A 2017 Special Prize of the EPS High Energy and Particle Physics Division of the EPS is awarded to René Brun “for his outstanding and original contributions to the software tools for data management, detector simulation, and analysis that have shaped particle and high energy physics experiments for many decades.”

René Brun joined CERN in 1973 after defending a PhD Thesis in nuclear physics. Over many decades, he developed several software systems well known worldwide and used by international collaborations in nuclear, particle and high-energy physics. His first major histogram generator package HBOOK developed originally for the R602 experiment at the Intersecting Storage Ring quickly became a standard tool for many other experiments. He then joined the NA4 experiment and contributed to the development of GEANT 1 and GEANT 2 simulation programs. Working in the OPAL experiment at LEP he then integrated a full geometry package describing the transport of particles through the experimental set-up. This led to the GEANT 3 package launched in 1981. GEANT has been used for the simulation of detector response in numerous experiments since then. René Brun coordinated the development of PAW (Physics Analysis Work Station), a powerful package for interactive analysis released in 1984 and widely used by HEP experiments around the world. He has initiated, with Fons Rademakers, the development of the ROOT object oriented analysis software tools and led the project from 1995 to 2011. ROOT was first chosen by Fermilab in 1998 and then became a standard package for all the LHC experiments.

With a very deep understanding of the needs of complex analysis environments, and brilliant ideas, René Brun creates original and successful software tools perfectly adapted to the physical and technical requirements of particle and high-energy experiments.

Current affiliation:

René Brun is presently based at CERN