

Miha's Blog: A good reason for the OSG community to feel proud. Updated October 8

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October 7, 2013 According to [Guardian newspaper](#) The Nobel prize for Physics will be announced tomorrow, October 8, 2013. The Nobel committee can not nominate only the favorite, the British physicist Peter Higgs, whose name is synonymous to "God's particle": Give the prize for the Higgs theory, in which the eponymous boson appears, and they face another problem. A Nobel prize can be shared by a maximum of three people, but at least six physicists wrote out the theory in 1964. One – Belgian physicist Robert Brout – died in 2011. But five into three does still not go. The rumored solution could be Predicting the existence of the Higgs boson is one thing. Finding it is another. That job fell to the 6,000 scientists on the ATLAS and CMS collaborations at [CERN](#), the [particle physics](#) laboratory near Geneva. The numbers reflect how modern science is done. And in this case, nothing is made easier by honouring only the leaders. One option, suggested by a former secretary of the Nobel physics committee is for the prize to be split. Half would go to Englert and Higgs; the other half to CERN as an organisation. If this comes true, or not, it does not matter. Because "de-facto" this Guardian article reports an implicit nomination for OSG (Open Science Grid), Fermi National Lab., Center for High Throughput Computing (CHTC) and individual names like Frank Wuerthwein, Miron Livny, Lothar Bauer and many, many others. These organizations and people were key contributors in the search coordinated by CERN for Higgs particle. This is good reason for the OSG community to feel proud October 8, 2013 So as expected, here are the winners of the Physics Nobel Prize: Peter Higgs and Francois Englert. This left out three more researchers, Gerald Guralnik, Tom Kibble and Carl Hagen, who collaborated at Imperial College London in 1964 on an independent prediction of a Higgs-like mechanism for granting particles their mass. It also left out CERN, although... this year's award doesn't honor some 6,000 experimentalists at CERN who helped to make the Higgs boson discovery, although the Nobel committee conspicuously called out the LHC's achievement in its announcement, which recognized Higgs and Englert "for the theoretical discovery of a mechanism that contributes to our understanding of the origin of mass of subatomic particles, and which recently was confirmed through the discovery of the predicted fundamental particle, by the ATLAS and CMS experiments at CERN's Large Hadron Collider." Recent OSG contribution As far as OSG is concerned, we had recently a presentation of Frank Wuerthwein at ISC Big Data 2013 in Heidelberg. This is what [ISGTW](#) publication wrote Last week, [the inaugural ISC Big Data conference](#) was held in Heidelberg, Germany. The event was chaired by [Sverre Jarp, chief technology officer of CERN openlab](#), and CERN was the focus of two case studies presented during the two-day conference. [Frank Würthwein](#), from [the University of California at San Diego, US](#), discussed how CERN handles big data today and looked forward to how the organization will have to adapt these processes to cope with increased peak data rates from the experiments on [the Large Hadron Collider \(LHC\)](#) after upgrade works are completed as part of [the first long shutdown \(LS1\)](#). Until recently, the large CERN experiments, [ATLAS](#) and [CMS](#), owned and controlled the computing infrastructure they operated on in the US, and accessed data only when it was locally available on the hardware they operated. However, Würthwein explains, with data-taking rates set to increase dramatically by the end of LS1 in 2015, the current operational model is no longer viable to satisfy peak processing needs. Instead, he argues, large-scale processing centers need to be created dynamically to cope with spikes in demand. To this end, Würthwein and colleagues carried out a successful proof-of-concept study, in which [the Gordon Supercomputer](#) at [the San Diego Supercomputer Center](#) was dynamically and seamlessly integrated into the CMS production system to process a 125-terabyte data set. Dr. Wuerthwein's presentation is a major achievement as it sets the principles of Dynamical Data Center, a concept created to address the needs of the Nobel Prize class physicists. [CERN web pages](#) pay tribute to Frank, calling his paper "a landmark." See also [An interview with Dr. Frank Wuerthwein](#) to learn more about Dynamic Data Centers and view the slides deck the presentation. I added them here as well for easy reference: [Dynamic Data Center concept](#) Nobel prize reflections From the book "Surely You're Joking, Mr. Feynman" we read about "Alfred Nobel's Other Mistake." The first being dynamite, of course, and the second being the Nobel Prize. This is from the [blog of Sean Carroll](#). The folks who should really be annoyed are, of course, the experimentalists. There's a real chance that no Nobel will ever be given out for the Higgs discovery, since it was carried out by very large collaborations. If that turns out to be the case, I think it will be the best possible evidence that the system is broken. I definitely appreciate that you don't want to water down the honor associated with the prizes by handing them out to too many people (the ranks of "Nobel Laureates" would in some sense swell by the thousands if the prize were given to the ATLAS and CMS collaborations, as they should be), but it's more important to get things right than to stick to some bureaucratic rule..