IEEE world honors

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Kalyanmoy Deb presented the 2018 IEEE CIS Evolutionary Computation Pioneer Award

Michigan State University Professor Kalyanmoy Deb was presented the 2018 IEEE CIS Evolutionary Computation Pioneer Award at the IEEE World Congress on Computational Intelligence (WCCI 2018) in Rio de Janeiro, Brazil. He was honored July 11 for his “pioneering contribution, development, and leadership in evolutionary multi-criterion optimization.”

Deb is the Koenig Endowed Chair and a professor in the Department of Electrical and Computer Engineering and the BEACON Center for the Study of Evolution in Action.

BEACON Director Erik Goodman said the honor recognizes career achievements over a lifetime.

“Among Professor Deb’s pioneering contributions to the field of evolutionary multi-objective optimization was the algorithm NSGA-II, which has been more widely used than any other evolutionary multi-objective optimization tool,” Goodman explained. “He has led the community in development of this new field that has spurred both widespread academic research and worldwide industrial application.”

Multi-criterion optimization has been applied to many aspects of science, engineering, economics, and logistics. It helps decision-makers optimize conflicting objectives, like minimizing costs while maximizing comfort or maximizing performance while minimizing resource consumption and emissions. In practical uses, it can help communities balance productivity, profitability, and environmental damage while serving as a guide for real-world decision making.

Deb is a fellow of IEEE, the Indian National Science Academy, the Indian National Academy of Engineering, the Indian Academy of Sciences, and the International Computation.
He received his bachelor’s of science degree in mechanical engineering from IIT Kharagpur in 1985 and his master’s and PhD degrees in engineering mechanics from the University of Alabama in 1989 and 1991.

In 2017, he received the inaugural Lifetime Achievement Award from Clarivate Analytics for his highly cited research contributions during ceremonies in New Delhi, India. He was also honored with the Clarivate Analytics Highly Cited Researcher Award in India. He was selected for papers ranking in the top one percent by citations, considering both year and field of publication.

Also at WCCI 2018, a paper co-authored by Deb and two former students -- Ankur Sinha, of the Indian Institute of Management Ahmedabad, India, and Samish Bedi, who visited MSU from India in 2016 as an inGEAR student -- received the IEEE Congress on Evolutionary Computation 2018 Outstanding Conference Paper Award.

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