P. Kříž, J. Štěpán

A note on almost sure convergence and convergence in measure

Comment.Math.Univ.Carolin. 55,1 (2014) 29 –40.

Abstract: The present article studies the conditions under which the almost everywhere convergence and the convergence in measure coincide. An application in the statistical estimation theory is outlined as well.

Keywords: convergence in measure; almost sure convergence; pointwise compactness; Lusin property; strongly consistent estimators
AMS Subject Classification: Primary 28A20; Secondary 62F12

References

[1] Asanov M.O., Veličko N.V., *Kompaktnye množestva v $C_p(X)$*, Comment. Math. Univ. Carolinae **22** (1981), 255–266.
[2] Blackwell D., *There are no Borel SPLIFs*, Ann. Probability **8** (1980), 1189–1190.
[3] Dunford N., Schwartz J.T., *Linear Operators Part I: General Theory*, John Wiley & Sons, Inc., New Jersey, 1988.
[4] Fremlin D.H., *Measure Theory, Vol 4, Topological Measure Spaces*, Colchester: Torres Fremlin, 2003.
[5] Ionescu Tulcea A., *On pointwise convergence, compactness and equicontinuity I*, Z. Wahrscheinlichkeitstheorie und verw. Gebiete **26** (1973), 197–205.
[6] Ionescu Tulcea A., *On pointwise convergence, compactness and equicontinuity II*, Advances in Math. **12** (1974), 171–177.
[7] Kelley J.L., *General Topology*, Springer, New York, 1975.
[8] Kříž P., *How to construct Borel measurable PLIFs?*, WDS'11 Proc. of Contr. Papers, Part I, (2011), 43–48.
[9] Štěpán J., *The probability limit identification function exists under the continuum hypothesis*, Ann. Probability **1** (1973), 712–715.