

# Technology, Business and Big Data:

## Career Opportunities from the Statistics and Computer Information Systems (SCIS) Department at Baruch



Marios Koufaris

by Marios Koufaris, Associate Professor, CIS

What are the highest paying majors for graduates of business schools today? The answer may surprise you. According to PayScale.com, Statistics (#13) and Management Information Systems (#18) far outrank Finance (#27) or Accounting (#52)<sup>i</sup>. In fact, a variety of industry publications, from *Forbes*<sup>ii</sup> to *US News & World Report*<sup>iii</sup>, continue to stress the increasing availability of high-paying jobs related to Information Technology (IT) and Statistics. Here in New York City, *Crain's* recently reported that IT jobs have caught up to Wall Street jobs in terms of number of positions available<sup>iv</sup>. The Big Data wave that is currently sweeping every industry is projected to create 1.9 million new jobs in the U.S. by 2015 according to Gartner, Inc.<sup>v</sup>

Given this job landscape, our students are increasingly realizing that the market is in demand of three sets of skills: (a) IT skills, (b) Quantitative Modeling and Statistical Analysis skills, and (c) Strategic Decision-Making skills. These are all skills that the department of Statistics and Computer Information Systems (SCIS) is uniquely positioned to offer students in the Zicklin School of Business at Baruch College.

The SCIS department consists of 34 full-time faculty members (as well as a number of highly qualified adjunct instructors). Our faculty members are well published and active in high-impact research that often translates directly into the classroom. For example, Prof. Kannan Mohan conducts research on globally distributed software development teams that use agile methodologies, while Prof. Yu (Ryan) Yue has conducted research on functional neuroimaging data analysis.

We offer degrees at all levels (BBA, MBA, MS, and PhD) with several available majors/concentrations (Information Systems, Statistics, Decision Sciences, Quantitative Methods). We provide an eclectic roster of courses that map directly into the current needs of the job market. Our students can:

- (a) Develop their IT skills with courses on a variety of topics such as Database Management Systems, Data Warehousing and Analytics, Object Oriented Programming, IT Audit, Web Design, and many more.
- (b) Develop their Quantitative and Statistical skills with courses on Data Mining, Financial Statistics, Time Series, Stochastic Processes, and several others.
- (c) Develop their Strategic Decision-Making skills with courses on Globalization and Technology, e-Business, Sustainability and IT, Business Intelligence, to name a few.

Our students also have a number of options in terms of career tracks they can follow. The skills they acquire are in high demand in a variety of industries, such as Financial Services, Media, Healthcare, Technology Services, and Consulting. Some of our students can choose a more technical track and become systems developers or database administrators. Others can go the less technical route, with careers as business analysts, IT auditors, Business Intelligence specialists, or Project Managers. And others can focus on careers in Business Analytics, Data Science and other quantitative fields.

In addition, our graduates are hired by some of the largest organizations in the country, if not the world, such as Bank of America, KPMG, Credit Suisse, the United Nations, and Goldman Sachs, among others. In the 2012-2013 year, 80% of graduate students who majored in Information Systems reported full time employment at graduation, according to the GCMC. This puts them second only to Finance majors who reported an 82% employment rate.

In fact, Zicklin students have shown a keen awareness of the high demand for our offerings in the market. The number of undergraduate CIS majors has jumped by 85% since 2009. And the number of graduate students who are pursuing one of our majors or concentrations has gone up by 36% since 2005. We expect this trend to continue and accelerate.

Our department has also been successful with its PhD program in Information Systems (part of the PhD in Business offered by the Graduate Center and the Zicklin School). Our graduates have taken on faculty positions in notable universities, including the University of Houston, Quinnipiac University, and Singapore Management University, among others.

In conclusion, the pervasiveness of Information Technology and the revolution of data-driven decision-making are rapidly changing the career landscape for business school students. The SCIS department is uniquely positioned to equip Zicklin graduates with the necessary skills for successful and impactful careers. *Baruch CIS Web site:* <http://cisnet.baruch.cuny.edu/koufaris> *Ph.D. Program:* <http://cis.baruch.cuny.edu/doctoral>

i <http://www.payscale.com/college-salary-report-2014/majors-that-pay-you-back>

ii <http://www.forbes.com/sites/jennagoudreau/2012/05/15/best-top-most-valuable-college-majors-degrees/>

iii <http://money.usnews.com/careers/best-jobs/rankings/the-100-best-jobs>

iv <http://www.craigslist.com/article/20140401/BLOGS02/140409990/tech-employment-is-catching-up-to-wall-street#>

v <http://www.gartner.com/newsroom/id/2207915>