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Careers in Mathematics

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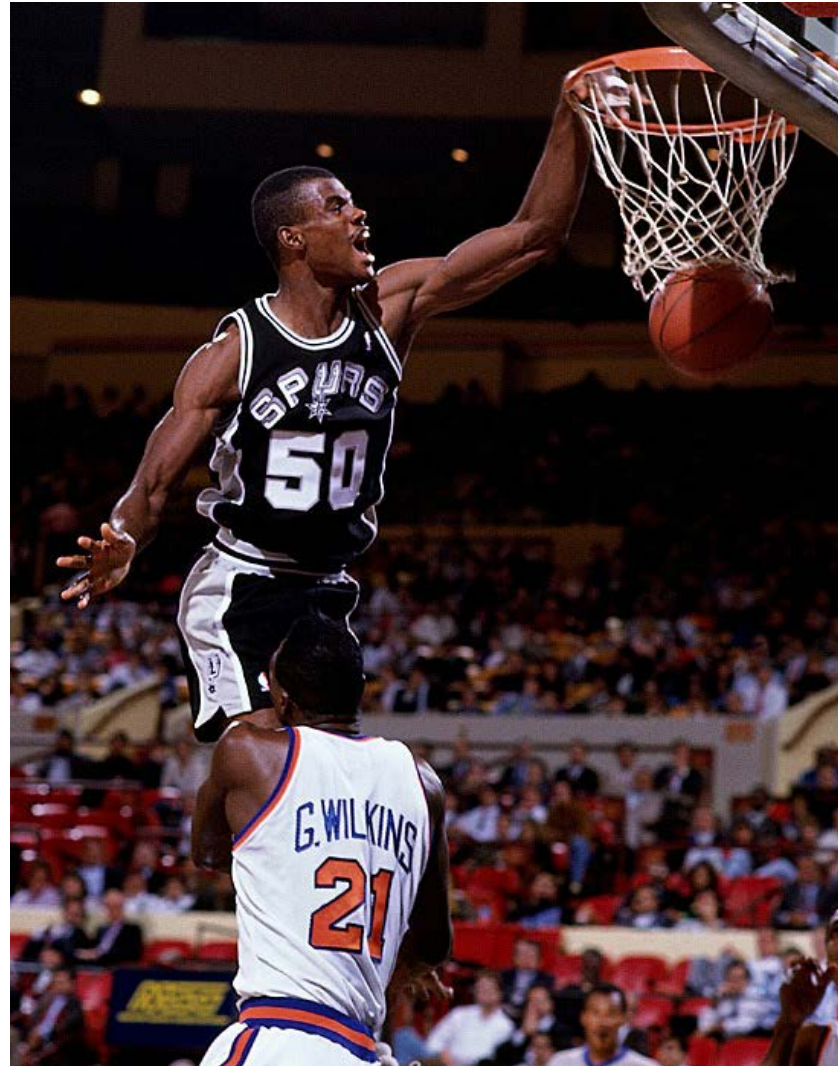
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Careers in Mathematics

Dr. Adam Hammett

Who am I?



Actuary

- A business professional who deals with the financial impact of risk and uncertainty
- Use math and statistics to solve real business problems
- Assemble and analyze data to estimate the probability and likely cost of an event such as death, sickness, injury, disability, or loss of property

Actuary

- Also address financial questions, including how a company should invest its resources to maximize profits
- Low-end Salary: \$51,950/yr
- Median Salary: \$87,210/yr
- High-end Salary: \$158,240/yr
- In 2009, a Wall Street Journal survey on best jobs in the US listed an actuary as the second best job
- For more info: <http://www.beanactuary.org>

Who am I?



Attorney

- Many lawyers majored in mathematics in college, not necessarily pre-law
- Math is surprisingly excellent preparation for the LSAT (Law School Admissions Test). In fact, **Math and Physics majors outscore all other majors on the LSAT.**
- Majoring in math will give you a “leg up” on the competition among other lawyers when you enter the job market
- Low-end Salary: \$55,270/yr
- Median Salary: \$113,240/yr
- High-end Salary: \$166,400/yr

Who am I?

- Computer Scientist, Cryptanalyst, National Security Analyst
- Field Operative



Computer Scientist

- Work as theorists, researchers, or inventors
- Use innovation to solve complex problems and create or apply new technology
- Research ranges from complex theory to hardware design to programming-language design
- Some researchers work on projects such as developing and advancing uses of virtual reality, extending human-computer interaction, or designing robots
- Low-end Salary: \$61,480/yr
- Median Salary: \$101,570/yr
- High-end Salary: \$155,420/yr

Cryptanalyst

- Analyze and decipher secret coding systems and decode messages for military, political, or law enforcement agencies or organizations
- Help provide privacy for people and corporations, and keep hackers out of important data systems
- Are constantly working on new ways to encrypt information
- Low-end Salary: \$38,930/yr
- Median Salary: \$76,470/yr
- High-end Salary: \$112,780/yr

Who am I?

- Epidemiologists



Epidemiologist

- Investigates and describes the causes and spread of disease and develops the means for prevention or control
- May study many different illnesses, often focusing on major infectious diseases such as influenza or cholera
- Use mathematical models in order to track the progress of most infectious diseases
- May also discover the likely outcome of an epidemic or help manage them by vaccination
- Low-end Salary: \$40,860/yr
- Median Salary: \$61,700/yr
- High-end Salary: \$92,610/yr
- For more info: <http://www.malariamore.org>

National Security Analyst

- Also known as intelligence analysts, use the process of taking known information about situations and entities and with appropriate statements of probability, the future actions in those situations and by those entities
- Reduce the ambiguity of highly uncertain situations
- Low-end Salary: \$53,938/yr
- Median Salary: \$73,491/yr
- High-end Salary: \$105,581/yr

Who am I?



Operations Research Analyst

- Are involved in top-level strategizing, planning, and forecasting
- Use advanced techniques from mathematics, science, and engineering to make better decisions and to solve problems
- Help to allocate resources, measure performance, design production facilities and systems, manage the supply chain, set prices, coordinate transportation and distribution, and analyze large databases
- Also have been used in wartime to effectively deploy radar, search for enemy submarines, and get supplies to where they are most needed (Game Theory)
- Low-end Salary: \$40,030/yr
- Median Salary: \$70,070/yr
- High-end Salary: \$119,140/yr
- What's **Game Theory**? <http://www.transience.com.au/pearl.html>

Who am I?

- 2010-11 NBA MVP, 25.0 ppg, 7.7 apg



Statistician

- Apply their mathematical and statistical knowledge to the design of surveys and experiments; the collection, processing, and analysis of data; and the interpretation of the experiment and survey results
- Opinion polls, statements of accuracy on scales and other measuring devices, and information about average earnings in an occupation are all usually the work of statisticians
- Low-end Salary: \$38,430/yr
- Median Salary: \$72,820/yr
- High-end Salary: \$117,210/yr
- Interesting link: <http://www.rasmussenreports.com>

Questions?

- For more info: <http://www.weusemath.org>