2023-K330

Assembly Resolution No. 330

BY: M. of A. McMahon

HONORING Calyampudi Radhakrishna (C.R.) Rao upon
the occasion of his special designation as recipient
of the 2023 International Prize in Statistics

WHEREAS, It is the sense of this Legislative Body that those who
enhance the quality of life in their community and have shown a long and
sustained commitment to the maintenance of high standards in their
profession, certainly have earned the recognition and applause of all
the citizens of this great Empire State; and

WHEREAS, Attendant to such concern, and in full accord with its
long-standing traditions, this Legislative Body is justly proud to honor
C.R. Rao upon the occasion of his special designation as recipient of
the 2023 International Prize in Statistics, awarded biennially at the
International Statistical Institute World Statistics Congress in Ottawa,
Ontario, Canada; and

WHEREAS, The International Prize in Statistics is modeled after the
Nobel Prize and recognizes a major achievement by an individual or team
in the statistics field, particularly an achievement of powerful and
original ideas that have led to practical applications and breakthroughs
in other disciplines; and

WHEREAS, One of the most accomplished mathematicians and
statisticians of our age, C.R. Rao revolutionized statistical thinking

and dramatically influenced the human understanding of science across a wide spectrum of disciplines; and

WHEREAS, In 1920, C.R. Rao was born to a Telugu family in Hadagali, Karnataka; his schooling was completed in Gudur, Nuzvid, Nandigama, and Viskhapatam, all in Andhra Pradesh; and

WHEREAS, C.R. Rao received an MSc in mathematics from Andhra University and an MA in statistics from Calcutta University in 1943; he also obtained a PhD degree at King's College at Cambridge University, further adding a DSc degree from Cambridge in 1965; and

WHEREAS, Cambridge University awarded C.R. Rao with the prestigious Sc.D. degree in 1965, and he has received 31 Honorary Doctoral degrees from universities in 18 countries; additionally the Pennsylvania State University has established a C.R. and Bhargavi Rao Prize in Statistics; and

WHEREAS, At the beginning of his career, C.R. Rao worked at the Indian Statistical Institute and the Anthropological Museum in Cambridge; later he held several important positions, as the Director of the Indian Statistical Institute, Jawaharlal Nehru Professor and National Professor in India, University Professor at the University of Pittsburgh, and Eberly Professor, Chair of Statistics, and Director of the Center for Multivariate Analysis at Pennsylvania State University; and

WHEREAS, As a testament to his genius, C.R. Rao has received many honors; he was awarded the title of Padma Bhushan by the Indian Government in 1968 and in 2001, he was awarded the Padma Vibhushan; and

WHEREAS, C.R. Rao demonstrated three fundamental results that paved

the way for the modern field of statistics and provided statistical tools heavily used in science today in his 1945 paper published in the Bulletin of the Calcutta Mathematical Society; combined, these results help scientists more efficiently extract information from data; and

WHEREAS, The first result in C.R. Rao's findings is known as the Cramer-Rao lower bound, which provides a means for knowing when a method for estimating a quantity is good; the second is named the Rao-Blackwell Theorem, which provides a means for transforming an estimate into a more optimal estimate; lastly, the third result provides insights that pioneered a new flourishing interdisciplinary field, information geometry; and

WHEREAS, Information geometry has recently aided the understanding of Higgs boson measurements at the Large Hadron Collider, the world's largest and most powerful particle accelerator; it also has found applications in recent research on radars and antennas, artificial intelligence, data science, signal processing, shape classification, and image segregation; and

WHEREAS, C.R. Rao's monumental work has earned such a prestigious award, as his theories and tools continue to exert a profound influence on science; and

WHEREAS, It is the custom of this Legislative Body that when individuals of such noble aims and accomplishments are brought to our attention, they should be celebrated and recognized by all the citizens of this great Empire State; now, therefore, be it

RESOLVED, That this Legislative Body pause in its deliberations to honor C.R. Rao upon the occasion of his special designation as recipient of the 2023 International Prize in Statistics; and be it further

RESOLVED, That a copy of this Resolution, suitably engrossed, be transmitted to C.R. Rao.