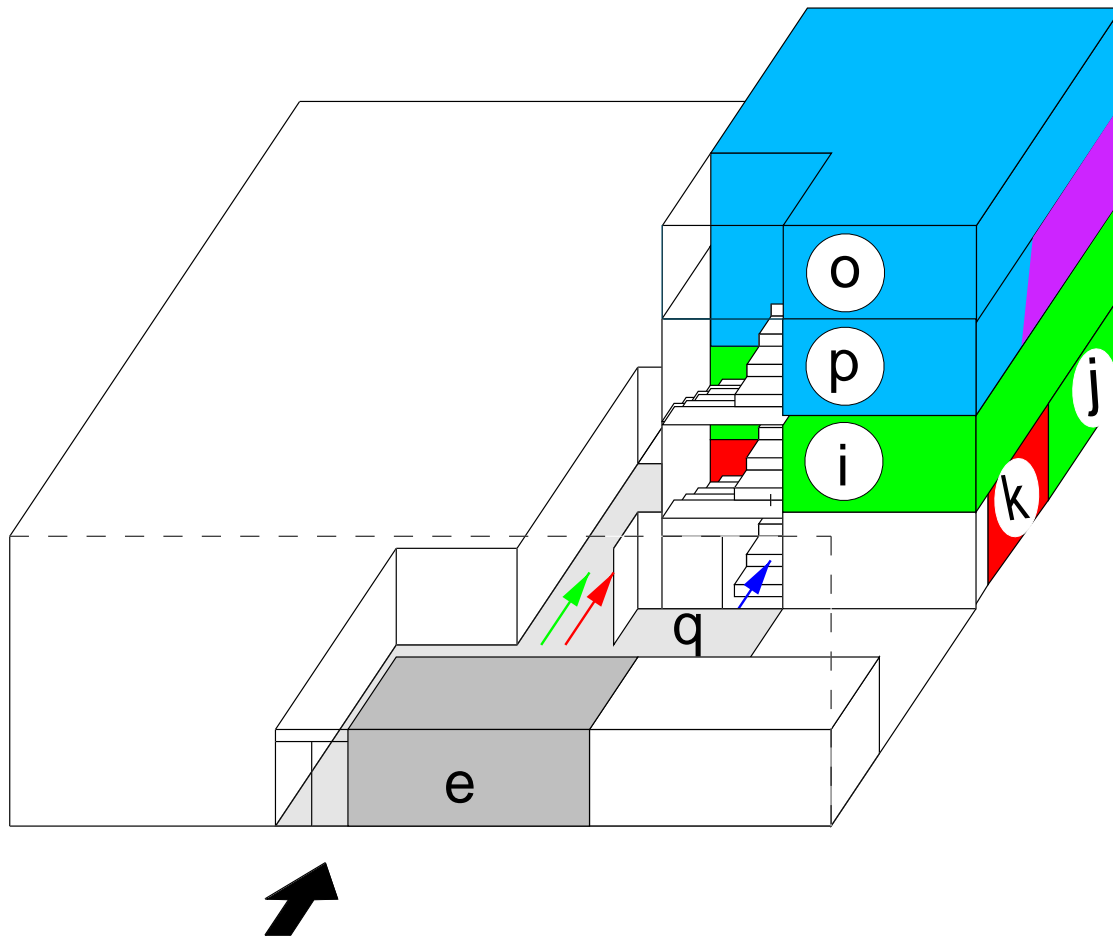
## DEMONSTRATIONS & DISPLAYS

Event	Description	Locations	Key	Timing
<b>Microfabrication</b>	Nanotechnology, thin film transistors, micromachining	<b>Clean Room</b> Baker Building, Foyer	c	Demonstrations at <b>2.15, 3.15 &amp; 4.15</b>
<b>Space Shuttle</b>	Demonstration of supersonic flow over the space shuttle	<b>Aerodynamics Lab</b> Baker Building, 2 <sup>nd</sup> Floor	m	Demonstrations at <b>2.15, 2.45, 3.15, 3.45 &amp; 4.15</b>
<b>Perspectives on Engineering</b>	Multimedia displays	<b>LR6</b> Baker Building, 1 <sup>st</sup> floor	g	Available all afternoon
<b>Manufacturing Engineering</b>	Displays and Information	<b>Ground Floor Corridor</b> Inglis Building	q	Available all afternoon

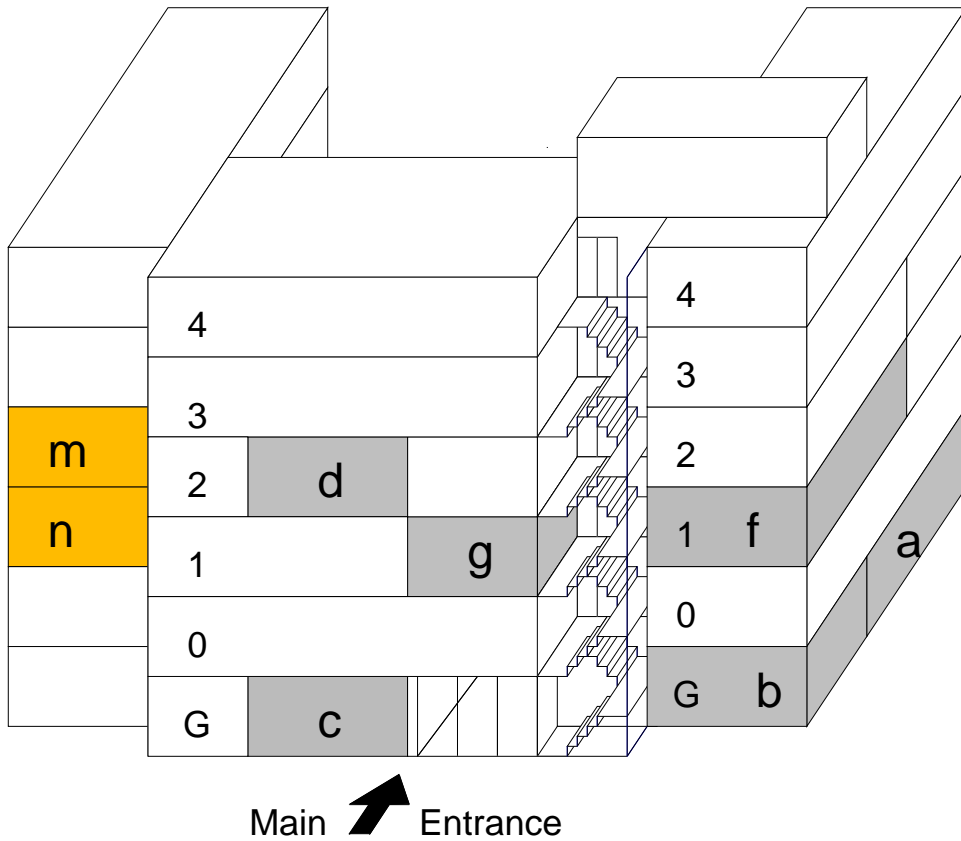
## INFORMATION POINTS

<b>Gap Year Information</b>	Details on <b>Year in Industry</b> and <b>Smallpeice Trust</b> Schemes plus CUED's <b>Industrial Experience Liaison Officer, Igor Wowk</b>	<b>LR4</b> Baker Building, Foyer	b	Available all afternoon
<b>Admissions Queries</b>	Directors of Studies Help-Desk & Frequently Asked Questions	<b>LR4</b> Baker Building, Foyer	b	Available from 2.45pm

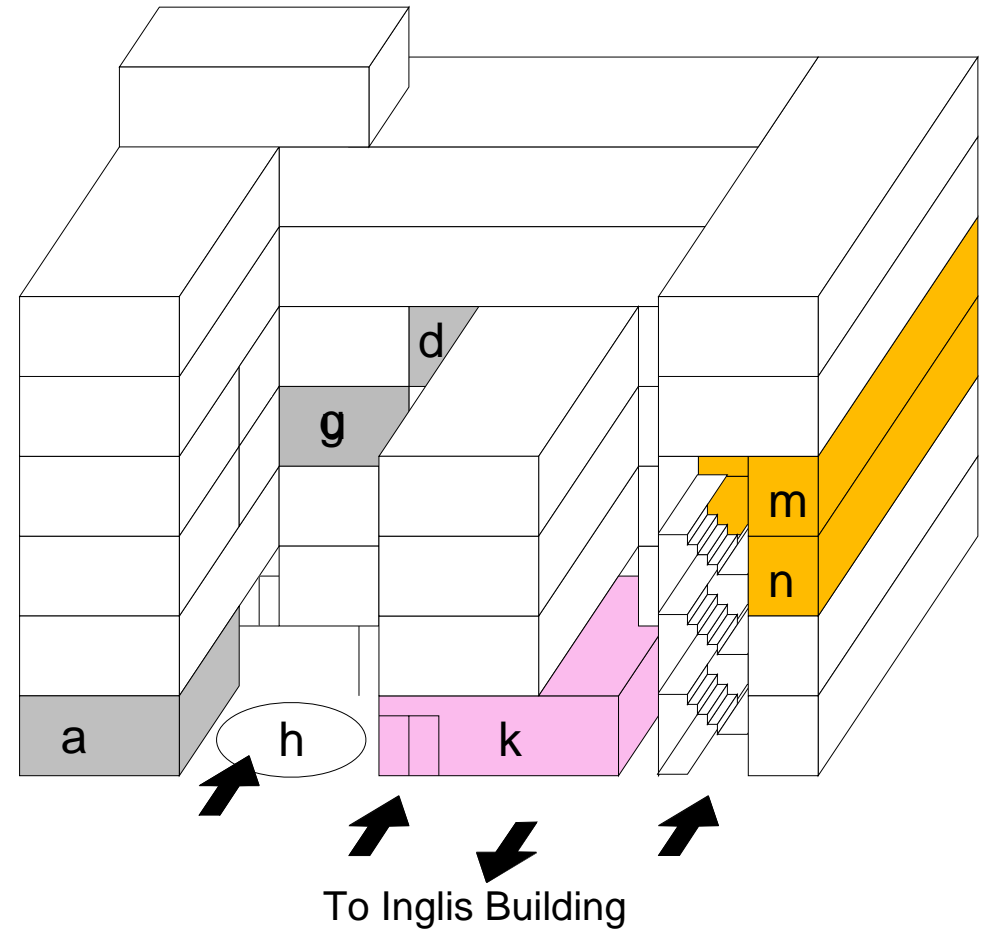
# Inglis Building



- a LT0
- b LR4
- c Clean Room
- d Tea Room (SCR)
- e LT2
- f LR5
- g LR6
- h Courtyard
- i Geotechnical Engineering
- j Structures Lab
- k Materials Lab
- l Mechanics Lab
- m Aerodynamics Lab
- n Acoustics Lab
- o Photonics Lab
- p EIETL
- q Manufacturing Eng









Baker Building






Baker Building  
( view from courtyard )

# Summary of Tours

Tour	Discipline	Topics include:	Locations:	Map Key
ROUTE 1	<b>Mechanical Engineering</b> <i>PINK</i>	How does a gyroscope work? Why can't cars be quieter? Car and truck suspension design Vibrations in building	<b>Mechanical Engineering Lab</b> Baker Building, Ground floor	
	<b>Aerodynamics &amp; Acoustics</b> <i>YELLOW</i>	Wind Tunnel demonstrations Lift on Wings Vehicle Aerodynamics	<b>Aerodynamics Lab</b> Baker Building, 2 <sup>nd</sup> floor	
		Reducing Tyre Noise Control of unsteady combustion	<b>Acoustics Lab</b> Baker Building, 1 <sup>st</sup> floor	
ROUTE 2	<b>Civil, Structural &amp; Environmental Engineering</b> <i>GREEN</i>	Sustainable Development Displays – Energy, Waste, Water & Environmental Impact Geotechnical Disasters Controlling the tilt of Big Ben Gasoline Spillage: Cleaning up Soil Pollution Groundwater Seepage Design of Deployable Space Structures	<b>Geotechnical Demonstration Area &amp; Lightweight Structures</b> Inglis Building, Mezzanine floor	
	<b>Materials Engineering</b> <i>RED</i>	Breaking steel at – 196°C How to check for cracks in aircraft Bicycle design	<b>Structures Lab</b> Inglis Building, Ground floor	
			<b>Materials Lab</b> Inglis Building, Ground floor	

*ROUTE 3*

Tour	Discipline	Topics include:	Locations	Map Key
	<b>Electrical Engineering</b> <i>BLUE</i>	<b>Photonics &amp; Sensors:</b> Optical fibre switching; 3D TV, Window pane TV, TV on a chip  <b>Electrical Power:</b> Motor Magic; Jumping Ring; Electric Wheelchair; Magnetic Levitation  <b>Electronic Engineering:</b> Virtual test bed for ship power systems; CD player	<b>Photonics &amp; Sensors Lab</b> Inglis Building, 2 <sup>nd</sup> floor  <b>Electrical &amp; Information Engineering Teaching Lab</b> Inglis Building, 1 <sup>st</sup> floor	  
	<b>Information Engineering</b> <i>PURPLE</i>	<b>Signal Processing:</b> Speech separation, reverberation cancellation and audio restoration; Automated content-based image retrieval; Optical motion capture; Rowing Performance Monitor – try it out!  <b>Communications:</b> TRIP: Optical coding location sensor system; Location tracking and context aware computing  <b>Speech, Vision &amp; Robotics:</b> Hand-held 3D ultrasound; Real time visual tracking; Multimedia document retrieval  <b>Control:</b> Model helicopter; Inverted pendulum	<b>Electrical &amp; Information Engineering Teaching Lab</b> Inglis Building, 1 <sup>st</sup> floor	

# ➤ Safety Warning ◀

SOME MACHINERY AND EQUIPMENT IN THE DEPARTMENT CAN BE HIGHLY DANGEROUS, OR EVEN LETHAL, IF HANDLED WITHOUT SUPERVISION. PLEASE DO NOT TOUCH AND HANDLE ANY MACHINERY OR EQUIPMENT UNLESS ALLOWED TO DO SO UNDER SUPERVISION OF THE OPERATOR OR DEMONSTRATOR RESPONSIBLE

## + FIRST AID +

In the event of an injury, first aid is available. Ask any member of the staff to call a First Aider or contact Reception.

## ← FACILITIES →

**Refreshments** Hot and cold drinks and snack dispensing machines are situated in the corridor of the Inglis Building. (Map key (q)). Ice creams will be on sale in the Courtyard (Map key (h)).

**Toilets**

**Baker Building**

- Basement: Ladies, Mens and Disabled (North wing)
- 1<sup>st</sup> floor: Mens (South wing)
- 2<sup>nd</sup> floor: Ladies (South wing)
- 3<sup>rd</sup> floor: Mens (South wing)

**Inglis Building**

- main ground floor corridor: Ladies and Mens

**Telephone** The Department's main number is Cambridge (01223) 332600. Public telephones are located in the foyers of the Baker and Inglis Buildings.

**Parents...** **teachers** and other accompanying adults are welcome to use the staff common room (situated on the second floor of the Baker Building) to wait for their charges; tea and coffee and a chance to sit down! (Map key (d)).

