Honorary PhD assigned to Peter Higgs

Tonelli and Di Ciaccio collected the honorary degree on behalf of the Boson’s father

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The award-giving ceremony of the honorary doctorate (PhD) in Theoretical Particle Physics to Peter Higgs, the theorist of the Boson which was named after the scientist himself, has just ended. Higgs was unable to take part in the event due to health problems. Guido Tonelli, the recipient of the Enrico Fermi 2013 Award assigned by the Italian Physics Society (SIF), in representation of the CMS experiment, and Anna Di Ciaccio, in representation of the Atlas experiment at LHC, collected the awards on Higgs’ behalf.

Despite the absence of the recipient, it was quite an emotional moment when Guido Tonelli and Anna di Ciaccio collected the PhD in Theoretical Particle Physics assigned by the International School for Advanced Studies (SISSA) of Trieste to Peter Higgs, the Scottish physicist who, back in
the Sixties, theorized the Higgs Boson, the Universe’s elementary particle “that originates the properties of the world as we know them,” as SISSA Director Guido Martinelli explained in his introduction before the ceremony.

The particle was at last observed in spring through the two experiments at LHC, CMS and Atlas, of which Tonelli and Di Ciaccio are representatives. It is one of the most important discoveries in physics of all times.

The attendance of Tonelli and Di Ciaccio at the ceremony therefore marks the continuity between the work carried out by the Scottish physicist and the commitment of thousands of physicists currently engaged in the research carried out at LHC (the world’s largest particle accelerator, located in Geneva). Tonelli was for a long time a spokesperson for the CMS experiment and last spring, together with Fabiola Gianotti, at the time in charge of the Atlas experiment (Gianotti was also in Trieste in recent days to attend the Annual Congress of the Italian Physics Society - SIF) announced the particle’s “discovery.”

“Without such particle the Standard model of the Universe, which is today the one that provides the majority of information on the nature of our Universe, would not hold true” commented Anna Di Ciaccio. “It took us so many years to set up the two big experiments at LHC that allowed us to make the discovery. I therefore congratulate professor Higgs and hope to meet him soon, wishing him to obtain soon an even greater award.” Di Ciaccio referred, not too covertly, to the very likely possibility that Higgs may receive the Nobel Prize in Physics in October.

“It’s like living a dream,” explained Tonelli, who in recent days (alongside with other recipients, including Gianotti) received the Fermi Medal by SIF on the grounds of the work carried out with the CMS. “Working for twenty years on a project and seeing it become a reality is a unique experience. For me, this is a message for the future, we have to take care of the next generation of scientists, like those who currently study here at SISSA.” Tonelli added a personal anecdote involving Higgs: “When, after all the effort made in the last years at LHC we had the first clues that something was there, I remember Higgs’ surprise. He and the other great theorists who had laid the foundations for this discovery could see their careers (and their lives) finally fulfilled. I recall that whenever I met him, Higgs would keep on asking me the details of what we had observed, almost as if he could not believe it. I hope that the next time I meet him will be in Stockholm at the Nobel Prize ceremony.”

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**Image:** (from left) Anna di Ciaccio, Guido Martinelli, and Guido Tonelli holding the medal and the PhD diploma assigned to Peter Higgs – credits SISSA

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