

**Abstract Submittal Form****JANNAF****62nd JPM / 10<sup>th</sup> MSS / 8<sup>th</sup> LPS / 7<sup>th</sup> SPS****Joint Subcommittee Meeting****Nashville, TN • 1 – 5 June 2015****NEW Abstract Due Date: Friday, 13 February 2015****Fields with an asterisk (\*) are required.**\* **Title:** Application of Additively Manufactured Components in Rocket Engine Turbopumps\* Submitted to:  JPM  MSS  LPS  SPSRefer to [Call for Papers](#) for description of Mission Areas and select **one** from the choices below.\* Mission Area :  1  2  3  4  5  6  7\* Updated Paper?  Yes  No\* Student Paper?  Yes  No

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**\* Approval** Approved by Management (indicates required resources are available to prepare, submit, and present this paper at the above subject JANNAF Meeting)**\* U.S. Citizenship** The presenting author is a U.S. Citizen qualified to receive unclassified, limited-distribution information. Attendance at this meeting is restricted to U.S. Citizens.

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Joint Subcommittee Meeting

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**NEW** Abstract Due Date: Friday, 13 February 2015

**Unclassified Abstract (250 – 300 words; do not include figures or tables)**

\* Type or copy and paste your abstract here.

The use of additive manufacturing technology has the potential to revolutionize the development of turbopump components in liquid rocket engines. When designing turbomachinery with the additive process there are several benefits and risks that are leveraged relative to a traditional development cycle. This topic explores the details and development of a 90,000 RPM Liquid Hydrogen Turbopump from which 90% of the parts were derived from the additive process. This turbopump was designed, developed and will be tested later this year at Marshall Space Flight Center.

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- Direct questions to Shelley Cohen, by phone at 410.992.7302 x 215, or email to [scohen@cpiaac.jhu.edu](mailto:scohen@cpiaac.jhu.edu).

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