Careers in Mathematics

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What kind of role? What kind of organisation? Sector, status, size .... Don’t be put off by the job title.
Skills of a Mathematician

QAA Benchmark Statement for Mathematics, Statistics and Operational Research (MSOR) graduates

- general study skills
- independent learning
- independent working
- pursuing problem solution to conclusion
- time-management and organisation
- adaptability
- general IT skills
- transferring knowledge between contexts
- logical and analytical problem solving
- highly developed numeracy
- general communication skills
Careers Specific Options with Maths

Further Study, Research, Teaching
IT, Operational Research
Gov Statistical, Security Services
Engineering & Engineering Consultancy
Management Consultancy
Actuarial, Investment, Pensions, Financial
modelling, Product pricing
Meteorology, Environment, Patents
Statistics – Pharma, Health, Data mining,
Market Research
Careers Open to All Graduates

Accountancy
Banking
Distribution
Insurance
Journalism
Marketing
Public relations
Purchasing
Sales
Administration
IT
Financial Mang’t
Leisure/tourism
Human Resources
Retail
Transport
Social Work
Where I saw mathematicians

• Noise dept – aircraft noise, engine noise
• Controls dept – computer control of everything in the aircraft, power level, flight controls, measurements, air conditioning ...
• Methods design & development – modelling airflows, fluid flows (fuel, oil). heat transfer, noise, loads and stress, manufacturing processes (casting solidification)
• Reliability and Integrity – techniques for understanding and predicting failure, airworthiness
• Market analysis, economic forecasting, credit rating

And some did straight forward engineering roles
Useful sites

Career profiles/advice: www.MathsCareers.org.uk
Academic jobs: www.jobs.ac.uk
Find a PhD: www.findaphd.com
Graduate positions: www.prospects.ac.uk
www.gradcracker.com
Guardian jobs

Plus Careers Library:
plus.maths.org/interview.html

Travels in a Mathematical World podcast:
www.travelsinamathematicalworld.co.uk
Useful sources

- Careers fairs
- Presentations
- Company web-sites, annual reports (text)
- Alumni
- People you know
- Social media – LinkedIn groups
- Careers service – resources for helping and checking CVs and applications, notices of vacancies and opportunities
Strengths Interests

Technical strengths and interests
Societies - Visits, Talks, Events, Committees
Work experience, Volunteering, Education
Outreach
Team activities – participating reliably, organising
Creative/Practical/Languages/Programming – keeping up skills, building, developing, adding new ones
At Interview

- They want to hire you
- Looking for capability, interest and enthusiasm
- Back up your application – extra examples
- Know about them – web, annual report, share price/league table position
- Use their info – show your experience/enthusiasm fits
- Specific concise examples. What, why, result, even better if
- Ask questions
Who are the IMA?
Professional Body and Learned Society for Mathematicians
IMA Membership
Recognition
Development
Participation
Information
Benefit of Membership and Participation

Demonstrates you take your career and your development seriously and supports you in achieving your goals.
What do mathematicians do?
www.mathscareers.org.uk
Technical Careers

Modelling roles – writing and developing code, helping others use them properly – numerical analysis, programming skills

Data analysis – pricing for insurance, travel companies, marketing and retail, maintenance scheduling, weather – Stats, Optimisation

Design of experiments – health, biosciences – Stats, Optimisation

Data security, Communications – Cryptography

Logistics, Manufacturing Control – Stats, Optimisation, OR