

Analytical Solutions of a Continuous Arithmetic Asian Model for Option Pricing using Projected Differential Transform Method.

- **Source:** Engineering Letters . 2019, Vol. 27 Issue 2, p51-58. 8p.
- **Author(s):** EDEKI, Sunday O.; UGBEBOR, Olabisi O.; OGUNDILE, Paul O.
- **Abstract:** In financial mathematics, the procedure for finding the solutions of the Black-Scholes model defined in terms of Arithmetic Asian Option (AAO) is one of the most tasking issues when considering its corresponding analytical solutions. In this paper, such analytical solution of a continuous arithmetic Asian option is obtained through the application of a proposed semi-analytical approach known as Projected Differential transform Method (PDTM). The Asian option model in continuous arithmetic form witnesses the application of PDTM for the first time in literature (to the authors' best of knowledge). The PDTM entails less computational work, even without neglecting the high level of accuracy. The obtained solution is in agreement with those in literature via other solution methods. In terms of recommendation, the proposed solution method will be of great interest for related versions or forms of Asian option pricing models (geometric) likewise other financial nonlinear differential models.
- *Copyright of Engineering Letters is the property of Newswood Limited and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract.*

For access to this entire article and additional high quality information, please check with your college/university library, local public library, or affiliated institution.



Important User Information: Remote access to EBSCO's databases is permitted to patrons of subscribing institutions accessing from remote locations for personal, non-commercial use. However, remote access to EBSCO's databases from non-subscribing institutions is not allowed if the purpose of the use is for commercial gain through cost reduction or avoidance for a non-subscribing institution.

© 2022 EBSCO Industries, Inc. All rights reserved.