

From: [Liu, Yi-Kai \(Fed\)](#)
To: [Orr, Lochi M. Mrs. \(Fed\)](#)
Subject: Re: Project Summaries for Division Yearly -- Your input needed by Dec 20
Date: Wednesday, December 21, 2016 6:35:08 PM
Attachments: [ykliu-project-summaries-2016.docx](#)

Hi Lochi,

Here are my project summaries, on "one-time programs using isolated qubits" and "phase retrieval and quantum tomography." Thanks, and I'm sorry for being late!

--Yi-Kai

From: Ronald Boisvert <ronald.boisvert@nist.gov>
Sent: Monday, November 28, 2016 5:09 PM
To: Division 771
Subject: Project Summaries for Division Yearly -- Your input needed by Dec 20

Your help is needed to complete the second stage of compiling our Division Yearly Report: Project Summaries. These are brief synopses (e.g., 1/2 to 1 page) of projects active during the past year. They are, essentially, extended abstracts suitable for digestion by the broad scientific community.

ALL ACTIVE PROJECTS SHOULD HAVE A SUMMARY. This includes projects of postdocs, faculty, and guest researchers. It is OK (even preferable) to combine several related projects with a common theme into a single project summary that can provide a bigger picture of the overall effort. If the project is a joint project, then get together with your collaborators and submit just ONE report. (We can't publish two different descriptions of the same work.) Please list all contributors as co-authors, including those in other NIST Labs and external to NIST.

In your write up, try to answer these questions:

Why are you doing it? Who benefits?
What was accomplished in the last 18 months?
What are the next steps?

Please include references to papers submitted or published in the last 18 months. Graphics of any kind are especially welcome.

I attach some good examples of project summaries from the past. The summaries submitted last year are all contained in the Division's yearly report: <http://dx.doi.org/10.6028/NIST.IR.8132>

PLEASE SUBMIT YOUR REPORTS TO Lochi.Orr@nist.gov BY
**** Tuesday DEC 20 ****

Submit as either Word file or ASCII text. It's OK to include equations; if you submit ASCII insert the equations as LaTeX and I'll format them for Word.

When submitting, please suggest which of the following categories this applies to:

- Mathematics of Metrology
- Advanced Materials
- High Performance Computing and Visualization
- Quantum Information
- Foundations of Measurement Science for Information Systems
- Mathematical Knowledge Management

I am also looking for project descriptions which could be expanded upon to produce a FEATURE, i.e. a particularly notable advance which could be highlighted in a 2-4 page article. If you have published a notable paper this year please consider doing a feature. I will need 4-6 of these. Please contact me if you have an idea. (You don't need to do a project summary if you do a feature on the same topic.)

Thanks for your help in producing this!

Ron