

**Kiselman, Christer O.**

**The use of conjugate convex functions in complex analysis.** (English) Zbl 0585.32019  
Complex analysis, Banach Cent. Publ. 11, 131-141 (1983).

[For the entire collection see [Zbl 0529.00020](#).]

This well written article is primarily an exposition of the use of the partial Legendre transformation in studying global and local properties of plurisubharmonic functions. New proofs of known results on certain plurisubharmonic functions are given, namely the calculation of the boundary distance of their domain of harmonicity and the proof of the plurisubharmonicity of the regularized order of the induced partial functions. In addition, two new existence theorems for plurisubharmonic functions are proved: one for prescribed orders of the partial functions and the other for prescribed minimal growth sets.

Reviewer: S.Hayes

**MSC:**

[32U05](#) Plurisubharmonic functions and generalizations  
[26B25](#) Convexity of real functions of several variables, generalizations

Cited in **1** Review  
Cited in **2** Documents

**Keywords:**

convexity theory in complex analysis; conjugate convex function; partial Legendre transformation; existence theorems for plurisubharmonic functions; orders; minimal growth

**Full Text:** [Link](#) [EuDML](#)