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William Francis Lawvere

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1 William Francis Lawvere's biography

American mathematician born February 9, 1937 at Muncie, Indiana, USA. Currently, he is with the New York University at Buffalo as an Emeritus Professor. Special interests include applications of category theory to the axiomatic foundations of mathematics, categorical dynamics and algebraic semantics.

Dr. William Francis Lawvere is widely known for his foundation work on adjointness in mathematics, especially category theory, toposes, closed Cartesian categories, and the axiomatic foundation of mathematics and category theory based on ETAC.

W.F. Lawvere obtained his Ph.D at Columbia university in 1963 with Samuel Eilenberg, (who was the co-founder of category theory with Saunders MacLane in 1942–1945). He visited for a year at Berkeley University, and after his PhD, during 1964–1967, he worked at the Forschungsinstitut für Mathematik at the famous ETH in Zürich; he began work on the ‘category’ of categories (which is defined either as a meta-category or as a super-category), and was there directly influenced by Pierre Gabriel’s seminars at Oberwolfach on Alexander Grothendieck’s “Foundation of Algebraic Geometry”.

Subsequently, he worked at the University of Chicago, Illinois, in the Department of Mathematics with Professor Saunders Mac Lane especially on categorical logics, using adjoint functors, algebraic semantics and universal quantifiers (see ETAC and ETAS). During this time he also worked on <http://planetmath.org/CategoricalDynamics> categorical dynamics.

In 1968 and 1969 he was back in Zürich, at a time when the first papers on the $< \text{category} >$ of categories and <http://planetmath.org/Supercategories> were published, and he introduced the concept of a generalized Grothendieck topos, or ‘elementary topos’.

He then moved to Dalhousie University in 1969, where in 1995 there was a celebration of 50 years of Category Theory with Professor Saunders MacLane also being present. (Currently, there is also an over-due celebration of 40 years of categorical dynamics, with Lawvere as one of its founders).

He opposed in 1970 the use of the War Measures Act on moral principles.

Since 1974, until his retirement in 2000, he was a Professor of Mathematics at University at Buffalo, NY, often collaborating with Stephen Schanuel. He became an Emeritus Professor of Mathematics and Adjunct, Emeritus Professor of Philosophy at the University at Buffalo, NY.

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