



Senior Jesuits

# A Mathematician for Christ

Rev. Andrew Whitman, S.J., has both a brilliant mathematical mind and a humble, gracious spirit, two qualities not so commonly held by one person. And, after 85 years, his memory is sharp. Reflecting on his many memories, he says, "It's a mystery how the Lord leads our lives."

The latest of these life-defining moments is his *Pro Ecclesia et Pontifice Cross*, the award recently bestowed upon Fr. Whitman by Pope Benedict XVI in gratitude for three decades of service to the Vatican Observatory. The Cross of Honour, as it is often called, was established and first awarded by Pope Leo XIII in 1888. It is one of the highest honors awarded to clergy and religious, and the highest of honors given to the laity, for distinguished service to the Catholic Church.

Fr. Whitman's remarkable journey reads like a great work of fiction. It begins in Detroit, then helpless in the Great Depression with bread lines, bank failures and unemployment. His father was one of thousands left jobless, and with no work available the Whitman family began what was to be an 18-month job search which eventually led them to New Orleans.

Andy was seven when his family arrived in New Orleans, and he attended public elementary and secondary schools. It was a highly-coveted scholarship awarded to the top two students in a class numbering 522 that boosted him into studies at Tulane University. He enrolled in 1942, at the height of World War II, and majored in civil engineering. "We had no vacations," he recalls, adding that he completed his undergraduate studies in just two years and three months. "Building things always attracted me," he explains. "But, I was always drawn to the priesthood, and the Jesuits were right next

door," referring to the physical property boundary shared by Tulane and Loyola Universities.

His plan was stifled by tuberculosis, then considered an incurable disease. He contracted the illness his senior year, and doctors informed him that its severity only gave him two remaining years of life. He could not enter the Jesuit novitiate with such a diagnosis, so he instead chose to earn his master's degree in hydro-engineering from Louisiana State University. Upon completion, he was offered a position at Tulane University to teach all of the incoming students; classrooms were full of returning soldiers and volunteers.

Then out of the blue, his diseased lung collapsed and took with it all the bacterial germs of his malady, curing him of tuberculosis and relieving him of its impending death sentence. He approached the Jesuits once again. Examination after examination proved that he was in fact free of illness, and he officially entered the Society in 1951, a 25-year-old man looking ahead to the gift of renewed life.

Andy completed philosophy studies at Spring Hill College followed by a doctorate in mathematics from Catholic University and a licentiate in sacred theology from Woodstock College. He



Fr. Andy Whitman chats with guests at a reception honoring him.



Fr. Whitman is honored for his many years of service to the Vatican Observatory.

was ordained a Jesuit priest in 1963 and began tertianship teaching mathematics next door to his alma mater at Loyola University New Orleans.

As a young mathematician, his intelligence and methods were impressive but intimidating to several of his colleagues, so much so that Jesuit Provincial John Edwards encouraged him to choose a job for himself that would not limit his capabilities. He accepted a position at the University of Houston, where for seven years he served as a professor of mathematics. But, "life became too easy," he recalls, and in 1974 he left for life as a missionary in Brazil.

He spent time at the Pontificia Universidade Catolica in Rio de Janeiro and at the Jesuit mission Centro Kennedy in Campinas, Brazil, at a vocational school for adults. "Those were glorious, wonderful years of teaching," he recalls. It was during this time that he became an adjunct researcher for the Vatican Observatory as well. But, particularly memorable are his years spent working in conjunction with Franciscan sisters on the great Amazon. "River culture was another world, and such a beautiful world," he adds.



After 15 years in South America, Fr. Whitman returned to the states to teach at the College of the Holy Cross for seven years before turning 70 and retiring from classroom teaching altogether. “Then, I went to the telescope,” he hints, referring to the Vatican Observatory Research Group in Tucson, Arizona. He continued to work as a research scientist and administrator for 14 more years before resigning his position. “I felt too old for the responsibility,” he candidly reveals.

But leaving the observatory has not led to retirement of any kind. Currently a writer in residence at St. Charles College, Fr. Whitman is penning a book on Lie algebra (an algebraic structure used in the study of geometric objects) to, as he explains it, “initiate people into this natural mathematics.” He also continues to meet with the Clavius Group of Mathematicians which he co-established with Rev. Larry Conlon, S.J., while at Catholic University in 1963.

Now well established in its 49th year, Clavius Group meets annually, for four weeks during the summer, to share research and prayer. Its 30 members and their families hail from several universities and countries. “Over all these years it’s become like a family,” Fr. Whitman says of the relationships cultivated at group reunions. “I’ve baptized children, celebrated weddings for them, and now I’m baptizing grandchildren,” he adds, illustrating how his mathematical research and priestly ministry have been masterfully woven together. Of this divine tapestry he repeats, “It is such a mystery,” perhaps a mystery decoded in the words of an essay he once wrote, “Experiencing mathematics, one experiences in a finite manner, Truth that is Good and Beautiful. And thus mathematics can become a prayer.”

*Fr. Whitman will celebrate 60 years as a Jesuit at this year’s Jesuit Jubilee on Sunday, July 31, 2011.*



*Fr. Whitman receives the Pro Ecclesia et Pontifice award presented to him by Fr. José Funes, S.J. This is one of the highest honors awarded to clergy and religious for distinguished service to the Holy Father and the Catholic Church.*

## Exploring the Heavens

Rev. David Brown, S.J. takes the expression “shooting for the stars” to new heights. A New Orleans native, 44-year-old Brown has devoted his life to studying the heavens – both divine and celestial. After earning his B.S. in Physics from Texas A&M University, he joined the



Society of Jesus in 1991. For the next decade he studied philosophy at Fordham University and theology at the Weston Jesuit School of Theology, until his ordination to the priesthood in 2002. Then, he turned his attention to the celestial heavens by exploring the binary interactions which might produce sub dwarf B (sdB) stars at different metallicities, with implications for the UV-upturn. What in the world does that mean? “My research is in the area of what is called stellar evolution; that is, studying how stars actually work – their energy mechanisms, their evolution, and their fates. In particular, I study what are known as binary stars, which are systems in which there are two stars together instead of one,” Fr. Brown says.

Upon successful completion of his thesis on this subject in 2008, he was awarded a doctorate in astrophysics from the University of Oxford. At this time he was also assigned to the staff at the Vatican Observatory in Castel Gandolfo, Italy, where he has been working on the synthesis of stellar populations to model the ultra-violet excess in giant elliptical galaxies. After a break to fulfill his tertianship in Salamanca, Spain, he returned to the Observatory in April 2011 to continue his research.

Not surprisingly, Fr. Brown is also interested in the relationship between the divine and celestial worlds or, more precisely, the relationship between faith and science. The Vatican Observatory was, in fact, founded 120 years ago for exactly that reason. Pope Leo XIII, continuing the efforts of Pope Gregory XIII over 300 years before, was determined to counteract the longstanding accusations that the Church harbors hostility toward science. To the contrary, through the work of the Observatory the Church has demonstrated its true belief that “faith and reason are like two wings on which the human spirit rises to the contemplation of truth” (*Fides et Ratio, Proemium*).

As a member of the Vatican Observatory staff, Fr. Brown has proven that he can be a man for others, while also embodying the Church’s support of scientific studies. “In studying the cosmos and man’s place in it, we are engaged in the pursuit of [scientific] truth, but since all truth comes ultimately from God, it is also a way of beholding something of God Himself, Who is the Truth,” he says. Over the coming years, Fr. Brown will continue his research, and with the support of both the scientific and faith communities there are sure to be more stellar discoveries on the way from this Jesuit.