

JPBM Communications Award

The 2011 Communications Award of the Joint Policy Board for Mathematics (JPBM) was presented at the Joint Mathematics Meetings in New Orleans, Louisiana, in January 2011.

The JPBM Communications Award is presented annually to reward and encourage journalists and

other communicators who, on a sustained basis, bring mathematical ideas and information to nonmathematical audiences. JPBM represents the American Mathematical Society, the American Statistical Association, the Mathematical Association of America, and the Society for Industrial and Applied Mathematics. The award carries a cash prize of US\$1,000.



**Cheryl Heuton and
Nicolas Falacci**

Previous recipients of the JPBM Communications Award are: James Gleick (1988), Hugh Whitemore (1990), Ivars Peterson (1991), Joel Schneider (1993), Martin Gardner (1994), Gina Kolata (1996), Philip J. Davis (1997), Constance Reid (1998), Ian Stewart (1999), John Lynch and Simon Singh (special award, 1999), Sylvia Nasar (2000), Keith J. Devlin (2001), Claire and Helaman Ferguson (2002), Robert Osserman (2003), Barry Cipra (2005), Roger Penrose (2006), Steven H. Strogatz (2007), Carl Bialik (2008), George Csicsery (2009), and Marcus du Sautoy (2010).

The 2011 JPBM Communications Award was presented to NICOLAS FALACCI and CHERYL HEUTON. The text that follows presents the selection committee's citation, a brief biographical sketch, and the recipients' responses on receiving the award.

Citation

The 2011 JPBM Communications Award is awarded to NICOLAS FALACCI and CHERYL HEUTON for their

positive portrayal of the power and fun of mathematics through their hit TV series, *Numb3rs*.

Nicolas Falacci and Cheryl Heuton created the extraordinary TV series *Numb3rs*, featuring an FBI agent and his brother, a mathematical genius. Through its six-season run on CBS, the series featured the use of mathematical thinking and modeling to solve crimes. *Numb3rs* provided the general public with a glimpse of the mathematical world, its depth and its power, in a way that connected with a broad spectrum of viewers. With creativity and cleverness, their work, which includes over one hundred episodes, made its fans aware of the ubiquity of mathematics in their daily lives.

[Falacci and Heuton have been recognized by the National Science Board with its Public Service Award, and they are the recipients of the Carl Sagan Public Understanding of Science Award.]

Biographical Sketch

Nicolas Falacci was born 1959 in Hyannis, Massachusetts. He attended the undergraduate film program at New York University's Tisch School of the Arts and received his B.F.A. in 1981. He sold his first feature-length screenplay in 1989 to Columbia Pictures and producer Joel Silver. He continued writing film projects for various studios and producers, mostly in the science fiction genre. That same year, while pursuing his favorite pastime of rock climbing in the Los Angeles area, he met Cheryl Heuton. Within a couple of years, the two of them moved to New York City, married, and began writing together.

Cheryl Heuton was born 1957 in Whittier, California. She grew up in the north San Diego area and attended the University of California, San Diego. She worked as a reporter for local weekly newspapers, then went on to become an editorial writer for the *Los Angeles Herald-Examiner* and later the *Long Beach Press Telegram*. She was nominated

for a Pulitzer Prize for her series of articles about the mentally ill homeless.

As a writing team, Cheryl and Nick sold their first feature script to Warner Brothers, then went on to write film projects for New Line, MGM, Imagine, Sony, and HBO.

In 2003 they pitched CBS Television an idea for a television series centered around a mathematician. Production on *Numb3rs* began in 2004, and the show debuted on CBS in January 2005. A ratings success, *Numb3rs* was renewed for a total of six seasons. During those six years, Cheryl and Nick worked on the show as executive producers. Each season they wrote and supervised numerous episodes.

In early 2010 Nick directed the 119th and final episode of *Numb3rs*. The show continues to be broadcast in syndication in the United States and in numerous foreign countries, including the United Kingdom, Germany, Sweden, Australia, Japan, and Brazil.

Response from Nick Falacci and Cheryl Heuton

While we pursued a career in film and television writing, we both have a lifelong passion and interest in science. I, specifically, arrived at NYU intent on achieving a double major in film and...physics. Once I was informed of the required workload, especially the number of math classes I would have to take, I abandoned my scientific aspirations on the spot and focused my energy on filmmaking.

Cheryl and I discovered our shared love of science on our first date, when we realized we were both tremendous fans of James Burke's "The Day the Universe Changed". Though we never discussed a specific intention to write about scientists, we found ourselves naturally inclined to create characters with backgrounds in engineering, math, and science. One of our feature scripts was based on the true story of the Glomar Explorer, an amazing engineering feat by the Navy to salvage a Russian submarine three miles beneath the surface of the ocean. We developed a network television series about the extraordinary crash and accident analysts at the National Transportation Safety Board.

It was probably only a matter of time before Cheryl and I would be drawn to the world of mathematics and mathematicians. Both long-time skeptics, we were fascinated by the rigorous rational thinking of mathematicians. We were continually and delightedly surprised by the seemingly endless capacity of mathematics to help mankind understand the nature of the world and fuel the development of technology. With the help of the writing of various authors like John Allen Paulos, we discovered the unique way that mathematicians view the world. The more we explored and researched the topic, the more we were convinced

that television audiences would find mathematicians as fascinating as we did.

Noting the popularity of crime dramas, specifically the ones based on forensic sciences, we felt that this type of storytelling could provide the opportunity to contrast and collide the thinking that goes on within a criminal investigation by police detectives with the extreme deductive reasoning of a mathematician. Our research led us to the real-life collision of math and police work: This happened by way of Kim Rossmo, a Canadian mathematician, homicide detective, and, more importantly, one of the pioneers of geographic profiling.

The notion of a mathematician solving major crime investigations was a reality. We had a strong suspicion that a lot of other people would be as fascinated by this unexpected, yet exciting confluence of disciplines as we were.

We are extremely honored to have been selected to receive the JPBM Communications Award. Neither of us, obviously, are mathematicians, and neither of us pursued our careers with any plan to popularize mathematics on network television. So much of what brought *Numb3rs* to fruition was, as mathematicians or cosmologists might say, a happy coincidence.

By creating *Numb3rs*, we have experienced two extremely rewarding accomplishments: the excitement of creating a successful television drama and the profound satisfaction of introducing an audience of ten to twelve million viewers each week to the elegance and power of mathematics and its direct impact on our daily lives.

We wish to acknowledge our utmost gratitude and appreciation for the people at CBS who believed in the show from the very beginning; the other *Numb3rs* writers who took on the daunting task of incorporating mathematics into a crime procedural drama week in, week out; our entire production staff, who embraced the notion and premise of the show; our enthusiastic researchers and our extraordinarily talented consultants who helped us navigate the world of mathematics; and, of course, Caltech, for its vigorous and wholehearted support of the show and for making us welcome on their campus.