

Esko Valkeila: *On the approximation of geometric fractional Brownian motion;* Helsinki University of Technology, Institute of Mathematics, Research Reports A535 (2007).

Abstract: *We give an approximation to geometric fractional Brownian motion. The approximation is a simple corollary to a 'teletraffic' functional central limit theorem by Gaigalas and Kaj in [6]. We analyze the central limit theorem of Gaigalas and Kaj from the point of view semimartingale limit theorems to have a better understanding of the arbitrage in the limit model. With this approximation we associate the corresponding pricing model sequence, which has no-arbitrage property and which is complete.*

AMS subject classifications: 60F17, 60H99, 91B28

Keywords: arbitrage, geometric fractional Brownian motion, approximation

Correspondence

Esko Valkeila@tkk.fi

ISBN 978-951-22-9020-8
ISSN 0784-3143
TKK, Helsinki, Finland

Helsinki University of Technology
Department of Engineering Physics and Mathematics
Institute of Mathematics
P.O. Box 1100, FI-02015 TKK, Finland
email:math@tkk.fi <http://math.tkk.fi/>