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Spectral Notions for Conformal Maps: a Survey

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Abstract. The universal means spectrum of conformal mappings has been studied extensively in recent years. In some situations, sharp results are available, in others, only upper and lower estimates have been obtained so far. We review some of the classical results before discussing the recent work of Hedenmalm and Shimorin on estimates of the universal means spectrum near the origin. It is our ambition to explain how their method works and what its limitations are. We then move on to the recent study of the universal means spectrum of bounded functions near the point 2 conducted by Baranov and Hedenmalm. A number of open problems related to these topics are pointed out.

Keywords. Universal means spectrum, conformal mapping, univalent functions.

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