

Sunil Patel

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Education

■ Fulneck School, Pudsey, West Yorkshire (1989-1999) [Head Boy: 1998-1999]

A-Levels	Maths, Physics and General Studies	A
	Chemistry	B
GCSEs	Geography, French, Physics and Biology	A*
	Maths, Chemistry and English	A

■ Imperial College, London; (1999-2003) MSci+YiE Physics Degree Class: Upper 2nd

I studied the MSci+YiE (ARCS), four year Physics Degree programme at Imperial College, London. It was a challenging mix of lectures and tutorials, technical, laboratory and computing work often done in small groups. Included were courses that developed skills such as team working, group projects, essay and report writing; and giving presentations and seminars. Added to this was the extra dimension given by the 3rd year study and project in Europe.

■ Università degli Studi di Trento, Trentino Alto-Adige, Italia (2001-2002) Year in Europe

Part of the MSci+YiE degree involves spending a year studying at a University in Europe and I chose to go study in northern Italy at the University of Trento. The year is split into studying the physics courses offered there (and taught in Italian) and working with a research group. I worked on a photo-acoustic spectroscopy project, analysing and reducing noise sources to enable greater sensitivity of the detection equipment. The complete immersion in the language, culture and life in Trento was an amazing experience that I am very fortunate to have been part of.

■ University of Southampton, Southampton, UK (2003-2008): PhD

My PhD project at Southampton was in Laser Cooling and Atomic Trapping and involved building a Magneto-Optical Trap and a lot of software programming in LabView that brought the many disparate instruments together to make the experiment run. The project was particularly challenging due to beginning from scratch and having to control both the hardware and precision optics both on the time domain and frequency domains. The team effort was crucial.

■ Industry Recognised IT Certification

- Microsoft Windows NT 4.0 Workstation (MCP), Server, Server in the Enterprise
- CompTIA A+ & DOS/Windows Technician Certification

Information Technology Skills

I have a very broad range of IT skills that encompass both software and hardware. I work with a wide variety of programs that includes (but is not limited to):

OS	Windows 3.1, 9.x, NT, 2000, XP Home/Pro, Vista, Linux, Solaris, BSD, Mac OS X
Office	Microsoft Office, Sun/Open Office, Lotus SmartSuite, Corel WordPerfect Office
Programming	LabView (graphical programming), Mathematica, C++, X/HTML, CSS
Graphics	Dreamweaver, Fireworks, Flash and Freehand, Corel
Typography	PDF, Postscript, LaTeX Document/Print Typesetting + BibTeX
Other	Pangolin Laser Light Show Designer, Blender 3D (with YafRAY)

I also have an in depth knowledge of computer building, installation, networking, security and troubleshooting.

Creative Skills

I produce high quality graphics and design work. This includes designing logos, 3D modelling and rendering, newsletters, posters and websites. I have a small portfolio of work commissioned by people mostly from the School of Physics and Astronomy at the University of Southampton for its Schools Outreach Programme:

www	Fulneck School	www.fulneckschool.co.uk
	THEANO – Women in Science	theano.soton.ac.uk
	Personal site and gallery	www.sunilpatel.co.uk
Leaflets	Holography & Laser Safety	For the Holography Schools Outreach programme
	Photonics – Science of Light	For the Light Express (Schools Outreach)
Newsletters	Schools Outreach Brochure	Mass-mailed to 2500 Schools and Colleges across the South
Posters	"How the Glider Flies"	The "Physics Behind Flight" poster series, on display at the InTech Science Museum, Winchester and in the foyer of the School of Physics at the University of Southampton
	"How Thermals Work"	
	"Atmospheric Pressure"	
	Nanomaterials Research	For the Rapid Nano-Prototyping Facility, Southampton
Laser Art	Several laser light shows for the Light Express Road show Outreach Project	

Teaching and Schools Outreach

Having had informal teaching experiences with special needs (on a one to one basis) at Fulneck and brief tutoring at Imperial College, I am now heavily involved in the extensive Schools Outreach Programme of the School of Physics and Astronomy at the University of Southampton.

One of the many activities involves bringing school students into the research labs at the University to spend a day learning about Holography. I teach pupils ranging from Year 9 to A-Level how to make holograms and supervise them in the labs as they go about making their own.

The flagship Outreach Activity for the Department is the Light Express. The Light Express is a travelling Road show that visits schools across the South with a powerful display laser. We put on laser light shows and lecture about photonics and the science behind the Internet. I am one of the laser operators and I also describe the several, visually stunning demonstrations we do using the laser to the school students.

Leisure time

At Imperial College, I was on the Erasmus Club Committee (which helps Year in Europe students both going to and from the continent). I helped foreign students integrate into College life, home students prepare for their year abroad and I organised social events.

Within the School of Physics and Astronomy at Southampton, undergraduate demonstrating and Schools Outreach activities – particularly the Light Express – was a serious commitment.

I am a strong swimmer and visit the pool frequently. I also enjoy regular weight training at the gym. When I am home in Yorkshire, I especially like walking (a pastime started when I was in Italy). Sports take up the majority of my free time, though when I want to relax, I prefer reading books – fantasy fiction and Classics in particular.

Languages

- Bi-lingual/Native in English and Gujarati
- Fluent in Italian
- Very Basic (GCSE) French and German

References

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