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Mathematics Professor Co-Authors Optics-Related Book

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Dr. Anjan Biswas, an associate professor of mathematics at Delaware State University has co-authored a new published book entitled *Mathematical Theory of Dispersion-Managed Optical Solitons*.

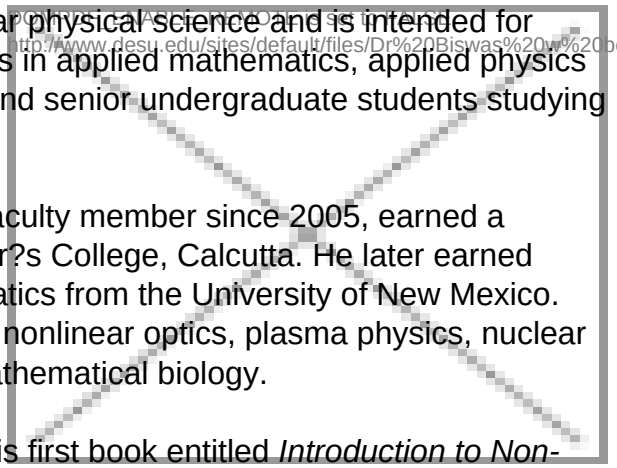
Dr. Biswas co-authored the book with Dr. Daniela Milovic of the University of Nis of Serbia, and Dr. Matthew Edwards of Alabama A&M University.

Temporal optical solitons are stable pulses that propagate through optical fibers for trans-continental and trans-oceanic distances without getting distorted during its transmission. Solitons are the outcome of a delicate balance between dispersion and nonlinearity. This book is about the dynamics of temporal optical solitons when the dispersion is managed for performance enhancement during its transmission through fiber optic cables.

The book falls in the academic category of nonlinear physical science and is intended for students at the master?s and doctoral degree levels in applied mathematics, applied physics and engineering. The book will also benefit junior and senior undergraduate students studying physics and engineering.

Dr. Biswas, an India native who has been a DSU faculty member since 2005, earned a Bachelor of Science in Mathematics from St. Xavier?s College, Calcutta. He later earned master?s and doctoral degrees in applied mathematics from the University of New Mexico. His research pursuits have included soliton theory, nonlinear optics, plasma physics, nuclear physics, fluid dynamics, theoretical physics and mathematical biology.

This is the second book authored by Dr. Biswas. His first book entitled *Introduction to Non-Kerr Law Optical Solitons* ? which he co-authored with Swapan Konar ? was published in 2006. He has also served as an editorial board member of 11 physics and mathematics journals and is an associated editor of the Applied Mathematics journal.



Dr. Anjan Biswas holds the second book that he has co-authored.

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