

# Final Report: String Phenomenology 2017

The sixteenth annual International conference in the String Phenomenology series was held at Virginia Tech, Blacksburg on July 3rd - 7th 2017. String Phenomenology 2017 was organized by Professor Lara Anderson and Professor James Gray, with help from two postdoctoral fellows, Seung-Joo Lee and Xin Gao and Professors Eric Sharpe and Djordje Minic.

The scientific program of String Phenomenology 2017 was chosen broadly from within the discipline of string phenomenology and related areas of mathematics and physics. Thus, the conference brought together researchers from a wide variety of related fields in order to discuss progress in relating string compactifications to low energy physics and stimulate future developments in such directions. In the 5 days of the conference there were 38 plenary session talks and 40 parallel session presentations. The presentations covered the full range of theoretical themes relevant to the conference topic ranging from attempts to construct realistic particle physics and cosmological models from string theory, to mathematical topics which are directly relevant in the technical work prevalent in the field. There were also presentations with a more experimental flavor, for example Vetterli's presentation on behalf of the ATLAS collaboration, "Recent Results from ATLAS", and Flauger's presentation "Searching for Signatures of Fundamental Physics in the CMB". There was also ample time for discussions outside of presentations, and appropriate space was made available to facilitate these interactions.

The conference had 103 registered participants. Many of these were students and post-docs, and young researchers had a strong representation in the presented talks. All of the plenary session presentations were of the same length, regardless of the level of seniority of the speaker. There were five female participants, all of whom gave a presentation. Many students gave their first conference presentations in the parallel sessions at String Phenomenology 2017. The conference was a diverse and very much international meeting with participants coming from all over the globe. In addition there was an emphasis on links between formal mathematical results and physical constructions, which will have a positive impact on the progress in both areas. The broader impacts of this conference were enhanced by the emphasis on young researchers in the field. They were also facilitated by the talk slides being made available on the web page for the vast majority of speakers (those that were willing to share their slides):

<http://www.cpe.vt.edu/stringpheno17/>

There was also a twitter feed for the conference

<https://twitter.com/StringPheno2017>

to further enhance the impact of the event.

The feedback received from participants was very positive, particularly regarding the quality of the talks and availability of discussion space.

The intellectual merit of String Phenomenology is that it provides a unique opportunity for researchers interested in ultimately relating string theory to experimental physics to meet and exchange progress and ideas. Because of this, the conference remains the key

international annual meeting in this sub-field of string theory. It took place in 2018 in Warsaw, and will take place in 2019 at CERN.

The DOE funds were used to support the participation of some of the younger researchers giving presentations. The cost of a room at the Inn at Virginia Tech for one night was \$143. Thus, for five nights for a single person, the cost is \$715. We used the DOE funds to support 7 participants in this manner (with the extra \$5 being obtained from other sources).