

[Arnaudon, M.](#)

Appendix to the preceding article: The natural filtration of the Brownian motion indexed by \mathbb{R} on a compact manifold. (Appendice à l'exposé précédent: La filtration naturelle du mouvement brownien indexé par \mathbb{R} dans une variété compacte.) (French) [Zbl 0949.60089](#)

Azéma, Jacques (ed.) et al., Séminaire de probabilités XXXIII. Berlin: Springer. Lect. Notes Math. 1709, 304-314 (1999).

It is shown in a recent note of *M. Émery* and *W. Schachermayer* [*ibid.*, 291-303 (1999)] that the natural filtration of a Brownian motion on the circle indexed by \mathbb{R} is obtained from a usual Brownian filtration via a (deterministic) time-change. The purpose of this article is to prove the same result for Brownian motion on any compact Riemannian manifold of dimension $d \geq 2$. The method relies on a generalization of results of *M. Cranston* [*J. Funct. Anal.* 99, No. 1, 110-124 (1991; [Zbl 0770.58038](#))] and *W. S. Kendall* [*Stochastics* 19, 111-129 (1986; [Zbl 0584.58045](#))] about the Brownian coupling property.

For the entire collection see [[Zbl 0924.00016](#)].

Reviewer: [Thomas Simon \(Berlin\)](#)

MSC:

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[60G44](#) Martingales with continuous parameter

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