

# Édouard Brézin Biography

December 21, 2020. Patrick Charbonneau

Édouard Brézin (December 1, 1938-) did his undergraduate studies at École Polytechnique (1958-1960), and obtained a Doctorate ès sciences (Physique Théorique) from Université de Paris in 1969. He joined the Service de physique théorique (today, Institut de physique théorique) of the Centre d'énergie atomique, in Saclay, in 1963, where he stayed until 1985. In 1986, he became professor of physics at the Laboratoire de physique théorique of École normale supérieure (ENS). He also held a professor position at Polytechnique (1974-2004), and at Paris VI, starting in 1989, until he became emeritus in 2007. Brézin held a number of leadership positions, notably serving as chair of the ENS physics department (1986-1991), as president of the board of Centre national de la recherche scientifique (1992-2000) and of l'Académie des sciences (2005-2006).

After spending a year as visiting professor in Princeton (1971-1972), during which he heard Ken Wilson's famous 15-part lectures on the renormalization group, Brézin fully engaged with the underlying physical ideas. He became one of the leaders in the study of the statistical physics of fields, working, in particular, on a variety of condensed matter applications and on random matrix theory. Despite being fairly physically and intellectually close to the study of spin glasses and replica symmetry breaking—he was office neighbor of Bernard Derrida and Cirano de Dominicis in Saclay, and collaborated with Giorgio Parisi in the 1970s and David Gross in the 1980s—he never directly toiled on these problems. Brézin was therefore a particularly significant, front-row observer of the community and of its development.

Brézin became a member of the French Académie des sciences in 1991, a AAAS foreign associate in 2002 (fellow in 2013), a foreign member of the US National Academy of Sciences in 2003 and of The Royal Society in 2006. He notably received the Prix Langevin of the Société française de physique (1974), the Prix Ampère of the French Académie des sciences (1981), the Franco-German Gentner-Kastler Prize (1986), the Prix des Trois Physiciens from ENS (1989), the President's medal of the Institute of Physics (2004), and he shared the 2011 Dirac Medal (ICTP) with John Cardy and Alexander Zamolodchikov in "recognition of their pioneering work on field theoretical methods to the study of critical phenomena and phase transitions".