Robert H. Goddard Honor Award Nomination

Goddard Space Flight Center

Exceptional Achievement Award for: (CHECK ONLY ONE CATEGORY)

Science	Secretarial/Clerical	Leadership Award (C.S. Only)
Engineering	Diversity and EEO	Supervision Award (C.S. Only)
Technicians	Outreach	Safety Award
Professional Administrative	Customer Service	Quality & Process Improvement Award
Mentoring		Goddard Space Flight Center Legacy Award (C.S. Only)
New Opportunities Captured (Teams Only)		Robert H. Goddard Tribute Award (C.S. Only)
		Robert H. Goddard Award of Merit (C.S. Only)
		Mission Enabling Support

INDIVIDUAL: Civil Servant   Non-Civil Servant

Name: Mark C. Pallone

Code: 582

Employer (If non C.S.): Microtel LLC

Phone: 301-286-2601

Email: mark.c.pallone@nasa.gov

GROUP/TEAM NAME:

 All Civil Servant Members   All Non-Civil Servant Members   Both

Person Accepting for the Group/Team:

Phone Number:

E-Mail:

SUGGESTED CITATION (NOT TO EXCEED 175 CHARACTER SPACES) (Must start with "For exceptional… or For outstanding…")
For outstanding flight software engineering and simulator development to the Ocean Color Instrument.

JUSTIFICATION: (not to exceed 4250 spaces): Note: Justification must: 1.) describe the accomplishment against the award criteria; 2.)describe the impact of the accomplishment; and 3.)demonstrate how the accomplishment is beyond the employee's/group's expected job duties

(DO NOT ATTACH ADDITIONAL SHEETS – ONLY INFORMATION ON THIS PAGE WILL BE CONSIDERED)

Mr. Pallone distinguished himself as a software engineer on the Ocean Color Instrument (OCI) Flight Software (FSW) team and Ground Support Equipment (GSE) team.

As the primary developer for the Memory Scrub application, Mr. Pallone was responsible for designing, developing, and integration testing the Memory Scrub application. Mr. Pallone was also the primary developer for the interrupt handling and exception handling FSW. With these two assignment he gained knowledge about the duel-core LEON3 processor including symmetric multi-core processing, the Scalable Processor Architecture version 8, and the processor card Field Programmable Gate Array (FPGA). Such a detailed knowledge if the hardware is difficult to acquire but necessary to properly handle interrupts and exceptions. As part of the above assignments, Mr. Pallone learned how to use the Gaisler Research Monitor problem connected to the processor JTAG which allows for very detailed debugging of the executing FSW including setting break points and single stepping through the code. This things are not easy in a real-time embedded system.

In early 2019 the FSW team started running long duration tests. These tests showed a problem with the watchdog timer infrequently expiring. Mr. Pallone's above experience and knowledge of the lab, the processor, and the processor board ideally positioned him to play a key role is solving this infrequent watchdog timeout mystery.

Mr. Pallone methodically diagnosed the problem, learned new features of the tool chain, collected enough sample points, negotiated an FPGA update to help troubleshoot, and eventually defined the problem.

Mr. Pallone's contributions to solving this very difficult and high visibility problem has allowed the FSW group to progress and deliver our software to the integration and test effort with high confidence in the quality of the FSW that will be supporting upcoming instrument level tests.

In addition to the above FSW development and troubleshooting activities, Mr. Pallone learned all about the mechanism control electronics and thermal hardware to design and implement two critical simulators used to test the FSW.

The quality of these simulators also allows the FSW group to progress and deliver our software to the integration and test effort with confidence in the quality of the FSW.

The OCI FSW development and test team and the branch are fortunate to have such a highly motivated and technically excellent engineer on our team.

NOMINATOR (CHECK ONLY ONE): : Civil Servant Non-Civil Servant*		**DATE:** 09/11/2019
Name: Daniel L. Berry **Phone:** 301-286-0060 **Code:** 582 **Email:** daniel.l.berry@nasa.gov		

*Civil Servant Concurrence: (Re: To address conflict of interest if non-Civil Servant nominates Civil Servants.)	DATE:
Concur Non-concur Name: Phone: Code: Email:	

AWARD NOMINATION SUBMISSION CHECKLIST:

BEFORE YOU "HIT SEND" DID YOU:

Include under JUSTIFICATION: A brief description of the individuals or team's responsibilities, contributions, and accomplishments, referring to the specific award criteria. Specific examples must be included. NOTE: Nominators are responsible for ensuring the accuracy of the justification and are encouraged to talk with the nominee(s), his/her Team Leader, and/or supervisor. The Awards Committee reserves the right to contact any of these individuals for supplemental information or to verify the accuracy of this justification.

➢ _____Indicate the appropriate Award Category – (only one category per submission)

➢ _____Note whether it is for an Individual or Team

➢ _____For Teams, did you provide the Team Name and identify the person who will accept on behalf of the team

➢ _____Include a citation (175 characters [includes spaces & punctuations])

➢ _____Include organization codes and/or company names for nominee and all team members

➢ _____List team members in an Excel file by last name, first name, organization code or company affiliation if not Civil Servant (Note: please provide complete team listing on one tab in Excel)

➢ _____Include your phone number and organization code

After you "hit send":
➢ _____Ensure you receive an automated reply that your nomination was "successfully submitted" (If not, please contact the Awards Office immediately at 301-286-5025).