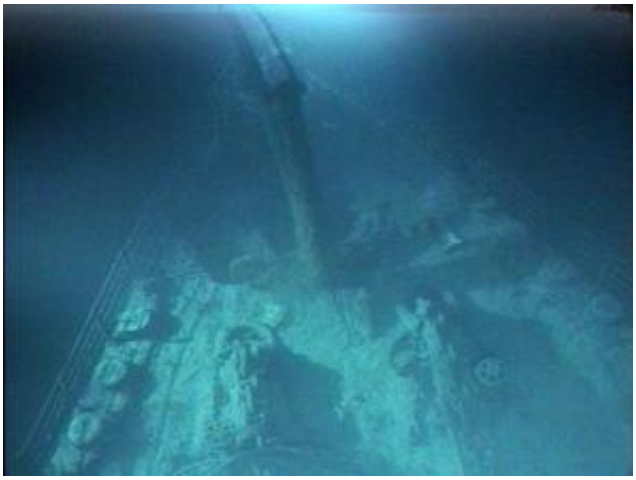
Marine forensics expert Richard Woytowich seeks to vindicate Titanic survivors' account

March 23 2012



On the eve of the 100th anniversary of the Titanic's sinking, marine forensics expert Richard Woytowich will present a paper re-interpreting the statements made by survivors at the 1912 official inquiries into the disaster.

Woytowich, a professor of computer engineering technology at New York City College of Technology (City Tech), will take into account what engineers and other technologists now know about how the ill-fated passenger liner broke apart on April 15, 1912. He will be presenting his research on April 4, 8 a.m., at the International Marine Forensics Symposium, to be held at the Gaylord National Hotel & Convention

Center in National Harbor, Maryland.

A longtime resident of Eltingville, Staten Island, Woytowich has been studying how the ship sank since 1998. In 2007, working with technical historian Roy Mengot, he developed a computer model showing that the breakup of the ship could have started in the bottom structure rather than at the uppermost decks as was widely assumed. They wrote an article on this research, titled "The Breakup of Titanic: A Progress Report from the Marine Forensics Panel (SD-7)," which was published in the January 2010 issue of *Marine Technology*.

That work, in turn, was prompted by the release of photographs taken by an expedition to the wreck, in which the fractured edges of two pieces of the ship's bottom were shown. "When I saw the edges of the actual bottom pieces of the ship, I immediately felt that I was looking at the parts that failed first, not the parts that failed last," Woytowich notes.

Recently, he was motivated to re-evaluate the testimony of many of the Titanic survivors because their statements seemed to support this model better than the popular top-down breakup (depicted in the movie Titanic). (Only a few survivors – including the ship's senior surviving officer – testified that the ship sank intact.)

"Once we changed our mental image of the breakup, it might be possible to resolve the apparent conflicts in the survivors' testimony – especially the conflict between those who said that the ship broke in two and those who said that the ship went down intact," Woytowich says. "A secondary goal was to use the survivors' statements to refine my reconstruction of the later stages of the ship's breakup."

Backed by forensic evidence, Woytowich hopes to help restore the credibility of the majority of the survivors, who testified that the ship broke in two. While they were not believed by the official inquiry, they

were vindicated when the wreck was discovered lying in pieces on the bottom in 1985.

None of the survivors, however, reported seeing the ship split apart from the top down. When early analyses suggested that the breakup began at the upper edges of the hull, the reliability of all of the survivors' testimony was called into question.

But if, as Woytowich believes, the breakup started in the bottom structure, "then much of the process would have occurred near or below the surface of the water. The extent to which each survivor could see it would have depended on his or her location," he explains. "In that case, the apparent conflicts in testimony could be explained, and the credibility of all the survivors could be restored.

As Woytowich put it, "It's been 100 years since the sinking; it's time to set the record straight."

Woytowich has also presented on other aspects of the sinking of the Titanic, which was the largest ship of its time. In 2003, he presented a paper, "Riveted Hull Joint Design in RMS Titanic and Other Pre-WWI Ships," based on research he had conducted for the previous five years. His calculations showed that some of the joints involved in the iceberg impact were only about 27 percent as strong as the plates they connected.

His paper at the upcoming symposium, which runs from April 3-5, will not be the only presentation on the breakup of the Titanic, which sank on its maiden voyage after hitting an iceberg. At least one other team of investigators will be presenting the results of their analysis of the ship. "I'm looking forward to an interesting discussion of our results," Woytowich says. "It may be that the information presented at this symposium will finally let us come to a consensus on how the ship broke up. But it is always possible that differences of opinion will remain."

Since it is likely that ships will continue to be damaged or sunk for as long as people sail the seas, the symposium will also look to the future, introducing a set of guidelines for forensic investigations. These guidelines will build on the work done by the members of the Marine Forensics Committee (the technical committee under whose auspices the symposium is being held, and of which Woytowich is a member), including the work done to investigate the sinking of the Titanic.

Provided by New York City College of Technology