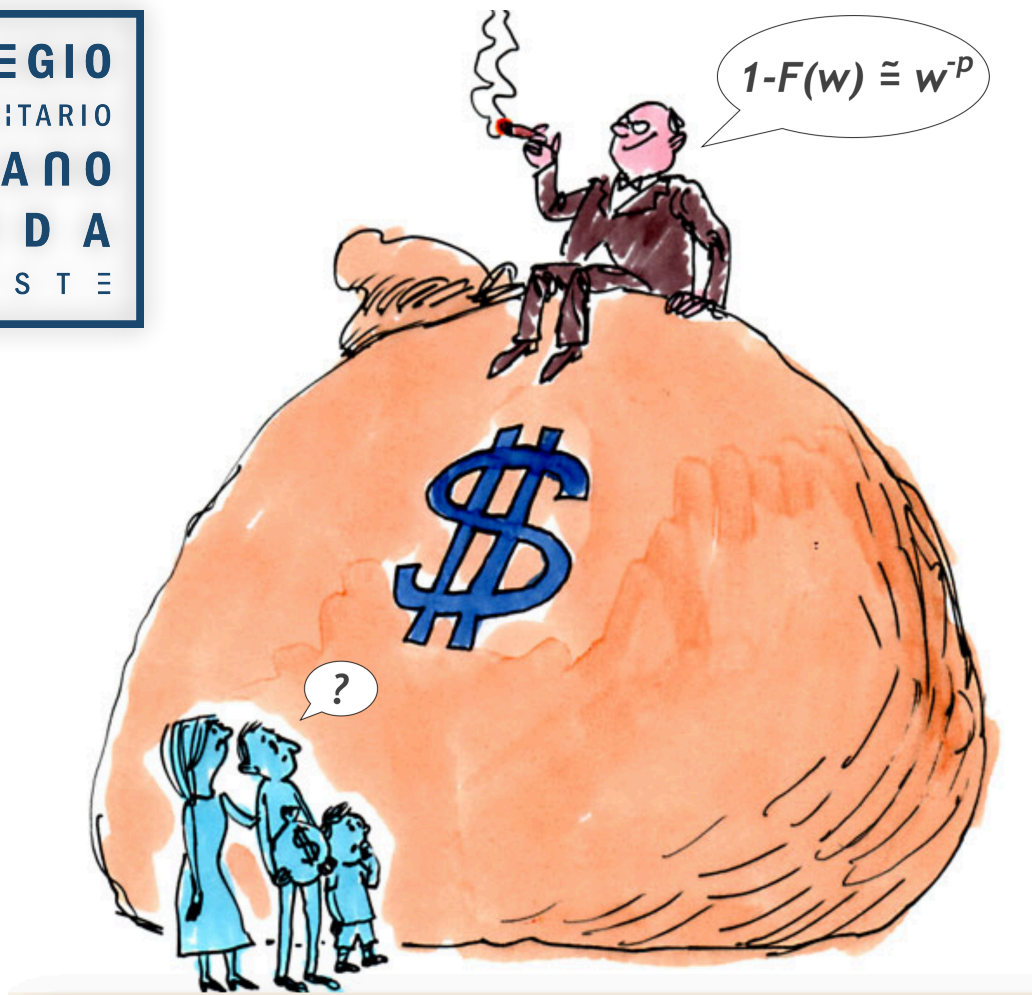




THE MATHEMATICS BEHIND WEALTH DISTRIBUTIONS AND ECONOMIC INEQUALITY

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Sala Conferenze, ex Ospedale Militare

Via Fabio Severo 40, Trieste and Zoom

A study by the World Institute for Development Economics Research at United Nations University reports that the richest 1% of adults alone owned 40% of global wealth, and that the richest 10% of adults accounted for 85% of the world total. The bottom half of the world's adult population owned 1% of global wealth. Other studies have confirmed this analysis by reporting a further increase in inequality as a result of the economic crisis caused by the

pandemic. But what are the origins of such inequalities? Can mathematics help us better understand the nature of such phenomena? In this lecture we will briefly attempt to venture into the mathematical modeling of wealth distribution, starting with Vilfredo Pareto's early ideas from the beginning of the last century to more recent developments based on methodologies originally introduced in statistical physics.