

## Patents

- Manyapu, Kavya K., and Leora Peltz. "Dust mitigation system utilizing conductive fibers." *U.S. Patent Application No. 15/199,618 (Granted)*.
- Manyapu, Kavya K., and Leora Peltz. "Systems and Methods for Forming a Dust Mitigating Fabric." *U.S. Patent Application No. 15/476,902 (Pending)*.
- Manyapu, Kavya K., and Leora Peltz. "A Multi-use Dust Mitigation Glove, ." *U.S. Patent Submitted*.

## Selected Publications

- K.K. Manyapu, L. Peltz, P. de León, Safety Considerations for SPICDER: Spacesuit Integrated Carbon Nanotube Dust Ejection/Removal System. 10<sup>th</sup> International Association for the Advancement of Space Safety, CA, 2019, May
- K.K. Manyapu, L. Peltz, P. de León, Self-cleaning spacesuits for future planetary missions using carbon nanotube technology. *Acta Astronautica (2018)*, 157, 134-144.
- K. K.Manyapu, P. de León, L. Peltz , Extending the Utilization of Dust Protection Systems using Carbon Nanotube embedded materials for Lunar Habitats for Exploration Missions, 69<sup>th</sup> International Astronautical Conference, Bremen, Germany, 2018, Oct
- K.K. Manyapu, P. de León, L. Peltz, J.R. Gaier, Spacesuit Integrated Carbon Nanotube Dust Removal System: A Scaled Prototype, 48<sup>th</sup> ICES, Albuquerque, New Mexico, 2018, July.
- K. K.Manyapu, P. de León, L. Peltz, J.R. Gaier, & D. Waters, D. Proof of concept demonstration of novel technologies for lunar spacesuit dust mitigation. *Acta Astronautica*, 137 (2017), 472-481.
- K. K.Manyapu, P. de León, L. Peltz, J.R. Gaier, D.Tsentelovich, C. Calle, & P. Mackey, P, Investigating the Feasibility of Utilizing Carbon Nanotube Fibers for Spacesuit Dust Mitigation. 46<sup>th</sup> ICES , Vienna, Austria, 2016, July
- K.K. Manyapu and P. de León, Feasibility of Multi-Technology Integration Strategy for Dust Mitigation of Planetary Spacesuits, 66<sup>th</sup> International Astronautical Conference (IAC), Jerusalem, Israel, 2015, Oct
- K.K. Manyapu, P. de León, J.R. Gaier, B.Shiro. Effects of Dust Contamination on NDX-1 Planetary Spacesuit Material during Simulated EVAs. 45<sup>th</sup> International Conference on Environmental Systems (ICES), Seattle, Washington, 2015, July

## Technical Press Featuring Research

1. New Scientist, "Self-cleaning spacesuits could help astronauts cope with Martian dust", Jan 2019. <https://www.newscientist.com/article/2189658-self-cleaning-spacesuits-could-help-astronauts-cope-with-martian-dust/>
2. Discovery News, "New Spacesuit System Could Repel Destructive Moon Dust", June 2017. <https://www.seeker.com/space/exploration/new-spacesuit-system-could-repel-destructive-moon-dust>

3. The Economist, "How to solve the lunar dust problem", Nov 2016.  
<http://www.economist.com/news/science-and-technology/21709943-sharp-jagged-dust-grains-get-everywhere-and-break-things-how-solve-lunar>
4. La Presse, Canadian Newspaper and Magazine, "Fighting Lunar Dust", July 16, 2017 edition (Printed in French) , [http://plus.lapresse.ca/screens/ae3d4abf-22b8-4196-98cc-e152d20aa608%7C\\_0.html](http://plus.lapresse.ca/screens/ae3d4abf-22b8-4196-98cc-e152d20aa608%7C_0.html)

### **Selected Honors/Awards**

- Research samples launched to International Space Station on MISSE-11 Flight Rack, April 17th 2019
- Future Space Leader Award, Future Space Leaders Foundation, 2016
- Rotary National Award for Space Achievement, Stellar Award, Early Career, RNASA, 2014
- U.S POTUS White House Astronomy Night invitee as Ambassador for Boeing CST-100 Starliner, 2015
- Best Interactive Presentation Award for research originality & research quality, International Astronautical Congress, Israel 2015
- Idea Incubation Innovation (I<sup>3</sup>) Grant, Co-Principal Investigator, The Boeing Company, 2017
- NASA International Space Education Board Scholarship, NASA, 2016
- Daniel and Jo Emily Nieuwsma Research Grant, University of North Dakota, 2016
- Rotary National Award for Space Achievement, Stellar Award, Early Career, RNASA, 2014
- Boeing Defense and Space Top Talent Award- The Boeing Company, 2013