

# Leroy Chiao

Astronaut, Performance Specialist, and Innovation/Technology Futurist

**Performance/Innovation Keynotes with Optional Breakout Sessions** Dr. Chiao began his professional career as a chemical engineer, and his passion for space exploration led him to NASA. Following a stellar 15-year astronaut career, he moved on to leadership positions in entrepreneurial startups, applying his space experience to the business world. Chiao has identified and addressed key performance/innovation topics which affect all businesses and organizations, both big and small. His unique spaceflight perspective frames these topics from a non-traditional view that is especially impactful. In addition to the keynotes, optional breakout sessions are available for each topic to delve into more detail for select participants. These sessions include concrete tools that can be applied immediately. Breakout sessions are customizable to fit your timeframe and needs.

**To the Stars! Leaving Complacency Behind** Complacency in any organization leads to loss of efficiency and opportunities in the best case, and loss of the business or even life in the worst. Complacency is an insidious slow-burning problem, which usually begins and builds without anyone really noticing. In this thought-provoking presentation, Dr. Leroy Chiao discusses success in space exploration and business using his personal spaceflight stories and photographs, as well as failures at NASA and other organizations. Chiao introduces case studies and examines the symptoms, causes and effects of organizational and individual complacency. He discusses mitigation and maintenance strategies to leave complacency behind in your endeavor, to reach the stars!

**Endeavor to the Next Level! What does it take to jump to the next level?** It takes the right kind of leadership to foster a culture, which emphasizes the rigor of operational excellence, but also encourages using collaboration, curiosity and creativity to take calculated risks and novel paths. It is also vital that your enterprise stays up to date on technology and innovation trends, to stay in the lead position. During spaceflight, operational decision-making can make the difference between life and death, success and failure – especially during a crisis. But in some cases, it is the novel solution that saves the day. In this presentation, Dr. Leroy Chiao shares provocative and awe-inspiring stories from his four space missions, including nail-biting tales of real emergency situations, and shows audiences how lessons learned from spaceflight can impact their organizations. Using his personal experience as the commander of a 193-day mission aboard the International Space Station, he illustrates how reaching for the stars is important, but even more so is honing the skills required to not only stay alive, but thrive. In addition, understanding where innovation is driving technology trends is key to planning for the future. Having been in technology companies and NASA, Dr. Chiao is no stranger to this world. He offers an exciting glimpse into life in the future and shares insights on a world in which technology is accelerating much more quickly than ever before – presenting new opportunities for businesses poised to take action, or threats to those who are slow to adapt. He

presents real-world examples of companies, which thrived or suffered depending on their ability to change with the times. Imagine a world in which you are connected directly to the Internet using thought-controlled computer augmentation and a virtual heads-up display. Imagine a life where personalized medicine allows treatments tailored to your genetics, where replacement organs are grown to be identical to your own. Through awe-inspiring stories of his time in space and breathtaking photos, Chiao looks at what is coming around the bend and how organizations can take advantage of the next technological phase and form the right culture to jump to the next quantum level!

**The Future of Spaceflight: Flight Path Beyond the Wild West!** Spaceflight and space exploration began in the realm of countries and the race for global power and influence. Along the way, key technologies were developed and matured, which enabled the future commercial space industry. Astronaut Leroy Chiao grew up during the space race, was inspired to dream of becoming an astronaut by the Apollo 11 Moon landing, and years later, was selected by NASA and flew four missions into space during the heart of the Space Shuttle program and the beginning of the International Space Station (ISS) era. He left NASA in 2005 after serving as the 10th commander of the ISS and began working in the commercial “New Space” environment during its “Wild West” beginnings. This was just two years after the flight of SpaceShipOne, the first commercial crewed vehicle to touch space. Over the years, he has been a part of both successes and failures in this new industry. These experiences and his NASA heritage place Chiao in the perfect position to opine on what is the likely future trajectory of the commercial space sector. In this exciting presentation, Dr. Chiao talks about his personal journey and the evolution of government and commercial spaceflight. He describes the unbridled excitement and enthusiasm during the early “New Space” days and how this allowed breathtaking advances to be achieved, but also for charlatans to run free. The resulting painful shakeout of the industry forced it to mature for the better. Today, excitement and enthusiasm still run high, and many new opportunities are opening. Join Leroy Chiao in this exciting story about spaceflight’s future, which has only just begun!

**Leadership and Operational Decision Making: Fundamentals from Spaceflight** In space, effective leadership can make the difference between life and death, success and failure – especially during a crisis. In this presentation, Dr. Leroy Chiao shares provocative and awe-inspiring stories from his four space missions, including nail-biting tales of real emergency situations, and shows audiences how lessons learned from operational spaceflight can impact their organizations. Using his personal experience as the commander of a 193-day mission aboard the International Space Station, he illustrates how reaching for the stars is important, but even more so is honing the operational decision-making skills required to not only stay alive, but thrive. With the help of breathtaking photos, he outlines the five key leadership lessons learned from his time in space: 1.) Training is not something you can switch on and off; it must be a continuous learning process, 2.) Keep your eye on the long-term goal, but ensure that you are safe in the short-term so you have time and the capacity to accomplish it, 3.) Keep crises in perspective and make sure you don’t exacerbate a problem, 4.) Ask for help if necessary, but never forget you are ultimately responsible, and 5.) Sometimes

immediate action is required; anticipate and be prepared for it. Chiao's talk is great for leaders in all sectors who work in a complex environment, who take calculated risks, and who "push the envelope."

**Technology and Innovation Trends, and Your Business** Understanding where innovation is driving technology trends is key to planning for the future. Dr. Leroy Chiao is no stranger to this world. He offers an exciting glimpse into life on the next quantum level and shares insights on a world in which technology is accelerating much more quickly than ever before – presenting new opportunities for businesses poised to take action. Imagine a world in which you are connected directly to the Internet using thought-controlled computer augmentation and a virtual heads-up display or a world in which sensors can identify you instantly – allowing you to travel smoothly and securely, whether you use commercial travel or your automatically piloted vehicle. Imagine a life where personalized medicine allows treatments tailored to your genetics, where replacement organs are grown to be identical to your own. Through awe-inspiring stories of his time in space and breathtaking photos, Chiao looks at what is coming around the bend and how organizations can take advantage of the next technological phase.

**Inspirational Entertainment Keynotes** For corporate/business meetings, conferences, and other events which need a unique, interesting, inspirational and entertaining speaker, Leroy Chiao offers a perspective from space exploration guaranteed to excite and inspire!

**Exciting Discoveries in Space! What's It All About and is there Other Life Out There?** It is a question that humans have contemplated since we became aware of our universe: Is there other life out there? Over the centuries, tales of visits by alien life abounded. Even in spaceflight, astronauts frequently observe strange phenomena. In this fascinating keynote, Dr. Chiao describes his own provocative observations made over his four space missions and talks about recent exciting discoveries that show the possibility of other life in our own cosmic backyard! Chiao includes his personal story and adventures in space, and shares striking and beautiful photographs of our Earth.

**View from the On-High: Adventures of a Professional Astronaut** Experience spaceflight from the on-high of the Space Shuttle and the International Space Station. See breathtaking, awe-inspiring, and provocative photos of the Earth from space and hear first-hand accounts from Leroy Chiao about his four space missions. Get the behind-the-scenes tour from the Commander of Expedition X, and his view on where we are heading. Stunning photographs and personal stories make this an unforgettable experience!

**Space Photography as Art** Viewed from space, the Earth is an amazingly beautiful place. Join Leroy Chiao as he shares some of the best of his 16,000+ photographs from orbit. He describes his adventures in space and provides context and thoughts about the amazing photos he shot from the International Space Station and Space Shuttles. This presentation is sure to inspire wonder and add perspective on our amazing world to all audiences!

**Specialized Keynotes** As an astronaut, Dr. Chiao developed interests in specialized topics from a unique perspective. He discusses fascinating observations and ideas from personal experiences and reflection.

**For Students: Make the Most of Your OneOrbit!** We all have one chance, one life, OneOrbit! In this keynote geared especially for students, Dr. Chiao talks about the fundamentals that young people must embrace in order to pursue a successful and fulfilling professional life. Using his personal story, Chiao describes the importance of not only having dreams and passions, but of also having the courage to follow that path. A child of immigrants, Dr. Chiao endured challenges like bullying, and found ways to turn that negative energy into a positive. He describes the importance of hard work and persistence, character and making the right choices. This exciting and inspiring keynote delivers the recipe to young people to strive and thrive, delivered against the awesome backdrop of space exploration!

**International Space Exploration Programs: History, Current Plans and Where are We Going?** Without exception, human space exploration (HSF) programs historically grew out of military missile programs. This fascinating presentation examines how rocket programs began and evolved in wartime Germany, Russia, and the United States. China, a latecomer to the HSF game, has slowly and steadily built their program since launching their first national astronaut into orbit in 2003, to become the emerging space superpower today. Nobody is in a better position than Dr. Leroy Chiao to talk about the Chinese space program and offer comparisons to the American and Russian ones. Dr. Chiao, who holds the distinction of being the first astronaut of Chinese heritage to perform a spacewalk and to command a space mission, talks about these programs and takes a look at what are the possibilities for the future. He discusses international cooperation and gives his thoughts on where we are going in the future of space exploration!

**Is It SADS, Or Am I in Space? Medical Considerations for Spaceflight** Spaceflight is a magical, life-changing experience. However, there is a darker side to the adventure. Serious medical issues, both acute and chronic, occur in every phase of flight, and it is these biomedical challenges that limit our ability to send astronauts on longer and more distant missions – not the technology of spacecraft or technical systems. In this fascinating presentation, Dr. Chiao weaves the physiological effects of the space environment with his personal stories and adventures in space. In addition, he discusses the synergy between the development of operational countermeasures and diagnostics for spaceflight, and the creation of healthcare solutions on Earth. Educated as a chemical engineer, Dr. Chiao first became interested in space biomedicine after experiencing changes in physiology during his first Space Shuttle mission. A veteran of four spaceflights, he served as commander and NASA science officer of Expedition-X, a six-and-a-half-month mission aboard the International Space Station. After a 15-year NASA astronaut career, Dr. Chiao became the user panel chairman for the National Space Biomedical Research Institute, and a professor in the Center for Space Medicine, Both at the Baylor College of Medicine in the Texas Medical Center.

**Journey of the First Chinese-Heritage Professional Astronaut** Born in the United States, Leroy Chiao was the first NASA astronaut of full Chinese heritage. The wide-eyed child of immigrants, Chiao was inspired by the Apollo-11 Moon landing to launch his own journey to the stars. But his journey was not simple or easy. He overcame challenges like bullying and discrimination, and had to make the right choices as a young person, to stay healthy. Hear firsthand on how he persevered, succeeded and flew four missions into space, including three Space Shuttle flights, walked in space six times, co-piloted a Russian Soyuz spacecraft and was afforded the honor of commanding the International Space Station, on a six-and-a half month mission. Chiao also holds the distinction of being the first astronaut of Chinese heritage to perform a spacewalk and to command a space mission. Dr. Chiao's story is an inspiration to all, especially for young people!