



## Correction to: On Bernstein's inequality for polynomials

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In this addendum to the paper *On Bernstein's inequality for polynomials* [Anal. Math. Phys. online 20 March 2019], we rectify the beginning of Section 5 where we mentioned a proof of Mahler's result, i.e. the case  $p = 0$  in Bernstein's inequality, using *subharmonicity*. In particular, we take into account a reference that we previously missed, and that Paul Nevai, whom we thank, has very recently brought to our attention.

### 5 Case $p = 0$ , Mahler's result

This section (as well as Section 6) owes much to old conversations with Nazarov [3] during the fall of 1994, when the first-named author was finishing the joint work [4] with B. Saffari. F. Nazarov then emphasized the importance of subharmonicity. The possible use of this subharmonicity was first alluded to by the referee (M. Marden) of Mahler's 1961 paper [2]. But then it was also intensively used in the 1989 paper [1], which fully reproved Bernstein's inequality in  $L^0$  and then in  $L^p$ ,  $0 < p \leq \infty$ . The authors of the implied survey paper were not aware of [1] when their work was accepted in "Analysis and Mathematical Physics" and were informed of this important

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paper by P. Nevai , whom they thank, very shortly after their work appeared in arXiv. They apologize for this overview.

## References

1. von Golitschek, A., Lorentz, G.G.: Bernstein's inequalities in  $L_p$ ,  $0 \leq p \leq \infty$ , Rocky Mountain. J. Math. **19**, 145–156 (1989)
2. Mahler, K.: On the zeros of the derivative of a polynomial. Proc. R. Soc. Lond. Ser. A **264**, 145–154 (1961)
3. Nazarov, F.: Private communication (1994)
4. Queffélec, H., Saffari, B.: On Bernstein's inequality and Kahane's ultraflat polynomials. J. Fourier Anal. Appl. **2**(6), 519–582 (1996)

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