

On Fractional Fields indexed by Metric Spaces

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Abstract

We define and build H-fractional α -stable fields indexed by a metric space (E, d) . We mainly apply these results to spheres, hyperbolic spaces and real trees

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Bibliography

1. Bretagnolle, Jean; Dacunha-Castelle, Didier; Krivine, Jean-Louis. Lois stables et espaces L^p . (French) *Ann. Inst. H. Poincaré Sect. B (N.S.)* 2 (1965/1966) 231--259. [MR0203757](#) (34 #3605)
2. N. Chentsov. Levy's Brownian motion of several parameters and generalized white noise, *Theory of Probability and its Applications* 2 (1957), 265--266.
3. Dress, Andreas; Moulton, Vincent; Terhalle, Werner. T -theory: an overview. *European J. Combin.* 17 (1996), no. 2-3, 161--175. [MR1379369](#) (97e:05069)
4. Faraut, Jacques; Harzallah, Khélifa. Distances hilbertiennes invariantes sur un espace homogène. (French) *Ann. Inst. Fourier (Grenoble)* 24 (1974), no. 3, xiv, 171--217. [MR0365042](#) (51 #1295)
5. Istas, Jacques. Spherical and hyperbolic fractional Brownian motion. *Electron. Comm. Probab.* 10 (2005), 254--262 (electronic). [MR2198600](#)
6. Koldobskiui, A. L.. The Schoenberg problem on positive-definite functions. (Russian) *Algebra i Analiz* 3 (1991), no. 3, 78--85; *translation in St. Petersburg Math. J.* 3 (1992), no. 3, 563--570 [MR1150554](#) (93c:42014)
7. Koldobsky, Alexander; Lonke, Yossi. A short proof of Schoenberg's conjecture on positive definite *Bull. London Math. Soc.* 31 (1999), no. 6, 693--699. [MR1711028](#) (2001j:42008)
8. Kolmogoroff, A. N. Wiener'sche Spiralen und einige andere interessante Kurven im (German) *C. R. (Doklady) Acad. Sci. URSS (N.S.)* 26, (1940). 115--118. [MR0003441](#) (2,220c)
9. Lévy, Paul. Processus stochastiques et mouvement brownien. augmentée *Gauthier-Villars & Cie, Paris* 1965 vi+438 pp. [MR0190953](#) (32 #8363)
10. Maejima, Makoto. A remark on self-similar processes with stationary increments. *Canad. J. Statist.* 14 (1986), no. 1, 81--82. [MR0839294](#) (87f:60080)
11. Robertson, Guyan. Crofton formulae and geodesic distance in hyperbolic spaces. *J. Lie Theory* 8 (1998), no. 1, 163--172. [MR1616751](#) (99c:53083)
12. Robertson, Guyan; Steger, Tim. Negative definite kernels and a dynamical characterization of property *Ergodic Theory Dynam. Systems* 18 (1998), no. 1, 247--253. [MR1609459](#) (99c:22008)
13. Samorodnitsky, Gennady; Taqqu, Murad S. Stable non-Gaussian random processes. Stochastic Modeling. *Chapman & Hall, New York*, 1994. xxii+632 pp. ISBN: 0-412-05171-0 [MR1280932](#) (95f:60024)
14. Schoenberg, I. J. Metric spaces and completely monotone functions. *Ann. of Math. (2)* 39 (1938), no. 4, 811--841. [MR1503439](#)
15. Takenaka, Shigeo. Integral-geometric construction of self-similar stable processes. *Nagoya Math. J.* 123 (1991), 1--12. [MR1126180](#) (93d:60070)
16. Takenaka, Shigeo; Kubo, Izumi; Urakawa, Hajime. Brownian motion parametrized with metric space of constant *Nagoya Math. J.* 82 (1981), 131--140. [MR0618812](#) (83m:60071)
17. Valette, Alain. Les représentations uniformément bornées associées à un *Bull. Soc. Math. Belg. Sér. A* 42 (1990), no. 3, 747--760. [MR1316222](#) (96i:22011a)

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18. A.Yaglom. Some classes of random fields in n -dimensional space, related to stationary random processes, *Theory of Probability and its Applications* 2 (1957), 273--320. [MR94844](#)



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