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Bloch's Principle

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Abstract. A heuristic principle attributed to André Bloch says that a family of holomorphic functions is likely to be normal if there are no non-constant entire functions with this property. We discuss this principle and survey recent results that have been obtained in connection with it. We pay special attention to properties related to exceptional values of derivatives and existence of fixed points and periodic points, but we also discuss some other instances of the principle.

Keywords. Normal family, quasinormal, Zalcman Lemma, exceptional value, fixed point, periodic point.

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