Correction to: A note on Schwartz functions and modular forms

LARRY ROLAN AND IAN WAGNER

Correction to: Arch. Math. 115 (2020), 35–51

<https://doi.org/10.1007/s00013-020-01459-y>.

There is a small error in the statement of Theorem 1.2. In order to ensure that $f_+(\sqrt{2n_+}) = 0$, the principle part of $\phi\left(-\frac{1}{z}\right)z^{\frac{d}{2}-2}$ must line up with the principle part given in Proposition 3.7. In particular, the coefficient of the $ze^{-r_0^2\pi iz}$ term must be zero. This adds one extra constraint in the proof of Theorem 1.2 for the $+1$ eigenfunction and so we now have $n_+ = \lfloor \frac{d}{16} + 1 \rfloor$. In particular, there is an error in the example for the $+1$ eigenfunction for $d = 48$ and a -1 eigenfunction with last sign change at $\sqrt{6}$ has been found in [1].

All other pieces of Theorem 1.2 hold as stated and any potential applications to sphere packing remain the same because this does not change n_+ to ever be larger than n_- .

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Reference

- [1] Feigenbaum, A., Grabner, P., Hardin, D.: Eigenfunctions of the Fourier transform with specified zeros. Math. Proc. Camb. Philos. Soc., to appear (2020)

LARRY ROLAN AND IAN WAGNER
Vanderbilt University
Nashville
USA
e-mail: ianwagner11@gmail.com

Received: 17 July 2020

Accepted: 16 October 2020.