

Meeting: 1007, Santa Barbara, California, SS 2A, Special Session on History of Mathematics

1007-01-77 **Francine F. Abeles*** (fabeles@kean.edu), 1000 Morris Avenue, Union, NJ 07083. *The Development of the Tree Method in Logic from 1934 to 1968*. Preliminary report.

The modern tree method as a decision procedure for classical propositional logic and for first order logic originates in Gerhard Gentzen's (1909-1945) pioneering work in 1934 on natural deduction. But the route is not a direct one, nor is its lineage well established. In this paper I discuss the work of its chief contributors: Evert W. Beth (1908-1964), Jacques Herbrand (1908-1931), and the contemporary logicians Jaakko Hintikka (1929-), Raymond Smullyan (1918-), and Richard Jeffrey (1927-2002). Their results motivated further work in the mechanization of reasoning, and I discuss the milestones linked to their results that were developed in the period 1954 to 1965. (Received February 02, 2005)