A RELATION BETWEEN ASYMPTOTIC CONES AND PAINLEVÉ-KUROTOWSKI CONVERGENCE

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A asymptotic cone is a cone of a set and is considered about the limit of a sequence in the set. This cone has a lot of useful properties, in addition, a cone itself is often used such as a optimization or a set-relation in the field of convex analysis.

Painlevé-Kuratowski Convergence is a notion in topological vector space and implies the convergence of set-valued mapping. Characterizing the definition of asymptotic cone with this convergence, asymptotic cone can be redefined as set-valued mapping.

This presentation gives a relation between asymptotic cones and Painlevé-Kuratowski Convergence on convex analysis. The former part explains what asymptotic cones is and what Painlevé-Kuratowski Convergence means. The latter part introduces that asymptotic cones can be written as the set-valued mapping indeed.

REFERENCES

[1] A. Gopfert, H. Riahi, C. Tammer, and C. Zalinescu, Variational methods in partially ordered spaces, vol. 17 of CMS Books in Mathematics, Springer-Verlag, New York, 2003.
[2] A. Alfred and M. Teboulle, asymptotic cones and functions in optimization and variational inequalities, Springer monographs in Mathematics, Springer-Verlag, New York, 2003.

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