



KHONGORZUL DORJGOTOV

Asia & the Pacific

Mathematics

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Dr. Dorjgotov is a mathematician whose research focuses on fractional differential equations (FDEs), an emerging field in applied and theoretical mathematics with many applications in a variety of fields in science and engineering. FDEs have been recognized as an excellent tool for describing complex systems and processes in many applied sciences including physics, chemistry, biology and economics. The study of these types of equations is becoming increasingly popular as they can more accurately model a given physical system or process than conventional differential equations.

Dr. Dorjgotov began studying applied mathematics as an undergraduate student at the National University of Mongolia (NUM), where she won an award for best research in a student competition. She continued on to do her Master's degree in the same subject, before winning a MEXT Japanese government scholarship for doctoral study at Kyushu University in Japan. It was there that she first started her research on FDEs, focusing on Lie theory and symmetry approach. She outcompeted many international students during the final year of her PhD to win Best Poster at the 2017 Forum Math-for-Industry. After completing her PhD, she returned to Mongolia, becoming one of few women with a mathematics PhD in the country. She began working as a lecturer at NUM in 2018.

Now, Dr. Dorjgotov is working to establish the study of fractional calculus in Mongolia. In addition to working as a senior lecturer and supervising graduate students, she also strives to increase collaboration between the industrial and academic sectors. To this end she recently organized, with fellow researchers, the first Mongolian "Study Group" workshops, an internationally recognized method of technology and knowledge transfer between academic mathematicians and industrial sectors. Dr. Dorjgotov hopes that not only the industrial representatives but also decision makers will be able to apply the results of mathematical research to do their jobs more effectively.

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Receiving this award gives me much-needed recognition and acknowledgement of my work. It is a great encouragement and leverage to expand my research and to inspire fellow researchers and students in Mongolia.

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