

Space Conquest: Meet the people behind the film Hidden Figures : Professor Horne – Text C

In February 1962, astronaut John Glenn made history as the first American to orbit Earth. Few people today are **aware** of how uncertain it was as to whether he'd make it home. Or they weren't until the movie Hidden Figures recounted the story. But the movie isn't really about Glenn. The real heroes of the film are the female African-American mathematicians who worked behind the scenes — as human “computers” — to make sure the critical numbers added up for plotting Glenn's safe return.

The 2016 movie was based on Margot Lee Shetterly's book of the same name. The film focuses on three women in the 1960s who worked at NASA's Langley Research Center. Opportunities at the space agency for women and for people of color, back then, did not match those for white men. But Katherine Johnson, and her colleagues Dorothy Vaughan and Mary Jackson were still able to perform important work. And now they're finally getting the **widespread** respect and visibility that their achievements deserved.

Bringing **accuracy** to this uplifting story on the big screen would not have been possible without the help of experts in math and in NASA's history. These experts worked closely with Hollywood filmmakers to ensure everything was correct. This included the dialogue, the action and every mathematical formula shown. (...) Hidden Figures was filmed in Atlanta, not Hollywood. So the production needed a local math expert to work with the **cast**. Morehouse College recommended Horne and he seemed perfect for the job. After all, he had a strong background in physics and taught applied math — how math can solve real-world problems.

Before shooting began, Horne met with writer-director Ted Melfi. Melfi asked the teacher to make suggestions about the script. The movie focuses on John Glenn's re-entry orbit and getting the astronaut back in one piece. A central problem was how to portray Glenn's re-entry. “We wanted the math to complement the bigger story and be **consistent**,” recalls Horne. He knew about a certain set of equations that describe that orbital motion. Melfi added it to his script.

Horne's main assignment, though, was to work with the cast. “Everything you see them writing on the board, I told them to write,” he says. He gave Henson formulas to memorize. And when the child who played the young Katherine was asked to solve a complex problem in math class, it was Horne who wrote the equation. Indeed, he points out: “The handwriting is my handwriting.” Later he had the young actress memorize each step to solve it.

Horne also worked with the **props** department to provide the appropriate math equations seen in the background of scenes. All of this meant he needed to visit the set about a dozen times. “It was cool to see how they put everything together,” he says. “I'm happy they trusted me.” This math teacher loves how the movie turned out and is glad to have played a part. The filmmakers “set out to tell a good and believable story,” Horne observes. “They did that. And if it influences people to study math and science, great!”

Gerri Miller, [Meet the people behind the film Hidden Figures](#) *Science News Explores*, August 24, 2017

aware:

widespread:

accuracy: *justesse, réalité*

cast: *équipe*