



## Denver Section and Blockchain Local Group holds Workshop on Blockchain and Transactive Energy

The Denver IEEE section was proud to support a workshop held on February 3-4, 2020 by our new blockchain local group. The workshop was hosted by CU at the Williams Conference Center in Boulder.

The workshop was a coordinated effort by the Denver IEEE section, in partnership with our IEEE ComSoc chapter, several local companies, and three universities. And, in spite of the fact that we were experiencing a snowstorm, a full program of information was presented over the two days. About 60 attendees were there on the first day, and over 30 the second, despite the snowstorm.

The presentations were exciting, informative, and full of valuable information. They covered the full gamut of issues pertaining to transactive energy and distributed ledger technologies. The IEEE was also able to present their standards work and research in Colorado in the above topic areas.

The workshop covered so many interesting topics. They included economic, public policy, new business models, legal challenges, research in microgrids and transactive energy, and supply-demand leveling, cybersecurity issues, controls, smart systems, and the IoT. As well, it presented real projects underway at utilities and municipalities.

The speaker list was impressive. They included:

- Claudio Lima – Blockchain Engineering Council, BEC
- Hunter Albright – Colorado University
- Lynne Kiesling – Institute for Regulatory Law & Economics, Department of Eng. and Public Policy at Carnegie Mellon University
- Eric Christopher Alston – Leeds School of Business, University of Colorado
- Elizabeth Escobar-Fernandes – Duke Energy
- Carl Miller – Xcel Energy
- John Chappell – BlockApps
- Chris Peoples – PP&A
- Joseph Reiben – Reiben & Reiben LLC Law Firm
- Joe Gersch – Colorado State University
- Wei Gao – University of Denver (DU)
- Tim Weil – IEEE ComSoc
- John Carpenter – COO, Pinnacle Cart, Co-Founder, Global Blockchain Summit
- Ramesh Reddi – CybSecBCML
- Robert Cruickshank – National Renewable Energy Labs, NREL, US Department of Energy
- Gregor Henze – University of Colorado Boulder, Renewable & Sustainable Energy Institute
- Ryan Molecke – EnLedger
- Tarek Elgindy – National Renewable Energy Labs, NREL, US Department of Energy
- Chris Gorog – CTO Blockframe

After a full day and a half of presentations, breakout sessions began. The attendees selected important topics that emerged during the presentations. Then they broke into individual groups to discuss particular areas and generated ideas of what the community should do in that area.

Furthermore, a number of important topics were discussed during breaks, in ad hoc fashion. They included topics such as what the next steps for this group in the Denver-Boulder area will be. While there was a wealth of topics discussed, most of the discussions were focused on important areas for the future.

For example, one group discussed the cybersecurity aspects of blockchain in transactive energy applications. This group discussed several issues in this space and concluded with an action item to review a set of papers that came out of a task force that addressed this topic. This was typical of the activities during this workshop and many new ideas were generated within this space.

In the end, this workshop advanced even more actions, beyond what the groups identified. Going forward, the IEEE Blockchain Initiative is developing several projects in the transactive energy platform, including standards work, reference architectures, and possibly conformity assessment.

One effort we believe will be needed is a reference deployment of the evolved architecture. The first of these may be in Colorado as a result of this workshop. We identified several contributors to the education content we are cultivating as well. Also, several attendees expressed concerns

around privacy in this space, and privacy will be a focus area for the initiative going forward, so we now have more experts interested in working with us.

Boulder Media House recorded the presentations at the event, so we expect to be able to post the presentations once editing is complete and permissions are secured. Watch [blockchain.ieee.org](http://blockchain.ieee.org) for presentations and video content from the event.

For more information, please contact:







