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Weinstein's functions and the Askey-Gasper identity. (English)
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In his 1984 proof of the Bieberbach and Milin conjectures de Branges used a positivity result of special functions which follows from an identity about Jacobi polynomial sums that was found by Askey-Gasper in 1973, published in 1978. In 1991 Weinstein presented another proof of the Bieberbach and Milin conjectures, also using a special function system which (by Todorov and Wilf) was realized to the same as de Branges. Here the authors show how a variant of the Askey-Gasper identity can be deduced by a straight forward examination of Weinstein's functions which are intimately related with a Loewner chain of the Koebe function, and therefore with univalent functions.

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Keywords : Askey-Gasper identity; Weinstein's functions; Loewner chain

Classification:

- 30C50 Coefficient problems for univalent and multivalent functions
- 33C45 Orthogonal polynomials and functions of hypergeometric type
- 33C25 Orthogonal polynomials and functions
- 33C45 Orthogonal polynomials and functions of hypergeometric type