

IDEALS WITH AT MOST COUNTABLE HULL IN CERTAIN ALGEBRAS OF ANALYTIC FUNCTIONS

ANDRZEJ SOLTYSIAK

Closed ideals of subalgebras of the classical disc algebra $A(\mathbb{D})$ were investigated by many authors. We present an extension of a result of Agrafeuil and Zarabi ([1]) (and also Faïvyševskii ([2], [3])) showing that under certain natural assumptions and a modified Ditkin's condition every closed ideal with at most countable hull of the given algebra \mathcal{B} is standard.

Next using this result we describe closed ideals with at most countable hull in algebras $\mathcal{A}^{(\alpha)}(\mathbb{C}^+)$ ($\alpha > 0$) of bounded analytic functions on the right half-plane satisfying certain conditions on the boundary.

The talk is based on the joint work ([4], [5]) with Antoni Wawrzyńczyk from Universidad Autónoma Metropolitana-Iztapalapa in México City.

REFERENCES

- [1] C. AGRAFEUIL AND M. ZARRABI, *Closed ideals with countable hull in algebras of analytic functions smooth up to the boundary*, Publ. Mat. **52** (2008), 19–56.
- [2] V. M. FAĪVYŠEVSKIĪ, *The structure of the ideals of certain algebras of analytic functions*, (Russian), Dokl. Akad. Nauk SSSR **211** (1973), 537–539; translation in: Soviet Math. Dokl. **14** (1973), 1067–1070.
- [3] V. M. FAĪVYŠEVSKIĪ, *Spectral synthesis in Banach algebras of functions analytic in the disc*, (Russian), Funktsional. Anal. i Priložen. **8** (3) (1974), 85–86; translation in: Functional Anal. Appl. **8** (1974), 268–269.
- [4] A. SOLTYSIAK AND A. WAWRZYŃCZYK, *Ditkin's condition and ideals with at most countable hull in algebras of functions analytic in the unit disc*, Comment. Math. **52** (1) (2012), 101–112.
- [5] A. SOLTYSIAK AND A. WAWRZYŃCZYK, *Ideals with at most countable hull in certain algebras of functions analytic on the half-plane*, Bol. Soc. Mat. Mexicana. **19** (1) (2013), 91–100.

FACULTY OF MATHEMATICS AND COMPUTER SCIENCE, ADAM MICKIEWICZ
UNIVERSITY, UL. UMULTOWSKA 87, 61–614 POZNAŃ, POLAND
E-mail address: asoltys@amu.edu.pl