

# A SCIENTIST just like me



**Dr Parvez Alam**

**Senior Lecturer in Materials,  
Modelling and Design**

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**Hi there! I am Dr Parvez Alam – A senior lecturer in materials**



## **Where do I work?**

I work at The University of Edinburgh where I teach students mechanical design and supervise researchers who focus on topics related to materials engineering.

## **What did I like doing when I was at school?**

I enjoyed maths, the sciences and PE in school.

## **What do I like doing in my spare time?**

In my spare time I love sports and spending time with my cats. Skateboarding has been my biggest passion throughout my life though in winter it becomes tricky, so I do snowboarding instead.

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## What do I do as a Senior Lecturer in Materials?

I teach mechanical engineering and design. I give lectures and work in the labs with students to help them understand how nature can give us ideas for engineering – this is called biomimicry. When I do my research, I travel the world finding new, interesting animals with special mechanisms and study them under microscopes, modelling tools, and using VERY high speed cameras!



## How does what I do make the world a better place?

I help students understand and appreciate the complexity and beauty of the world around them, so they learn to keep the world beautiful when they engineer new products and devices.

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## What I like about my job

The best thing about my job is that when I do my research, I am completely free and make new discoveries very often. One month I might discover an animal that spins the world's toughest silk egg case. Another month I might discover a new way of designing materials for improved strength.

## Challenges I have faced

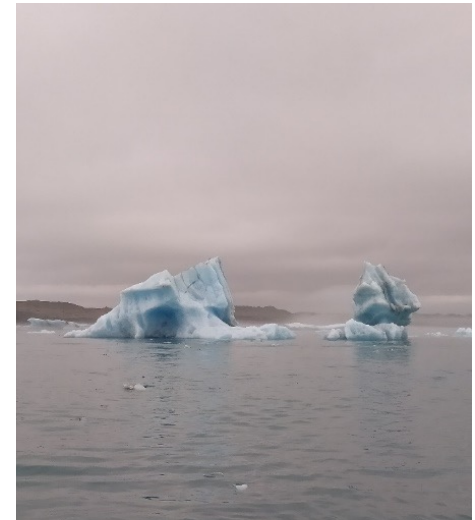
The biggest challenge is often applying to organisations for the money I need to develop a research project, travel to distant countries, hire researchers, or get equipment. Finding funding can be competitive and challenging.



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## If you want to lecture in Materials, you need:

- ✱ to have a **cross-disciplinary mindset** so that you can study different fields of science and engineering and bring them together
- ✱ **imagination** - to think of new ways of studying things that have never been studied before
- ✱ **creativity** - to find exciting ways of teaching
- ✱ to be **open minded** – to travel around the world and interact with people from different cultures and backgrounds



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## Discussion time

- ✦ Would you like to be a senior lecturer in Materials like Dr Parvez Alam?

**Why? Why not?**

- ✦ What skills and interests do you already have that would help you become a senior lecturer in Materials, Modelling and Design ?
- ✦ What new skills and knowledge would you need to develop?



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## Free supporting resources for Materials, Modelling and Design

**Chain Reaction** – design, test and refine chain reaction ideas

**Bring Back Glass** – a set of activities to explore the properties and importance of glass in everyday lives, in science and in technology

**Science & STEM Clubs** – see ‘Engineering Our World’ and ‘Challenge chasers’

**I bet you didn’t know...** articles use cutting-edge science research as a context for learning and Teacher Guides can be used as classroom presentations. See:

- Bamboo could be used to make cricket bats
- How to clean water using a molecular sieve
- Toilets of the future may change your mobile phone!

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