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FOR RELEASE:
Tuesday, March 19, 2019

MARCELO GLEISER AWARDED 2019 TEMPLETON PRIZE

WEST CONSHOHOCKEN, PA. – Marcelo Gleiser, theoretical physicist, cosmologist, and a leading proponent of the view that science, philosophy, and spirituality are complementary expressions of humanity's need to embrace mystery and the unknown, was announced today as the 2019 Templeton Prize Laureate.

Gleiser, 60, the Appleton Professor of Natural Philosophy and a professor of physics and astronomy at Dartmouth College in Hanover, New Hampshire, has earned international acclaim through his books, essays, blogs, TV documentaries, and conferences that present science as a spiritual quest to understand the origins of the universe and of life on Earth.

A native of Brazil, where his books are bestsellers and his television series draw audiences in the millions, Gleiser becomes the first Latin American to be awarded the Templeton Prize.

For 35 years, his research has examined a wide array of topics, ranging from the behavior of quantum fields and elementary particles, to early-universe cosmology, the dynamics of phase transitions, astrobiology, and new fundamental measures of entropy and complexity based on information theory, with more than 100 peer-reviewed articles published to date.

Gleiser is a prominent voice among scientists, past and present, who reject the notion that science alone can lead to ultimate truths about the nature of reality. Instead, in his parallel career as a public intellectual, he reveals the historical, philosophical, and cultural links between science, the humanities, and spirituality, and argues for a complementary approach to knowledge, especially on questions where science cannot provide a final answer.

He often describes science as an “engagement with the mysterious,” inseparable from humanity's relationship with the natural world. Gleiser's writings propose that modern science has brought humankind back to the metaphorical center of creation – his doctrine of “humancentrism” -- by revealing the improbable uniqueness of our planet, and the exceptional rarity of humans as intelligent beings capable of understanding the importance

of being alive. This inversion of Copernicanism, he argues, prompts the need for a new cosmic morality where the sacredness of life is extended to the planet and all living beings.

The Templeton Prize, valued at 1.1 million British pounds, is one of the world's largest annual individual awards and honors a person who has made an exceptional contribution to affirming life's spiritual dimension, whether through insight, discovery, or practical works. The announcement was made online at www.templetonprize.org today by the John Templeton Foundation, based in West Conshohocken, Pennsylvania.

Established in 1972 by the late global investor and philanthropist Sir John Templeton, the Prize is a cornerstone of the Foundation's international efforts to serve as a philanthropic catalyst for discoveries relating to the deepest and most perplexing questions facing humankind. The Foundation supports research on subjects ranging from complexity, evolution, and emergence to creativity, forgiveness, and free will.

"Professor Gleiser embodies the values that inspired my grandfather to establish the Templeton Prize and to create the John Templeton Foundation," said Heather Templeton Dill, president of the John Templeton Foundation, in a prepared statement available at www.templetonprize.org. "Two values which were especially important for him, and the focus of various Foundation grants, are the pursuit of joy in all aspects of life, and the profound human experience of awe."

"Professor Gleiser's work displays an undeniable joy of exploration. He maintains the same sense of awe and wonderment that he first experienced as a child on the Copacabana beach, gazing at the horizon or the starry night sky, curious about what lies beyond," she added. "As he writes in *The Island of Knowledge*, 'Awe is the bridge between our past and present, taking us forward into the future as we keep on searching.'"

"The path to scientific understanding and scientific exploration is not just about the material part of the world," said Professor Gleiser in his videotaped acceptance of the Prize at www.templetonprize.org. "My mission is to bring back to science, and to the people that are interested in science, this attachment to the mysterious, to make people understand that science is just one other way for us to engage with the mystery of who we are."

In his letter endorsing Marcelo Gleiser's nomination for the Prize, Evan Thompson, professor of philosophy at the University of British Columbia, noted: "His tireless efforts to bring a cohesive, just, and all-inclusive vision of humanity and its future are advancing human flourishing, bringing together people from different cultures and religious backgrounds into a global conversation on the importance of going beyond old stereotypes to celebrate the human condition and our role as planetary custodians."

"This is an extraordinary first for Dartmouth, and we could not be prouder of Marcelo, whose work goes to the heart of humanity's place in the cosmos and explores the biggest questions about our existence," said Dartmouth President Philip J. Hanlon. "This award acknowledges his place among the scientists, theologians, writers, and others who have transformed the way we view the world."

Marcelo Gleiser was born in Rio de Janeiro to an influential family in Rio's Jewish community and received a conservative Hebrew school education. He began college majoring in chemical engineering but soon shifted to physics, receiving a Bachelor of Science from the Pontifical Catholic University of Rio de Janeiro in 1981. The next year, he earned a master's in physics from the Federal University of Rio de Janeiro and, in 1986, a Ph.D. in theoretical physics from King's College London.

As a post-doctoral fellow, he wrote a series of papers on the cosmological consequences of theories with extra spatial dimensions, as proposed by models of unification, and one of the first papers examining superstring theory as it may relate to the Big Bang. Soon, his research branched into aspects of symmetry breaking, phase transitions, and the stability of physical systems, concepts that would influence his later critique of so-called "theories of everything."

At 32, Gleiser was appointed assistant professor of physics and astronomy at Dartmouth and full professor in 1998 at age 39. Over those years he distanced himself from unification theories and expanded his scientific views into a larger cultural context, resulting in his first book, [*The Dancing Universe*](#). Conceived as a textbook for non-science majors at Dartmouth, this exploration of the philosophical and religious roots of scientific thinking and their influence from ancient to modern times marked Gleiser's emergence as a public intellectual.

[Four more English-language books](#) followed, detailing his growing skepticism of the quest to find mathematical perfection in the universe, and calling instead to celebrate imperfection, asymmetry, and imbalance as joint creative powers in nature. He became a critic of blanket pronouncements about unknowable matters such as the inevitability of the unification of forces and the certainty that physics has solved the question of the universe's origin. He also increasingly rejected the claims of fellow scientists who asserted the irrelevance of philosophy or religion.

Gleiser's research transitioned to investigating how the properties of matter changed as the universe evolved, and the forces that counteract a system's tendency to dissipate or decay. In 1994 he co-discovered "oscillons" – small, long-lived energy "lumps" made of many particles – and he continues to examine their remarkable properties. Currently, he uses information theory to explore how the stability of physical systems – from subatomic to astrophysical scales – is encoded in the complexity of their shapes. He has also turned his attention to the origin of life on Earth, in particular the role of biochemical asymmetries in the early formation of polymers, precursors of complex biomolecules, and he has become an influential voice in the growing astrobiology community.

While he describes himself as an agnostic, he is also an avowed non-atheist. "I see atheism as being inconsistent with the scientific method as it is, essentially, belief in nonbelief," he noted in a 2018 interview in *Scientific American*. "You may not believe in God, but to affirm its nonexistence with certainty is not scientifically consistent."

Gleiser has served as commentator on numerous broadcast and cable programs, including “Fantástico,” Brazil’s most popular TV variety show, always with a knack for clear, succinct communication. In 2009 he co-founded the National Public Radio blog, “[13.7: Cosmos and Culture](#),” where he contributed more than 400 articles. It was recreated in 2018 as “[13.8](#)” at [orbitermag.com](#). He has also written more than 900 weekly columns in *Folha de São Paulo*, the largest newspaper in Brazil.

In 2016, he established the [Institute for Cross-Disciplinary Engagement](#) at Dartmouth to advance and transform constructive dialogue between the sciences and the humanities in academia and in the public sphere, especially on fundamental questions where bringing together multidisciplinary insights is essential. The Institute, supported in part by a grant from the John Templeton Foundation, sponsors dialogues and workshops in cities across the United States featuring scientists, humanists, and spiritual leaders.

Marcelo Gleiser and his wife, Kari Amber Gleiser, a trauma psychologist, are internationally competitive in Spartan races – long-distance obstacle races – and ultramarathons, which he describes as meditative integrations of mind and body into the vast world of nature. They live with their children in Hanover, New Hampshire.

He joins a group of 48 Prize recipients including Mother Teresa, who received the inaugural award in 1973, the Dalai Lama (2012), and Archbishop Desmond Tutu (2013). Last year’s Templeton Prize was awarded to His Majesty King Abdullah II of Jordan for his efforts to promote peace-affirming Islam and to seek religious harmony within Islam and between Islam and other religions. The 2017 Laureate was the American philosopher Alvin Plantinga, whose scholarship made theism a serious option within academia. Scientists who are previous Prize Laureates include Martin Rees (2011), John Barrow (2006), George Ellis (2004), Freeman Dyson (2000), and Paul Davies (1995).

Marcelo Gleiser will formally receive the Templeton Prize at a ceremony in The Metropolitan Museum of Art’s Grace Rainey Rogers Auditorium in New York City on Wednesday, May 29.

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Notes to Editors

- Further biographical information on Professor Marcelo Gleiser, a video of Heather Templeton Dill announcing and Marcelo Gleiser accepting the 2019 Templeton Prize, still pictures, and information on the 48 previous Templeton Prize Laureates, are available at www.templetonprize.org.
- Follow the Templeton Prize on Twitter using @TempletonPrize and #TempletonPrize2019.