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**Autor:** Nachbin, Leopoldo  
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had a guiding idea to develop a fruitful theory, but that does not seem to be the case of Wiener in this particular instance. Likewise, the group that is developing holomorphy in infinite dimensions has been guided by a feeling of its possible interest in Mathematics proper. A promising direction of research at present seems to be the study of holomorphy linked to nuclearity in the sense of Grothendieck; interesting results in this direction have already been obtained, mainly by Boland and Dineen, but many such useful methods are to be expected in this area. Holomorphy in infinite dimensions is being used in Mathematical Physics, say in studying Fock spaces; and in Electrical Engineering through ideas originated from Volterra. However, the ties between the existing theory, or the theory to be developed, and its possible applications, are still loose, the reason being a lack of suitable interplay between mathematicians and users.

## 5. SOME BIBLIOGRAPHICAL REFERENCES

The following references consist exclusively of some expository texts, and the proceedings of meetings. The readers should be able to trace back further information through them, concerning the various directions in which holomorphy in infinite dimensions branched off and is used. May I cite Kiselman in [16] below. He describes a problem in finite dimensions which was one of his motivations for the use of holomorphy in infinite dimensions; the problem has to do with the determination of the polynomially convex porters of a continuous linear form on  $\mathcal{H}(\mathbb{C}^n; \mathbb{C})$  from the knowledge of its nonlinear Fourier-Borel transform. Actually, when I told Kiselman that I was preparing an article of motivation like the present one, he gladly wrote his article in [16] below, and suggested that the complete title of my article should be “Why Holomorphy in Infinite Dimensions? Why not?” According to an oral communication that I got from Dieudonné, one of the first authors to deal with holomorphy in infinite dimensions was D. Hilbert, in his article “Wesen und Ziele einer Analysis der unendlichvielen unabhängigen Variablen”, *Rendiconti del Circolo Matematico di Palermo* 27, 1909, 59-74, or *Gesammelte Abhandlungen III*, 56-72.