

# On the uniqueness of an integro-polynomial representation for a definitizable trigonometric moment problem

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Let us suppose that a number sequence  $\{c_k\}_{-\infty}^{\infty}$  is such that there exists a difference operator mapping this sequence to a sequence that generates the solvable trigonometric moment problem. The sequence  $\{c_k\}_{-\infty}^{\infty}$  can be presented in the form

$$c_k = \int_0^{2\pi} (e^{ikt} - \mathcal{P}^{(k)}(e^{it})) d\rho(t) + \sum_{j=0}^l a_j^{(k)} c_j,$$

where  $\mathcal{P}^{(k)}(z) = \sum_{j=0}^l a_j^{(k)} z^j$  is, for each  $k$ , the interpolating polynomial of  $z^k$  at some fixed multi-set of points. The integral in the representation is treated as improper Stieltjes integral.

In our talk we discuss the uniqueness problem of this representation, concerning  $\rho(t)$  and the interpolation multi-set. A detail description for this circle of problems can be find in the report [1].

## References

- [1] NAVARRO L, STRAUSS V (2002) On a trigonometric moment problem for indefinite metric spaces. Research Paper No.826, Department of Mathematics and Statistics, University of Calgary, Canada