

Title: Grothendieck, Bourbaki and mathematical structuralism.

Abstract: In this talk, I want to contrast and compare Bourbaki's mathematical structuralism, as presented in his book on Set Theory, with Grothendieck's way of doing mathematics. I will first present Bourbaki's position on structuralism and how Bourbaki could not find a way to accommodate categories in his framework. I will then look at Grothendieck's early work, namely in the 1950s and early 1960s and see how it is a form of mathematical structuralism which, although different in crucial respects with Bourbaki's stance, is still consistent with the latter's line of thought. Thus, in the end, I claim that Grothendieck opened the way to mathematical structuralism as it is practiced today. I will briefly sketch the philosophical implications of this form of structuralism.