****

**Thursday, August 10, 2-2:30 pm**

**Inter-Model Data Flows using the AESD Records API**

**Brian Bush** will be presenting an overview of the dataflow architecture developed for the National Renewable Energy Laboratory’s Advanced Energy System Design (AESD) capability. The dataflow architecture is general-purpose, supporting a wide range of multivariate time-varying data producers, including measurements from real-time sensors and results from high performance computing (HPC) simulations, and allowing multiple concurrent consumers, including visualizations, statistical analyses, and datastores. The AESD Records API (application program interface) enables software that serves multidimensional record-oriented data to interoperate with software than uses such data. In the context of the Records API, multidimensional data records are simply tuples of real numbers, integers, and character strings, where each data value is tagged by a variable name and each record is assigned a unique identifier. We discuss three major use cases for serving and consuming records data: (i) static data, (ii) dynamically augmented data, (iii) on-demand simulations, (iv) with filters, and (v) with bookmarks. Separate implementations of the API exist in C++, Haskell, JavaScript, Python, and R.

**Brian Bush** is a staff member in the Strategic Energy Analysis Center (SEAC) at NREL. His current work focuses on the modeling, simulation, and analysis of energy systems and infrastructures, particularly on the role of hydrogen, biofuels, fuel cell vehicles, and electric vehicles in the transportation sector. In conjunction with this, Brian has developed scenario-analysis workflows that support the interactive steering and visualization of ensembles of simulations.

|  |  |  |  |
| --- | --- | --- | --- |
| **ATTEND IN PERSON**  **DATE:** August 10, 2017  **TIME:** 2 – 2:30 p.m. MT  **PLACE:** X320A – Beaver Creek | **ATTEND ONLINE**   |  |  | | --- | --- | | 🡪 [Join Skype Meeting](https://meet.nrel.gov/catherine.burke/ZW5WNS66)   |  | | --- | |  | |   **Call-in toll-free number**:1-866-510-2071  **Attendee access code:** 309 243 4# |

*Please see other exciting presentations (click* [*here*](https://sp2013.nrel.gov/sites/SEA/Shared%20Documents/Forms/AllItems.aspx?RootFolder=%2Fsites%2FSEA%2FShared%20Documents%2FCoffee%20Break%20Presentations&FolderCTID=0x0120002D763D0A29095841865CA4E582A510BF&View=%7B37E3B51B%2DCFC4%2D45F7%2DBF14%2D25882DCC84A7%7D) *) on the* ***NEW SEA SharePoint****! If you do not have access, please contact me directly at* [*catherine.burke@nrel.gov*](mailto:catherine.burke@nrel.gov)*.*