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Kontinuitätssatz

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Theorem. $G \subset \mathbb{C}^n$ is pseudoconvex if and only if for any family of closed analytic discs $\{d_{\alpha}\}_{{\alpha}\in I}$ in G with $\bigcup_{{\alpha}\in I}\partial d_{\alpha}$ being a relatively compact set in G then $\bigcup_{{\alpha}\in I}d_{\alpha}$ is also a relatively compact set in G.

This is the analogue of one of the definitions of a convex set. Just replace pseudoconvex with convex and closed analytic discs with closed line segments.

References

- [1] M. Salah Baouendi, Peter Ebenfelt, Linda Preiss Rothschild., Princeton University Press, Princeton, New Jersey, 1999.
- [2] Steven G. Krantz., AMS Chelsea Publishing, Providence, Rhode Island, 1992.