Using PIDs at the US Department of Energy

Japan Open Science Summit
June 15th, 2021

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Information Products and Services
DOE Invests ~ $12B per year in R&D

R&D Funding

- Advanced Research Projects Agency – Energy (ARPA-E)
- Office of Electricity Delivery & Energy Reliability
- Office of Energy Efficiency & Renewable Energy
- Office of Environmental Management
- Office of Fossil Energy
- Office of Legacy Management
- Office of Nuclear Energy
- Office of Science
- Office of Environment, Health, Safety & Security

NATIONAL LABS
- Ames
- Argonne
- Brookhaven
- Fermi
- Idaho
- Los Alamos
- Lawrence Berkeley
- Lawrence Livermore
- NETL
- NREL
- Oak Ridge
- Pacific Northwest
- Princeton
- SLAC
- Sandia
- Savannah River
- Thomas Jefferson

GRANTEES

TECHNOLOGY CENTERS

SITES

≈ 50,000 R&D findings/results per year

R&D Results

- Journal articles/accepted manuscripts
- Technical reports
- Conference papers
- Theses/dissertations
- Scientific and technical software
- Data objects
- Patents
- Workshop reports
- Videos
Core Functions: OSTI collects, preserves, and disseminates DOE-funded research and development results.

Mission: Advance science and sustain technological creativity by making DOE-funded research and development findings available and useful to Department of Energy researchers and the public.

Strategic Priority: Provide community with persistent identifier (PID) services.
## DOE OSTI PID Services

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PID for Research Results – DOIs
Data ID Services – Data DOIs

**DOE Data ID Service**
- Labs, facilities, and data repositories provide data records (with associated metadata) to OSTI via E-Link.
- E-Link is our custom-developed system for collecting DOE-funded research results, developed and maintained by OSTI.
- When data record is submitted, OSTI automatically assigns a DataCite DOI (unless one is already assigned).

**Interagency Data ID Service (IAD)**
- DataCite Consortium – US agencies are consortium organizations
- Assign DOIs to other agencies’ research outputs, based on metadata passed from OSTI to DataCite.

https://www.osti.gov/data-services
• When early development code/software records submitted to DOE CODE, can optionally assign DataCite DOIs. Typically for DOI citation purposes.

• DataCite DOIs are automatically assigned to software formally submitted to DOE OSTI (if one has not already been assigned).
PIDS for Awards – DOIs
Award DOI Service

Service Development and Launch

- Crossref members can use award/grant DOI service.
- Worked with DOE user facilities to gather requirements.
- Launched the Award DOI Service pilot project September 2020.
- Piloting with facilities to assign award DOIs to the awards provided by the facility (use of the facility).
- The service can scale to support DOE funding offices and other government awards.

https://www.osti.gov/award-doi-service/
PIDs for People – ORCID iDs
US Government ORCID Consortium

Consortium Development and Launch

• Many DOE and US government organizations joining ORCID as direct members.
• Interest from those organizations to be an ORCID member through a consortium.
• Developed to create community, decrease costs, and providing increased services.
• **US Government ORCID Consortium launched April 1st, 2020. Led by DOE OSTI.**

Consortium Benefits

• Consortium members are premium ORCID members – 5 API credentials, increased API functionality, custom analytics, etc.
• Consortium provides more individualized support – both administrative and technical.
• Consortium members are part of the US government community of practice – information sharing with organizations with similar needs and use cases.

https://www.osti.gov/orcid-consortium/
Consortium Members

12 current consortium members

NASA
Pacific Northwest National Laboratory
OSTI.GOV
PPPL Princeton Plasma Physics Laboratory
Oak Ridge National Laboratory

BERKELEY LAB
Bringing Science Solutions to the World

Argonne National Laboratory
The Advanced Photon Source
Argonne Leadership Computing Facility
Argonne Research Library
Center for Nanoscale Materials

USDA National Agricultural Library
U.S. Department of Agriculture

Los Alamos National Laboratory
Using and Connecting PIDS
At DOE OSTI, we’re working to create connections using PIDs throughout the research lifecycle in connected metadata to show the impact of DOE funding and tell DOE’s story.
Connecting PIDs in Metadata

- Crossref DOIs for Publications
- ROR IDs & Open Funder Registry DOIs for Funding Organizations
- ORCID iDs for Researchers/Authors
- ROR IDs for Research Organizations
- CrossRef DOIs for awards, grants, and contracts
- DataCite DOIs for Dataset
- DataCite DOIs for Software
Visualizing PIDs

\[ B \rightarrow \pi \nu \ell \text{ and } B_S \rightarrow K \ell \nu \text{ form factors and } |V_{ub}| \text{ from 2+1-flavor lattice QCD with domain-wall light quarks and relativistic heavy quarks} \]

Persistent / Related Identifier Connections

OSTI ID: 1180799

Publication Year
2015

Abstract
We calculate the form factors for \( B \rightarrow \pi \nu \ell \) and \( B_S \rightarrow K \ell \nu \) in dynamical lattice quantum chromodynamics (QCD) using domain-wall light quarks and relativistic b-quarks. We use the (2+1)-flavor gauge-field ensembles generated by the RBC and UKQCD collaborations with the domain-wall fermion action and Iwasaki gauge action.

Publisher's Version of Record
https://doi.org/10.1103/PhysRevD.91.074510

Citation Metrics

- Cited by: 31
- Impact Factor: 4.833
- Citation Impact by Journal: 2.64
- Citation Impact by Field: 2.9717
- % Rank by Field / Year: 5.5053

Citation Information provided by Web of Science