

Instructions for the nominees: The Senate Committee on Commerce, Science, and Transportation asks you to provide typed answers to each of the following questions. It is requested that the nominee type the question in full before each response. Do not leave any questions blank. Type "None" or "Not Applicable" if a question does not apply to the nominee. Return printed answers to Committee. Begin each section (i.e., "A", "B", etc.) on a new sheet of paper.

A. BIOGRAPHICAL INFORMATION AND QUALIFICATIONS

1. Name (Include any former names or nicknames used): Dava Jean Newman
2. Position to which nominated: NASA Deputy Administrator
3. Date of Nomination: January 08, 2015
4. Address (List current place of residence and office addresses):
 Home:  Work: 
5. Date and Place of Birth: 11 August 1964, Helena, Montana
6. Provide the name, position, and place of employment for your spouse (if married) and the names and ages of your children (including stepchildren and children by a previous marriage). Not Applicable.
7. List all college and graduate degrees. Provide year and school attended.

School	Degree	Dates Attended	Date Graduated
University of Notre Dame May 1986	BS (Aerospace Engineering)	Aug. 1982-May 1986	
M.I.T. June 1989	MS (Aeronautics & Astronautics)	Sept. 1986-Jan. 1989	
M.I.T. June 1989	MS (Technology & Policy)	Jan. 1987-Aug. 1988	
M.I.T. June 1992	PhD (Aerospace Biomedical Engineering)	Jan. 1989-June 1992	

8. List all post-undergraduate employment, and highlight all management-level jobs held and any non-managerial jobs that relate to the position for which you are nominated.

History of MIT Appointments:

<u>Title</u>	<u>Department</u>	<u>Beginning</u>	<u>Ending Dates</u>
C.S. Draper Assistant Professor	Aeronautics and Astronautics	Sept. 1993	July 1995
Harvard-MIT HST Affiliate Faculty	Health, Sciences and Technology	July 1995	May 2014
Assistant Professor	Aeronautics and Astronautics	August 1995	July 1998
Associate Professor	Aeronautics and Astronautics	July 1998	July 2000
MIT Margaret MacVicar Faculty Fellow (Chair)		February 2000	-Present
Associate Professor With Tenure	Aeronautics and Astronautics	July 2000	July 2004
Associate Professor/Joint with Engineering Systems Division		May 2003	June 2004
Director, Technology and Policy Program	Institute	July 2003	- present
Engineering Systems Div., Joint Faculty		July 2003	June 2004
Professor Engineering Systems Division	Institute	July 2004	- present
Professor Aeronautics and Astronautics	Institute	July 2004	- present
Faculty House Master: Baker House	Institute	August 2005	- present
Director, MIT Portugal Program	Institute	January 2011	- Present
Member of the Harvard-MIT Health Sciences & Technology Faculty		2014	- Present
Apollo Program Professor of Astronautics	Institute	Dec 2014	- Present

Non-MIT Experience:

<u>Employer</u>	<u>Position</u>	<u>Beginning</u>	<u>Ending Dates</u>
Hopgood, Calimafde, Kalil, Blaustein & Judlowe		September 1992	- Dec. 1993
Aerojet Strat. Prop.	Engineering Aide	May 1984	- August 1984
The Boeing Co.	Engineer	May 1985	- September 1986
International Space University	Founding Executive Committee	September 1986	- June 1988
NASA Kennedy Space Center	Instructor	June 1987	- August 1987
NASA Ames Research Center	Graduate Research Fellow	July 1989	- June 1992
International Space University	Consultant, Lecturer	July 1990	- May 1999
University of Houston	Assistant Professor	August 1992	- September 1993
Trotti and Associates, Inc.	Consultant	August 1996	- Dec. 1996
Univ. Salvador, Argentina	Faculty Fellow	June 1997	- July 1997
Nascent Technologies, Inc.	Consultant	Dec.1998	- August 1999
University Space Research Assoc. (USRA), Consultant		January 2001	
Superior Técnico Lisbon	Visiting Full Professor	December 2009	

9. Attach a copy of your resume.

Please see attached CV (MIT faculty electronic Faculty Personnel Record)

10. List any advisory, consultative, honorary, or other part-time service or positions with Federal, State, or local governments, other than those listed above, within the last five years.

<u>Advisory Activity Description</u>	<u>Beginning</u>	<u>Ending Dates</u>
NASA Advisory Council (NAC) Committee on Technology and Innovation	January 2010	- Present
NASA Reduced Gravity Education Flights, MIT Faculty Advisor	January 2010	- December 2010
NASA Human Research Program: Sex, Gender and Research Review, Expert Advisor	January 2013	-

December 2013

11. List all positions held as an officer, director, trustee, partner, proprietor, agent, representative, or consultant of any corporation, company, firm, partnership, or other business, enterprise, educational, or other institution within the last five years.

<u>Advisory Activity Description</u>	<u>Beginning Ending Dates</u>
Brian Hederman Memorial Robotic Competition at the University of Notre Dame, Advisor	January 2008 – Nov 2014
National Research Council Decadal Survey on Biological and Physical Sciences in Space, Co-Lead: Translation Space Exploration Systems Panel	January 2009 - 2011
International Advisory Board of the Politecnico de Torino	May 2010 – Nov 2014
President's Advisory Board for the Department of Engineering and Public Policy, Carnegie Mellon University	November 2010 – June 2012
National Research Council: NASA Technology Roadmaps, Steering Committee Member	2011- January 2012
NASA Human Research Program: Sex, Gender and Research Review, Expert Advisor	January 2013 – Dec 2013
National Academies, NRC Report: Pathways to Exploration, Committee on Human Spaceflight; Technical Feasibility Panel	January 2013 – July 2014
National Academies, Space Studies Board (SSB) <u>Consulting Record (past 5 years):</u>	October 2013 – Dec 2014
<u>Firm Name / Activity Description</u>	<u>Beginning Ending Dates</u>
Orbital Research, Inc. SBIR Phase I	June 2011-Sept 2012
Draper Laboratories, NIAC Phase I	June-Sept 2012
Aurora Flight Sciences, SBIR Phase I	May-Nov 2013
Midé Technologies Inc., STTR Phase I	July-Dec 2013

12. Please list each membership you have had during the past ten years or currently hold with any civic, social, charitable, educational, political, professional, fraternal, benevolent or religious organization, private club, or other membership organization. Include dates of membership and any positions you have held with any organization. Please note whether any such club or organization restricts membership on the basis of sex, race, color, religion, national origin, age, or handicap.

Current Organization Memberships:

<u>Organization / Activity Description</u>	<u>Offices Held (if any)</u>
American Society for Engineering Education (ASEE),	Member since 1998
Sigma Xi, The International Research Honor Society,	Member since 1998
Society of Women Engineers (SWE),	Member June 1997 – November 2010
Union of Concerned Scientists (UCS) for Peace,	Member since 2002
American Association of University Women (AAUW),	Member since 1998
American Institute of Aeronautics and Astronautics	Member since 1996; Associate Fellow
Aerospace Medical Association (AsMA),	Member since 2000
International Society of Biomechanics (ISB),	Member since 1999

None of the above restrict membership based on sex, race, color, religion, national origin, age, or handicap.

13. Have you ever been a candidate for and/or held a public office (elected, non-elected, or appointed)? If so, indicate whether any campaign has any outstanding debt, the amount, and whether you are personally liable for that debt.

No.

14. Itemize all political contributions to any individual, campaign organization, political party, political action committee, or similar entity of \$500 or more for the past ten years. Also list all offices you have held with, and services rendered to, a state or national political party or election committee during the same period.

None.

15. List all scholarships, fellowships, honorary degrees, honorary society memberships, military medals, and any other special recognition for outstanding service or achievements.

Awards Received	Award Date
Set World Record for Women's Human-Powered Hydrofoil Speed	October 1991
National Research Council (NRC) Research Associate Award	May 1992
Elected to the MIT Corporation (Board of Trustees)	June 1992
Professor of the Year - University of Houston ASME Chapter	January 1993
NASA Manned Flight Awareness Team Award	May 1995
AIAA Distinguished Lecturer	January 1999
MIT Margaret MacVicar Faculty Fellow Endowed Chair	February 2000
SWE National Conference 2000 Best Technical Paper Award	June 2000
Women in Aerospace, 2001 National Aerospace Educator Award Recipient	September 2001
Circumnavigation of the World (Sailing, 42,000 miles; teaching) ; Named NASA Solar System Ambassadors, taught 1000+ kids around the world, www.galateaodyssey.org	January 2002-June 2003
AIAA Distinguished Lecturer	January 2003
NASA Group Achievement Award for NIAC	August 2004
Included as one of 100 Extraordinary Women Engineers selected by the American Society of Civil Engineers (http://www.engineeringwomen.org/index.cfm)	November 2004
SAE Distinguished Paper Award	July 2005
Best Inventions of 2007, awarded by Time Magazine	January 2007
Metropolitan Museum of Art (MET) Super Heroes: Fashion and Fantasy	September 2008
Boston Museum of Science	July 2009
London Museum of Science and Industry	July 2009
MIT Museum: Sampling MIT	September 2009
Mass High Tech Women to Watch	March 2010
Paris - Cite des sciences & de l'industrie: Les Nouvelles Technologies de la Protection Corporelle	August 2010
BBC Inventor of the Week, Wallace and Gromit's World of Invention	November 2010
Named Portuguese National Research Team Winner: Associação Salvador for neurorehabilitation	

Victoria and Albert Museum, London, Power of Making exhibit.	January 2011
American Museum of Natural History, New York, Beyond Earth: The Future of Spaceflight.	August 2011 – Jan. 2012
2012 Cambridge Science Festival "Curiosity Award"	Nov. 2011 – Dec. 2012
TEDWomen 2013	February 2013
MITStrong Boston Marathon Team, Raised >\$200K to endow the Sean Collier Memorial Award and Scholarship	December 2013
	Jan.–April 2014

16. Please list each book, article, column, or publication you have authored, individually or with others. Also list any speeches that you have given on topics relevant to the position for which you have been nominated. Do not attach copies of these publications unless otherwise instructed.

Publications of Dava J Newman

1. Book

Newman, D.J., Interactive Aerospace Engineering and Design, Introductory engineering textbook with accompanying interactive CD-ROM, McGraw-Hill, Inc., January 2002.

2. Papers in Refereed Journal

- 2.1 Newman, D.J. and S.R. Bussolari, "Dual-Task Performance on an Interactive Human/Computer Space Shuttle Flight Experiment," Biomed Sci Instrum, 26:213-25, 1990.
- 2.2 Newman, D.J. and H.L. Alexander, "Human Locomotion and Workload for Simulated Lunar and Martian Environments," Acta Astronautica, 29(8): 613-620, 1993.
- 2.3 Newman, D.J., Alexander, H.L. and B.W. Webbon, "Energetics and Mechanics for Partial Gravity Locomotion," Aviat Space and Environ Med, 65: 815-823, 1994.
- 2.4 Newman, D.J., "Modeling Reduced Gravity Human Locomotion," Advances in Mathematical Modeling of Biological Processes, D. Kirschner, ed., International Journal of Applied Science and Computation, 3(1):91-101, June, 1996.
- 2.5 Newman, D.J., Schultz, K.U. and J.L. Rochlis, "Closed Loop, Estimator Based Model of Human Posture Following Reduced Gravity Exposure," AIAA Journal of Guidance, Control, and Dynamics, 19(5):1102-1108, 1996.
- 2.6 Newman, D.J., Tryfonidis, M. and M. Van Schoor, "Astronaut-Induced Disturbances in Microgravity," AIAA Journal of Spacecraft and Rockets, 34(2): 252-254, 1997.
- 2.7 Newman, D.J., Jackson, D.K. and J.J. Bloomberg, "Altered Astronaut Lower-Limb and Mass Center Kinematics in Downward Jumping Following Space Flight," Exp Brain Res, 117:30-42, 1997.
- 2.8 Lathan, C.E. and D.J. Newman, "Quantification of Human Performance in Extreme Environments," Advances in Human Factors/Ergonomics, 21B:1005-1008, 1997.
- 2.9 Newman, D.J. and G. Schaffner, "Computational Dynamic Analysis of Extravehicular Activity: Large Mass Handling," AIAA Journal of Spacecraft and Rockets, 35(2): 225-227, 1998.
- 2.10 Stanney, K., Salvendy, G. et al., "Aftereffects and Sense Of Presence In Virtual Environments: Formulation Of A Research And Development Agenda," International Journal of Human-Computer Interaction, 10(2), 135-187, 1998.
- 2.11 Lathan, C.E., Sebrechts, M.M., Newman, D.J and C.R. Doarn, "Heuristic Evaluation of a Web-Based Interface For Internet Telemedicine," Telemedicine Journal, 5(2): 177-185, 1999.
- 2.12 Newman, D.J. and C.E. Lathan, "Memory Processes and Motor Control in Extreme Environments," IEEE Transactions on Systems, Man, and Cybernetics, Part C: Applications and Reviews, 29(3): 387-394, August 1999.
- 2.13 Rochlis, J. and D.J. Newman, "A Tactile Display for International Space Station (ISS) Extravehicular Activity (EVA)," Aviat Space and Environ Med, 71(6): 571-578, June 2000.
- 2.14 Baroni, G., Rigotti, C., Amir, A.R., Ferrigno, G., Newman, D.J. and A. Pedotti, "Multifactorial Movement Analysis in Weightlessness: A Ground Based Feasibility Study," IEEE Transactions on Instrumentation and Measurement, 49(3): 476-483, June 2000.
- 2.15 Newman, D.J., "Life in Extreme Environments: How Will Humans Perform on Mars?" ASGSB Gravitational and Space Biology Bulletin, 13(2): 35-47, June 2000.

- 2.16 Jackson, D.K. and D.J. Newman, "Adaptive Effects of Space Flight as Revealed by Short-Term Partial Weight Suspension," *Aviat Space and Environ Med*, 71(9), September 2000.
- 2.17 Amir, A.R. and D.J. Newman, "Research into the Effects of Astronaut Motion on the Spacecraft: A Review," *Acta Astronautica*, 47(12):859-869, December 2000.
- 2.18 Schaffner, G., Newman, D.J. and S. Robinson, "Computational Simulation of Extravehicular Activity Dynamics During a Satellite Capture Attempt," *AIAA Journal of Guidance, Control, and Dynamics*, 23(2): 367-369, March-April 2000.
- 2.19 Newman, D.J. and A.R. Amir, "Innovative First Year Aerospace Design Course at MIT," *ASEE Journal of Engineering Education*, 90(3): 375-381, July 2001.
- 2.20 Newman, D.J., Amir, A.R. and S.M. Beck, "Astronaut-Induced Disturbances to the Microgravity Environment on Board the Mir Space Station: Results of the Enhanced Dynamic Load Sensors Spaceflight Experiment," *AIAA Journal of Spacecraft and Rockets*, 38(4): 578-583, July-August 2001.
- 2.21 Amir, A.R., Baroni, G., Pedrocchi, A., Newman, D.J., Ferrigno, G. and A. Pedotti, "Measuring Astronaut Performance on the ISS: Advanced Kinematic and Kinetic Instrumentation," *IEEE Transactions on Instrumentation and Measurement*, 50(5): 1450-1455, October 2001.
- 2.22 Grönqvist, R., Abeysekera, J., Gard, G., Hsiang, S.M., Leamon, T.B., Newman, D.J., Gielo-Perczak, K., Lockhart, T.E., and C.Y.-C. Pai, "Human-Centered Approaches in Slipperiness Measurement," *Ergonomics: The Official Journal of the Ergonomics Society and the International Ergonomics Association*, 44(13): 1167-1199, October 2001.
- 2.23 Saleh, J.H., Hastings, D.E., and D.J. Newman, "Spacecraft Design Lifetime," *AIAA Journal of Spacecraft and Rockets*, 39(2):244-257, March-April 2002.
- 2.24 Saleh, J.H., Hastings, D.E., and D.J. Newman, "Flexibility in System Design and Implications for Aerospace Systems," *Acta Astronautica*, vol. 53, pp 927-944, 2003. "Awarded 2008 top ten cited article published in the past 5 years of *Acta Astronautica*, the journal of the International Academy of Astronautics
- 2.25 White, R.J., Basingthwaite, J.B., Charles, J.B., Kushmerick, M.J., Newman, D.J., "Issues of Exploration: Human Health and Well being During a Mission to Mars", *Adv. Space Res.*, Vol. 31, No.1 pp. 7-16, 2003.
- 2.26 Saleh, J.H., Lamassoure, E.S., Hastings, D.E., and D.J. Newman, "Flexibility and the Value of On-Orbit Servicing: A New Customer-Centric Perspective," *AIAA Journal of Spacecraft and Rockets*, vol.40, No. 2, pp 279-291, March-April 2003.
- 2.27 Saleh, J.H., Hastings, D.E., and D.J. Newman, "Weaving Time into System Architecture: Satellite Cost per Operational Day and Optimal Design Lifetime," *Acta Astronautica*, vol.54, pp 413-431 2004.
- 2.28 Bethke, K., Carr, C. E. Pitts, B. M., Newman, D.J., "Bio-Suit Development: Viable Options for Mechanical Counter Pressure", Society of Automotive Engineers, Inc., Warrendale, PA, USA, SAE paper 2004-01-2294, 2004.
- 2.29 Carr, C.E., Schwartz, S.J., and D.J. Newman, "Preliminary Considerations for Wearable Computing in Support of Astronaut Extravehicular Activity", 2004.
- 2.30 MacLeish, M.Y., Moreno, N. P., Thomson, W. A., Newman, D. J., Gannon, P. J., Smith, R. S., Denton, J. J., James, R. K., Wilson, C., Sognier, M., Illman, D. L., "Communicating Bioastronautics Research to Students, Families and the Nation", *Acta Astronautica*, vol. 56, pp 773-782, March 2005.
- 2.31 Ferguson, P. A., Newman, D. J., "Novel Dynamic Joint Torque Estimation using Force-Plate and Joint Angle Data", December 2005.
- 2.32 Saleh, J.H., Hassan, R., Torres-Padilla, J. P., Hastings, D. E., and Newman, D.J., "Impact of Subsystem Reliability on Satellite Revenue Generation and Present Value", *AIAA Journal of Spacecraft and Rockets*, vol. 42, No. 6, November-December 2005.
- 2.33 C.E. Carr and D.J. Newman. "When is running in a space suit more efficient than walking in a space suit?", Society of Automotive Engineers, Inc., Warrendale, Pennsylvania, USA. SAE paper 2005-01-2970, 2005.
- 2.34 Jordan, N. C., Saleh, J. H., Newman, D. J., "The extravehicular mobility unit: A review of environment, requirements, and design changes in the US spacesuit", *Acta Astronautica*, Volume 59, Issue 12, Pages 1135-1145, July 2006.
- 2.35 Saleh, J. H., Torres-Padilla, J-P., Hastings, D. E., Newman, D. J., "To Reduce or to Extend a Spacecraft Design Lifetime?", *Journal of Spacecraft and Rockets*, vol. 43, No. 1, Jan-Feb. 2006.
- 2.36 An automatic procedure to map the skin strain field with application to advanced locomotion space suit design.

- 2.37 Saleh, J. H., Jordan, N. C., Newman, D. J. "Shifting the emphasis: from cost models to satellite utility or revenue models -The case for a value-centric mindset in space system design." *Acta Astronautica*, Vol. 69, No. 10, 2007, p. 889-900.
- 2.38 Carr, C. E., Newman, D. J., "Space Suit Bioenergetics: Framework and Analysis of Unsuiting and Suited Activity", *Aviation, Space Environmental Medicine*, 78:1013-1022, 2007.
- 2.39 Carr, C. E., Newman, D. J., "Space Suit Bioenergetics: Cost of Transport During Walking and Running", *Journal of Aviation, Space Environmental Medicine*, 78:1093-1102, 2007.
- 2.40 Carr CE, Newman DJ. "Characterization of a lower-body exoskeleton for simulation of space-suited locomotion", *Acta Astronautica* 62 (2008) 308-323. (doi:10.1016/j.actaastro.2007.11.007)
- 2.41 Arai, T., Aoki, H., Fanchiang, C., Newman, D.J., "Educational Tool for Modeling and Simulation of a Closed Regenerative Life Support System" *Acta Astronautica* 63 (2008) pp. 1100-1105.
- 2.42 Stirling, L., Newman, D.J., Willcox, K., "Self-Rotations in Simulated Microgravity: Performance Effects of Strategy Training" *Journal of Aviation, Space Environmental Medicine*, vol. 80 no. 1, pp. 5-14, 2009.
- 2.43 Stirling, L., Willcox, K., Ferguson, P., Newman, D.J., "Kinetics and Kinematics for Translational Motions in Microgravity During Parabolic Flight ", *Journal of Aviation, Space Environmental Medicine*, vol. 80, No. 6, pp. 522-531, 2009.
- 2.44 Stirling, L., Willcox, K., Newman, D., "Development of a Computational Model for Astronaut Reorientation", *Journal of Biomechanics*, Vol. 43, Issue 12, pp. 2309-2314, August 2010.
- 2.45 Wagner, E.B., Granzella, N.P., Saito, N., Newman, D.J., Young, L.R., Bouxsein, M.L., "Partial weight Suspension: A Novel Murine Model for Investigation Adaptation to Reduce Musculoskeletal Loading", *Journal of Applied Physiology* August 2010, 109:350-357, 2010, doi: 10.1152/jappphysiol.00014.2009.
- 2.46 R. A. Opperman, J. M. Waldie, A. Natapoff, D. J. Newman, J. A. Jones, "Probability of Spacesuit-Induced Fingernail Trauma is associated with Hand Circumference," *Journal of Aviation, Space Environmental Medicine*, vol. 81, pp.907-913, Oct. 2010.
- 2.47 Stirling, A. Arsie, L., Willcox, K., Frazzoli, E., Newman, D., "Application of Quantized Control to Human Reorientation Maneuvers in Microgravity", *Journal of Biomechanics*, 2010.
- 2.48 Waldie, J., Newman, D., "A Gravity Loading Countermeasure Skinsuit", *Acta Astronautica*, Volume 68, issues 7-8, April-May, Pages 722-230, Doi:10.1016/j.actaastro.2010.07.022
- 2.49 Goel, R., Kaderka, J. Newman, D., "Modeling the benefits of an artificial gravity countermeasure couple with exercise and vibration, *Acta Astronautics*, Volume 70, January-February 2012, Pages 43-51.
- 2.50 Wessendorf, A.M. and Newman, D.J., Dynamic Understanding of Human-Skin Movement and Strain-Field Analysis, *IEEE Transactions on Biomedical Engineering*, VOL. 59, NO. 012, pp 3432-3438, 2012.
- 2.51 Eugene C. Goldfield, Yong-Lae Park, Bor-Rong Chen, Wen-Hao Hsu, Diana Young, Michael Wehner, Damian G. Kely-Stephen, Leia Stirling, Marc Weinberg, Dava Newman, Radhika Nagpal, Elliot Saltzman, Kenneth G. Holt, Conor Walsh & Robert J. Wood (2012): Bio-Inspired Design of Soft Robotic Assistive Devices: The Interface of Physics, Biology, and Behavior, *Ecological Psychology*, 24:4, 300-327.
- 2.52 Pfothenhauer, Sebastian M., et al. "Seeding Change through International University Partnerships: The MIT-Portugal Program as a Driver of Internationalization, Networking, and Innovation." *Higher Education Policy*, 2012.
- 2.53 Damian G. Stephen, Wen-Hao Hsu, Diana Young, Elliot L. Saltzman, Kenneth G. Holt, Dava J. Newman, Marc Weinberg, Robert J. Wood, Radhika Nagpal, Eugene C. Goldfield, "Multifractal fluctuations in joint angles during infant spontaneous kicking reveal multiplicativity-driven coordination", *Chaos, Solitons and Fractals*, Vol. 45, Issues 9-10, pp. 1201-1219, Sept-Oct, 2012.
- 2.54 P. L. Melo, M. T. Silva, J. M. Martins, D. J. Newman, Identification of Muscle Dynamics For Functional Electrical Stimulation Control Applications, *J Biomech*, 45, S1, p. S72, 2012.
- 2.55 Newman, D.J., Silva, M.T., Martins, J.M., d'Orey, S., "Simulation of Passive Dynamic Walkers Using Contact Models", *Gait and Posture*. 2013
- 2.56 Duda, K., Vasquez, R., Newman, D.J., "Variable Vector Countermeasure Suit (V2Suit) for Space Exploration", *IEEE Explore*, paper number 978-1-4673-1813-6, 2013. January 2013
- 2.57 Domingues, R., Marreiros, S.M., Martins, J., Silva, M., Newman, D.J., "Analysis of the Skin Deformation about the Ankle-Foot Joint Using Two Different Methods of Digital Technology" submitted *IEEE Transactions on Biomedical Engineering*, 2013.
- 2.58 Pfothenhauer, S., Wood, D., Newman, D.J.. "Complex International Science, Technology and Innovation Partnerships: Towards a theoretical framework for analysis, assessment and design", *Review of Policy Research*, invited, 2013.

- 2.59 Melo, P., Silva, M., Martins, J., and Newman, D.J., "Technical Developments of Functional Electrical Stimulation to Correct Drop Foot: Sensing, Actuation and Control Strategies", accepted Journal of Clinical Biomechanics, May, 2014.
- 2.60 Holschuh, B., Obropta, E., Newman, D.J., "Low Spring Index NiTi Coil Actuators for Use in Active Compression Garments, IEEE/ASME Transactions on Mechnonics, accepted May 2014.
- 2.61 Holschuh, B., and Newman, D. "Two-Spring Model for Active Compression Textiles with Integrated NiTi Coil Actuators," (submitted) Smart Materials and Structures, 07 August 2014.

3. Proceeding of Refereed Conference

- 3.1 Newman, D.J. and T.B. Hawley, "The International Lunar Initiative: The 1988 Design Project of the International Space University," Lunar Bases & Space Activities in the 21st Century Symposium, Paper No. LBS 88-152, Houston, TX, April 1988.
- 3.2 Newman, D.J. and B.W. Webbon, "Human Locomotion and Workload for Extravehicular Activity (EVA): Simulated Partial Gravity Environments," International Academy of Astronautics (IAA) 9th Man in Space Symposium, Köln, Germany, June 1991.
- 3.3 Newman, D.J., "A Submersible Partial Gravity Simulator for Lunar and Martian Locomotion," International Design for Extreme Environments Assembly (IDEEA), Houston, TX, November 1991.
- 3.4 Newman, D.J., "Biodynamics Modeling of Human Movement," World Congress on Computational Medicine, Public Health, and Biotechnology, Women in Mathematical Modeling: A Showcase, Austin, TX, April 1994.
- 3.5 Newman, D.J. and S.C. Fox, "Posture Control in the Partial Gravity Environment As Assessed by Proprioception," 65th Aerospace Medical Association Meeting, San Antonio, TX, May 1994.
- 3.6 Newman, D.J., "Tuning Muscle Stiffness to Accomplish Neuromuscular Control in Hypogravity," 2nd World Congress of Biomechanics, Amsterdam, the Netherlands, July 1994.
- 3.7 Lathan, C.E. and D.J. Newman, "Memory Processes and Motor Control for Teleoperation Applications," AIAA Life Sciences and Space Medicine Conference, Houston, TX, April 1995.
- 3.8 Jackson, D.K., Newman, D.J. and J.J. Bloomberg, "Changes in Astronaut Lower Limb and Body Mass-Center Kinematics in Downward Jumping Following Space Flight," 66th Aerospace Medical Association Meeting, Anaheim, CA, May 1995.
- 3.9 Newman, D.J., "Human Posture Modeling: An Assessment of Altered Gravity Adaptation," Biomedical Engineering Society Annual Fall Meeting, Boston, MA, October 1995.
- 3.10 Jackson, D.K., Newman, D.J., Bloomberg, J.J., Peters, B. and S. Smith, "Astronaut Lower-Limb and Mass Center Kinematics in Downward Jumping Following Spaceflight," AIAA Life Sciences and Space Medicine Conference, Houston, TX, April 1996.
- 3.11 Newman, D.J. and K.U. Schultz, "Estimator Based Model of Human Posture Following Reduced Gravity Exposure," June 1996 Engineering Foundation Conference on Neural Control of Human Movement, Mt. Sterling, OH, June 1996.
- 3.12 Schaffner, G., Newman, D.J. and S. Robinson, "Inverse Dynamic Simulation and Computer Animation of EVA," AIAA-97-0232, AIAA 35th Aerospace Sciences Meeting, Reno, NV, January 1997.
- 3.13 Rochlis, J. and D.J. Newman, "EVA Navigation in Space: A Demonstration of the Tactile Situation Awareness System," 68th Aerospace Medical Association Meeting, Chicago, IL, May 1997.
- 3.14 Raj, A.K., McGrath, B.J., Rochlis, J.L., Newman, D.J. and A.H. Rupert, "The Application of Tactile Cues to Enhance Situation Displays," Proceedings for the Third Annual Symposium and Exhibition on Situational Awareness in the Tactical Air Environment, Piney Point, MD, June 1998, pp. 77-84.
- 3.15 Newman, D.J. and A.R. Amir, "Innovative Aerospace Design Course at MIT," ASEE Annual Conference, Seattle, WA, July 1998. Nominated for Best Paper.
- 3.16 Newman, D.J., "Interactive Web-based and Hands-on Engineering Education: A Freshman Aerospace and Design Course at MIT," ICEE '98 International Conference on Engineering Education, Rio de Janeiro, Brazil, August 1998.
- 3.17 Newman, D.J., Beck, S., Amir, A.R., Baroni, G., Ferrigno, G. and A. Pedotti, "Measuring Astronaut Performance in Microgravity: Loads and Modeling," Proceedings of the First Biennial Space Biomedical Investigators' Workshop, League City, TX, January 1999.

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- 3.132 Marreiros, S.P., Domingues, A.R., Martins, J.M., Silva, M.T. and Newman, D.J. (2013), "Computational Calculation and Representation of the Lines of Non-Extension of the Ankle-Foot Complex", Congress on Numerical Methods in Engineering - CMN 2013. Bilbao, Spain, 2013. Paper Ref: 372. June 2013
- 3.133 A. Diaz, A. Anderson, J. Hoffman, D. J. Newman, "Modeling Musculoskeletal Human-Spacesuit Interaction", International Astronautical Association (IAA) Humans in Space Conference, Cologne Germany July 2013.
- 3.134 Anderson, A., Menguc, Y., Wood, R., Newman, D.J., "Hyperelastic Pressure Sensor Development For Use in Extravehicular Mobility Unit" IAA Humans in Space Conference, Cologne Germany July 2013.
- 3.135 Domingues, A.R., S.P., Martins, J.M., Silva, M.T. and Newman, D.J. (2013): "Analysis of the Human Ankle Impedance for the Design of Active Soft Orthosis", XXIV Congress of the International Society of Biomechanics, Natal, Brazil, August, 2013.
- 3.136 Holschuh, B., Obropta, E., Aitchison, L., Newman, D.J., "Active Braid Compression Technology for Mechanical Counter-Pressure Space Suits", 64th International Astronautical Congress, Beijing, China, September, 2013.
- 3.137 Pfothenhauer S.M., Roos D., Newman D.J. "International University Collaborations as an Innovation Strategy for Transitioning Countries: A Study of MIT's Major International Partnership." Atlanta Science and Innovation Policy Conference, Atlanta, GA, September 26-28, 2013.
- 3.138 Wood D., Pfothenhauer S.M., Glover W., Newman D.J. "Disruptive Innovation in Public Service Sectors. Ambidexterity and the Role of Incumbents," Atlanta Science and Innovation Policy Conference, Atlanta, GA, September 26-28, 2013.
- 3.139 Wood D., Pfothenhauer S.M., Newman, D.J. "Complex International Innovation Partnerships: Pursuing Innovation through Collaboration and Technological Learning." European Conference on Innovation and Entrepreneurship ECIE, Brussels, Belgium, September 19-20, 2013.
- 3.140 Pfothenhauer S.M., Roos D., Newman D.J. "International University Collaborations as an Innovation Strategy for Transitioning Countries: A study of MIT's major international partnerships." European Conference on Innovation and Entrepreneurship ECIE, Brussels, Belgium. September 19-20, 2013.
- 3.141 Pfothenhauer, S., Wood, D., Newman, D., "Measuring performance in complex science and technology strategies: A sociotechnical approach to indicator design" STI 2013 – 18th International Conference on Science and Technology Indicators "Translational twists and turns: Science as a socio-economic endeavor", Berlin, Germany, September 4-6, 2013.
- 3.142 Holschuh, B. and Newman, D., "Low Spring Index, Large Displacement Shape Memory Alloy (SMA) Coil Actuators for Use in Macroand Micro-Systems" SPIE Photonics West 2014 in San Francisco, Feb 3-5.
- 3.143 Duda, K.R., Vasquez, A.J., Middleton, D.J., Newman, D.J., Jacobs, S.E., " Variable Vector Countermeasure Suit (V2Suit) for Space Exploration" NASA Human Research Program Investigators' Workshop (held in conjunction with the Space Radiation Investigators' Workshop on Feb. 11–13 and the Behavioral Health and Performance Element Working Group on Feb. 11).
- 3.144 Meyen, F., Duda, J.E., Opperman, N., Jawdar, N., Chambers, J., Newman, D.J., Hoffman, J., Perusek, G., "Pneumatic Exoskeleton for Space Suit Simulation", HRP abstract for the EVA S3. February, 2014

- 3.145 Newman, D.J., Anderson, A., Diaz, A., Kracik, A., Hilbert, A., Bertrand, P., Hoffman, J., Trotti, G., "Spacesuit Trauma Countermeasures Research: Injury Prevention and Comfort Protection Design" NASA HRP Feb 12-13, 2014 in Galveston, TX.
- 3.146 R. Vasquez, A., Middleton, K. Duda, D.J. Newman, "The V2Suit "Down" Tracking Algorithm", IEEE Aerospace Conference, Big Sky, MT. March 2014
- 3.147 Duda, K., Carpenter, M., Cohanin, B., Newman, D.J., Joffman, J.A., Loffi, R., and West, J., "Wearable Control Moment Gyroscopes: A technology Enabler for Space Exploration Missions, 3rd Annual Research and Development Conference, Chicago, IL, June, 2014.
- 3.148 Hilbert, A., Anderson, A., Bertrand, P., and Newman, D.J., "Human-Spacesuit Interaction: Suit-Induced Pressures in the Shoulder Region", ICES Poster presentation, Tucson, AZ, 2014. July 2014.
- 3.149 Kendrick, D. and Newman, D.J., "Modeling the Gravity Loading Countermeasure Skinsuit," 44th International Conference on Environmental Systems (ICES), 13-17 July 2014, Tucson, Arizona. July 2014.
- 3.150 P. Bertrand, Anderson A., A. Hilbert, D. J. Newman, "Feasibility of Kinematics and Human-Suit Interactions" International Conference on Environmental Systems, Tuscon, AZ, 2014. July 2014.
- 3.151 Anderson A., A. Hilbert, P. Bertrand, S. McFarland, D. J. Newman, "In-Suit Sensor Systems for Characterizing Human-Space Suit Interaction" International Conference on Environmental Systems, Tuscon, AZ, 2014. July 2014.
- 3.152 Obropta, E., Newman, D.J., "Measuring the strain field of human skin at the elbow joint for mechanical counter pressure space suit development," ICES Poster presentation, Tucson, AZ, July, 2014.
- 3.153 Bertrand, P., Niles, S., Newman, D., "Human Spaceflight in Social Media: Promoting Space Exploration through Twitter", 65th International Astronautical Congress, Paper IAC-14-E3-3-2-x22415, Toronto, Canada, 2014. Sept. 29, 2014.
- 3.154 K. R. Duda, R. A. Vasquez, A. J. Middleton, M. L. Hansberry, D. J. Newman, S. E. Jacobs, and J. J. West, Variable Vector Countermeasure Suit (V2Suit) for Space Exploration, IEEE Aerospace Conference Proceedings, March, 2015.
- 3.155 Anderson, A., and Newman, D.J., "Pressure Characterization between the Upper Body and Space Suit during Mission-Realistic Movements", IEEE Aerospace Conference Proceedings, Paper number: 2492.
- 3.156 E. Obropta and Newman, D.J. "A comparison of human skin strain fields of the elbow joint for mechanical counter pressure space suit development", IEEE Aerospace Conference Proceedings, March, 2015.

4. Other Major Publications

- 4.1 Newman, D.J., "Ground-Based Results of the Mental Workload & Performance Experiment (MWPE)," Proceedings of the Twenty-Third Annual Conference on Manual Control, Cambridge, MA, June 1988.
- 4.2 Newman, D.J. and M. van Schoor, "Dynamic Load Sensor Experiment: Background, Science Requirements, and Preliminary Design," white paper, November 1992.
- 4.3 London, A., Smith, R. and D. Newman (faculty advisor), "MISSION: Method of Improving Space Simulation in a 0-G Natatorium," in EMOTE: Electronic Multimedia Online Textbook in Engineering for Aeronautics and Astronautics, Barrett, E., ed., March 1994.
- 4.4 Newman, D.J., "Human Posture Modeling: An Assessment of Altered Gravity Adaptation," abstract, Annals of Biomedical Engineering, Vol. 23, Supp. 1, S-89:426, 1995.
- 4.5 Jackson, D.K., Newman, D.J. and E. Bailey, "XVINET an on-line directory and resource for Aeronautics and Astronautics students, alumni/ae, faculty, and staff," database and website development including: mentoring, employment searches, mentoring, feedback on department activities, and regional networking.
- 4.6 Newman, D.J., "Moving Through Fluids," Biomechanics, 2(5): 37-39, May 1995. May 1995
- 4.7 Newman, D.J. and M. Barratt, Chapter 22: "Life Support and Performance Issues for Extravehicular Activity (EVA)," Fundamentals of Space Life Sciences, S. Churchill, ed., Krieger Publishing Co., Malabar, FL, 337-364, January 1997.
- 4.8 National Research Council, Advanced Technology for Human Support in Space, Bagian, J., Committee Chair, Committee on Advanced Technology for Human Support in Space, Aeronautics and Space Engineering Board, Commission on Engineering and Technical Systems, National Academy Press, Washington, DC, June 1997.
- 4.9 Newman, D.J., "Aerospace Education Curriculum." On-line materials developed for high school outreach. <http://web.mit.edu/16.00/www/ac>

- 4.10 Lathan, C.E. and D.J. Newman, "Memory processes and motor control during a space simulation mission," Canadian Astronaut Program Space Unit Life Simulation (CAPSULS) 7-Day Mission: Final Report and Scientific Results, pp. 85-90, Canadian Space Agency, October 1998.
- 4.11 Bloomberg, J.J., Layne, C.S., McDonald, P.V., Peters, B.T., Huebner, W.P., Reschke, M.F., Berthoz, A., Glasauer, S., Newman, D.J. and D.K. Jackson, "Effects of Space Flight on Locomotor Control," in Extended Duration Orbiter Medical Project, Final Report 1989-1995, NASA SP-1999-534, NASA Johnson Space Center, 1999.
- 4.12 Newman, D.J., "Dynamic Load Sensors (DLS) Spaceflight Experiment."
<http://web.mit.edu/dept/aeroastro/www/labs/DLS>
- 4.13 Newman, D.J., "Quantifying Astronaut-Induced Loads in Microgravity," Astronaut Microgravity Awareness Training, NASA John Glenn Research Center, April 1999.
- 4.14 McDonald, P.V., Riccio, G.E. and D.J. Newman, "Understanding Skill in EVA Mass Handling: Vol. IV, An Integrated Methodology for Evaluating Space Suit Mobility and Stability," NASA TP-1999-3684, NASA Johnson Space Center, November 1999.
- 4.15 Newman, D.J. and D.K. Jackson, "Altered Astronaut Performance Following Spaceflight: Control and Modeling Insights," Chapter 20 in Neural Control of Posture and Movement, J. Winters and P. Crago, eds., Springer-Verlag Publishing, 282-291, 2000.
- 4.16 National Research Council, Engineering Challenges to the Long-Term Operation of the International Space Station, Kelly, T., Committee Chair, Committee on the Engineering Challenges to the Long-Term Operation of the International Space Station, Aeronautics and Space Engineering Board, Commission on Engineering and Technical Systems, National Academy Press, Washington, DC, February 2000.
- 4.17 Newman, D.J., Wu, R., Jackson, D.K. and D.E. Krebs, "Electromyographic Analysis of Human False Platform Jumping Experiments," abstract, Proceedings of the 13th Humans in Space Symposium, Santorini, Greece, May 2000.
- 4.18 Newman, D.J., "Space Biomedical Engineering." On-line materials developed for MIT and Harvard HST graduate course as well as for distribution to 12-member NSBRI university consortium.
<http://paperairplane.mit.edu/16.423J>, January 2001.
- 4.19 Carr, C.E., Schwartz, S.J., Newman, D.J., "Preliminary Considerations for Wearable Computing in Support of Astronaut Extravehicular Activity", MIT Media Laboratory Technical Report, No. 551, September 2001.
- 4.20 National Research Council, Laying the Foundation for Space Solar Power: An Assessment of NASA's Space Solar Power Investment Strategy, Hoover, W., Committee Chair, Committee for the Assessment of NASA's Space Solar Power Investment Strategy, Aeronautics and Space Engineering Board, Division on Engineering and Physical Sciences, National Academy Press, Washington DC, September 2001.
- 4.21 Poon, C.S., Tryfonidis, M., and D.J. Newman, "Bayesian Optimization of Visuomotor Performance in Human Decision," for Science, 2002.
- 4.22 Jackson, D.K., Newman, D.J., and D.E. Krebs, "False Platform Jump Landings in Humans Reveal Commanded Free Trajectories and Leg Impedance," Journal of Biomechanics, 2002.
- 4.23 Saleh, J. H., Torres-Padilla, J. P., Hastings, d. E., Newman, D. J., "To Reduce or to Extend a Complex Engineering System Design Lifetime? What is at Stake, for Whom, and How to Resolve the Dilemma" ESD Symposium, Cambridge, MA, March 2004.
- 4.24 Jordan, N. C., Saleh, J. H., and Newman, D. J., "The Extravehicular Mobility Unit: Case Study in Requirements Evolution," Technology, Management and Policy Consortium Meeting, Cambridge, MA, June 2005.
- 4.25 Newman, D.J., "Space Biomedical Sciences and Engineering Curriculum and Outreach Project" NSBRI Final Report, August, 2005.
- 4.26 Webster, Bruce Naakaii Ts'oh, Newman, D.J., Jarchow, T. "Low Magnitude High Frequency Vibrations Applied to the Foot through the Pedal of a Human Powered Artificial Gravity (HPAG) Machine", Cleveland Clinic Foundation Space Workshop, August, 2005.
- 4.27 Newman, D.J., "Human Powered Artificial Gravity Cycle", Final Report, Sept. 2005.
- 4.28 Newman, D.J., "The Power of Revolutionary Thinking: What Today's Scientists Can Teach You About Driving Innovation in Your Organization", MIT Enterprise Forum Global Broadcast Series, Atlanta, GA, September 22, 2005.
- 4.29 Newman, D.J., "Bio-Suit Advanced Space Suit Phase II Final Report", January, 2006. January 2006

- 4.30 Stirling, L.A., Newman, D.J. "Microgravity Investigation of Crew Reaction in 0g (Adapt)", C-9 and Other Microgravity Simulations, NASA/TM-2006-213727, PP. 93-99, January 2006
- 4.31 "Soldier Protective Clothing and Equipment: Feasibility of Chemical Testing Using a Fully Articulated Robotic Mannequin" Committee on Full-System Testing and Evaluation of Personal Protection Equipment Ensembles in Simulated Chemical-Warfare Environments, National Research Council ISBN: 0-309-10934-5, 178 pages, 6 x 9, (2007).
- 4.32 Johnson, B. J., Newman, D. J., "Optimization of a Planning Support System for Planetary Exploration Extravehicular Activities", MRSP research project, August 2008.
- 4.33 Newman, D.J., Opperman, R., "EVA Injury, Comfort and Protection," MIT, Dept. of Aeronautics and Astronautics, Technical Report, PO# 293723 for ILC, Dover, Sept. 5, 2008.
- 4.34 Stirling, L., Goldman, E.C., Newman, D.J., Symposium: "Informational Guidance and Distributed Control In Design of Assistive Devices", International Conference on Perception and Action, Minneapolis, MN, July 1, 2009.
- 4.35 Johnson, A. J., Dowding, J., Marquez, J., Sierhuis, M., Newman, D.J., Hoffman, J., Clancey, W.J., "An Integrated EVA Mission Planner and Exploration Support Tool for Lunar Exploration", abstract, NLSI Lunar Science Forum 2009, NASA Ames Research Center, Moffett Field, California, July 21-23, 2009.
- 4.36 Rivera, L., Newman, D. J., Trotti, G., "Future Lunar Exploration: Enabling Humans and Rovers Far and Beyond Through Design and Engineering", MSRP research project, August 2009.
- 4.37 Young D., Newman D.J., Goldfield E., "Extended Kalman Filtering for Tracking Joint Kinematics During Infant Supine Kicking", NSF National Cyber-Physical Systems (CPS) PI Meeting, Arlington, VA, August 10-12, 2010.
- 4.38 Wessendorf A., Weatherly J., Stirling L, Newman D.J., Goldfield E., "Motion Analysis Technique for Skin Strain Field Analysis", NSF National Cyber-Physical Systems (CPS) PI Meeting, Arlington, VA, August 10-12, 2010.
- 4.39 D. Young, D. Newman. Chapter: Augmenting Exploration: Aerospace, Sea and Self. Wearable Monitoring Systems. Eds. Annalisa Bonfiglio and Danilo De Rossi. Springer Science, 2011.
- 4.40 D. Newman, S. Chisholm, L. Gibson, S. Goldwasser, B. Liskov, C. Ross and L. Samson "A Report on the Status of Women Faculty in the Schools of Science and Engineering at MIT, 2011".
- 4.41 D.G. Stephen, W.H. Hsu, D. Young, E. Saltzman, K.G. Holt, D. J. Newman, M. Weinberg, R. Wood, R. Nagpal, and E.C. Goldfield "Multifractal Dynamics of Infants Spontaneous Kicking Reveal Multiplicative Basis for Exploration". January 2011
- 4.42 D. Newman, S. Chisholm, L. Gibson, S. Goldwasser, B. Liskov, C. Ross and L. Samson "A Report on the Status of Women Faculty in the Schools of Science and Engineering at MIT, 2011".
- 4.43 D. Newman, J. Martins, M. Silva, S. Oday "Passive Dynamic Walkers and Sensory Systems for Gait Analysis" Instituto Superior Tecnico, Portugal 2012.
- 4.44 E. Goldfield, YL. Park, BR. Chen, WH. HSU, D. Young, M. Wehner, D. Kelty-Stephen, L. Stirling, M. Weinberg, D. Newman, R. Nagpal. E. Saltzman, K. Holt, C. Walsh, R. Wood "Ecological Psychology" Bio-Inspired Design of Soft Robotic Assistive Devices: The Interface of Physics, Biology, and Behavior. January 2012
- 4.45 MIT Professor Has Created a Safer, Skin Tight Space Suit That Will Make It Easier to Work on Mars. September 2012
- 4.46 The Second Space Age, Space Landing Gear: Spacesuits, ICON Magazine, pp 86-95, November 2012.
- 4.47 The Deep-Space Suit, Popular Science, Cover Story, pp 54-59, November 2012.
- 4.48 S. d'Orey, J.M. Martins, M.T Silva D.J. Newman "Detention of Gait Cycle Events Through Fourier Series Expansion of Kinematic Data". February 2013..
- 4.49 Marreiros, S., Domingues, A., Martins, J., Silva, M., Newman, D., "Automatic Calculation of the Skin Lines of Non-Extension at the Ankle Joint", 5th Portuguese Biomechanics Congress, Espinho, Portugal, February 8-9, 2013.
- 4.50 Kendrick, D., Waldie, J., Newman, D., "The Gravity Countermeasure Skinsut", HRP 2013.
- 4.51 A. Anderson, A. Diaz, M. Kracik, G. Trotti, J. Hoffman, D.J. Newman, "Understanding Human-Space Suit Interaction to Prevent Injury During Extravehicular Activity", HRP 2013. February 2013.
- 4.52 K. R. Duda, R. Vasquez, A. J. Middleton, D. J. Newman, and S.E. Jacobs, 'Variable Vector Countermeasure Suit (V2Suit) for Space Habitation and Exploration', 2013 NASA Innovative Advanced Concepts Spring Symposium March 12-14, 2013 Chicago, IL.

- 4.53 Duda, E., Opperman, R.A., Meyen, F.E., Jawdat, N., Newman, D.J., Hoffman, J.A., Perusek, G., "Lower Body Development of a Space Suit Simulator For EVA Experimentation and Training" HRP 2013.
- 4.54 Meyen, F., Duda, J.E., Opperman, R.A., Jawdat, N., Newman, D.J., Hoffman, J., Perusek, G., "Engineering an Anthropomorphic Exoskeleton for Actively Controlled Space Suit Simulation" HRP 2013. February 2013.
- 4.55 Duda, K.R., Vasquez, R., Middleton, A. J., Newman, D.J., Jacobs, S.E., "Variable Vector Countermeasure Suit (V2Suit) For Space Exploration" NASA Human Research Program Conference, Galveston, TX, 2013.
- 4.56 Holschuh, B., Obropta, E., Newman, D., "Shape Memory Alloy (SMA) Coil Actuators for use in Controllable Mechanical Counter-Pressure (MCP) Spacesuits" NASA Human Research Conference, Galveston, TX 2013. February 2013
- 4.57 Building the Future Spacesuit November, media publication and coverage, 2013
- 4.58 Business Insider "This New Form-Fitting Spacesuit Could Revolutionize How Astronauts Move In Space". December 2013.
- 4.59 GIGAOM.COM "These Are The Futuristic (and hot) Space Suits Astronauts Could Wear On Mars".
- 4.60 Fast Co.Exist "This Sliik Spiderman Spacesuit Could Take Astronauts To Mars". December 2013.
- 4.61 P. L. Melo, M. T. Silva, J. M. Martins, D. J. Newman, A Microcontroller Platform For The Rapid Prototyping of FES-based Gait Neuroprostheses, Artif Organs, 2014.
- 4.62 P. L. Melo, M. T. Silva, J. M. Martins, A. M. Pinto, D. J. Newman, Modular Stimulation Units: A Novel Stimulation Platform for Motor Rehabilitation, Artif Organs, 2014.
- 4.63 P. L. Melo, M. T. Silva, J. M. Martins, D. J. Newman, A Model-based Approach To Correct Drop Foot Using Electrical Stimulation, Control Eng Pract, 2014.
- 4.64 Holschuh, B., and Newman, D. "Improving Compression Garments for Space and Terrestrial Applications via Integrated Active Materials Technology," under development and to be submitted for review to Proceedings of the National Academy of Sciences (PNAS), August 2014.
- 4.65 Boston Common Magazine "MIT's Dava Newman Creates a New Astronaut Suit". 5/1/2014
- 4.66 Wired UK "A Closer Look at MIT's Next-Gen Spacesuits" 5/1/2014.
- 4.67 F. Romero, P. L. Melo, M. T. Silva, F. Javier Alonso, Estimation of FES actuation parameters based on inverse dynamic analysis, Clin Biomech, 2014.
- 4.68 Anderson, A., Welsh, R., Newman, D.J., "Statistical Evaluation of the Causal Mechanisms Associated with Astronaut Shoulder Injury, J Aviation Space Env. Medicine, submitted 2014.
- 4.69 Anderson, A. and Newman, D.J., "Pressure Sensing for In-Suit Measurement of Space Suited Biomechanics, *Acta Astronautica*, submitted 2014.

Invited Lecture

- 6.1 August 1992, "Partial Gravity Locomotion: Underwater Treadmills and Parabolic Flight," Gordon Research Conference on Gravitational Effects on Living Systems, Proctor Academy, NH.
- 6.2 April 1993, "The Mechanics of Human Locomotion: An Investigation into the Influence of Gravitational Acceleration," Department of Mechanical Engineering, Stanford University, Stanford, CA.
- 6.3 July 1994, "Assessing Human Performance in Space," University of Maryland, Department of Aerospace Engineering, College Park, MD.
- 6.4 September 1994, "Astronaut Force Measurements: Using the Dynamic Load Sensors (DLS) on STS-62," Canadian Space Agency, Montreal, Quebec, Canada.
- 6.5 February 1995, "Aerospace Biomedical Engineering: Modeling, Dynamic Analysis, and Flight Experiments," Department of Biomedical Engineering, Boston University, Boston, MA.
- 6.6 November 1995, "Astronaut Adaptation of Performance in Altered Gravity," New Jersey's University of the Health Sciences School of Osteopathic Medicine, UMDNJ, Space Grant Symposium, NJ.
- 6.7 March 1996, "Engineering Analysis of Astronaut Adaptation in Altered Gravity," Department of Aero/Mechanical Eng., University of California, Davis, CA; also Department of Mechanical
- 6.8 March 1996, "Adaptive Control of Astronauts' Dynamic Tasks in Space Flight," Department of Electrical Engineering, University of California, Berkeley, CA.
- 6.9 January 1997, "Investigating Astronaut Performance: Modeling and Biomechanics," Orthopedics and Biomechanics Laboratory, Beth Israel Hospital, Harvard Medical School, Boston, MA.

- 6.10 June 1997, "Performing Spaceflight Experiments: the US-Russian Experience," Argentina's National Commission of Space Activities (CONAE) and INVAP S.E., San Carlos de Bariloche, Argentina.
- 6.11 October 1997, "The Enhanced Dynamic Load Sensors (EDLS) Onboard the Mir Space Station," Symposium on Human Motor Performance in Reduced Gravity, Politecnico di Milano University, Milano, Italy.
- 6.12 November 1997, "Investigating Astronaut Performance: On the Mir Space Station, in Partial Gravity, and during Extravehicular Activity," Dept. of Biology, The College of William and Mary, Williamsburg, VA. Voted by the graduate students as the best seminar of the 1997 series.
- 6.13 October 1999, "Human Space Exploration from the Russian Mir Space Station to Mars," Jones Seminar Series, Thayer School of Engineering, Dartmouth College, Hanover, NH.
- 6.14 November 1999, "Life in Extreme Environments: How will Humans Perform on Mars?" Keynote Speaker, American Society for Gravitational and Space Biology 15th Annual Meeting, Seattle, WA.
- 6.15 Eng., Catholic University of America, Washington, DC; and Department of Aerospace Eng., University of Colorado, Boulder, CO.
- 6.16 March 2000 - May 2001, "Human Space Exploration: Mir to Mars," AIAA Distinguished Lecturer Series: Orange County, CA; San Francisco, CA; Phoenix AZ; White Sands, NM; Baltimore, MD; Sydney & Adelaide, Australia.
- 6.17 February 2001, "Human Spaceflight: From Mir to Mars," 2001 Darwin Festival, Salem State College, Salem, MA.
- 6.18 June 2001, "Human Space Exploration: From Mir to Mars," Institute for Human and Machine Cognition, University of West Florida, Pensacola, FL.
- 6.19 November 2001, C.E. Carr and D.J. Newman, "Distributed Architectures and Traverse Planning for Mars Exploration", Workshop on Revolutionary Aerospace Systems Concepts for Human/Robotic Exploration of the Solar System, ICASE/USRA/NASA Langley Research Center, Hampton, VA.
- 6.20 November 2001 - July 2003, "Galatea Odyssey: World Contact / A Global Education Project," Peabody Essex Museum, Peabody, MA; Panama City, Panama; Darwin, Australia; Univ. of Stellenbosch, Stellenbosch, South Africa.
- 6.21 November 2003, "Astronaut Bio-Suit System for Exploration Class Missions," NASA Institute for Advanced Concepts (NIAC) Annual Meeting, Atlanta, GA.
- 6.22 April 2004, "Considering Human Space Systems: from the International Space Station to Mars," K.D. Wood Colloquium, Dept. of Aerospace Engineering, University of Colorado at Boulder, CO.
- 6.23 October 2004, "Astronaut Bio-Suit System for Exploration Class Missions," NASA Institute for Advanced Concepts (NIAC) Annual Meeting, Seattle, WA.
- 6.24 September, 2005, "The Power of Revolutionary Thinking: What Today's Scientists Can Teach You About Driving Innovation in Your Organization", MIT Enterprise Forum Global Broadcast Series, Atlanta, GA.
- 6.25 October, 2005, "An Astronaut 'Bio-Suit' System for Exploration Missions", NASA Institute for Advanced Concepts (NIAC) Annual Meeting, Broomfield, CO.
- 6.26 November 2005, "Advance EVA Research at MIT", Exploration EVA Conference, Houston, Texas November
- 6.27 October, 2006, An Astronaut BioSuit™ System for Exploration Missions, NASA EVA Blue Sky Panel on the future of Human and Robotic Interaction, Cosmos Club, Washington, D.C.
- 6.28 April, 2007, "The New Golden Age of Exploration: From Earth to Mars", Inauguration of the School of Earth and Space Exploration, Arizona State University, Tempe, AZ.
- 6.29 April, 2008, "Exploration: Medical Applications for Earth and Engineering Applications for Space", 100th Anniversary of the MIT Club of California Keynote, Los Angeles, CA.
- 6.30 April 2008, Creative Series for the Adidas Group, Canton, MA. April 2008
- 6.31 May 2008, Love - Act - Discover - Innovate!, University of Notre Dame, Provost's Undergraduate Research Initiative, Keynote.
- 6.32 June 2008, "Out of This World", Tech Day, MIT, Cambridge, MA. June 2008
- 6.33 September 2008, "Unleashing the Power of Technology and Creativity", NASA's Future Forums, Boston MA.
- 6.34 October 2008, "Inside the Russian Space Program - History, Astronaut Performance, & Training," Moscow, Russia.
- 6.35 October 2008, "Human Exploration," IDEAS Boston, Boston, MA.

- 6.36 October 2008, "Russian Space Exploration," Baikonur, Kazakhstan.
- 6.37 November 2008, "Human Exploration From Earth to Mars," Siemens National Competition: Math, Science & Technology, University of Notre Dame, South Bend, IN.
- 6.38 April 2009, "A New Age of Exploration: Human Spaceflight from Earth to Mars", MIT Sloan Fellows Program Keynote, Cambridge, MA.
- 6.39 August 2009, "Creative Designs for Exploration: Space, Sea, & Earth", ExplorationWorks Keynote Lecture, Helena, MT. August 2009
- 6.40 September 2009, "Astronaut Performance Space Biomedical Research – The Future of Space Exploration", University of Toronto, Overture Lecture Keynote, Toronto, Canada.
- 6.41 October 9, 2009, Artist in Context launch event at Harvard, Cambridge, MA.
- 6.42 October 15, 2009, MIT Club of Chicago, Chicago, IL.
- 6.43 October 30, 2009, "Seeking Creative Synergies between Engineering, Science and Art?" Encuentro de Ciencia y Arte 2009, Centro Nacional de las Artes (Ministry of the Arts), Mexico City, Mexico.
- 6.44 December 4, 2009, "Great Ideas Before Their Time: Homeokinetics from Iberall and Mechanical Counterpressure from Webb to Revolutionize Performance on the Earth and Mars", Iberall Lecture, U. of Conn., Storrs, CT.
- 6.45 December 8, 2009, Soapbox, MIT Museum, Cambridge, MA.
- 6.46 March 10, 2010, "Teaching and Learning: Why Don't We Embrace Change", "Blended Learning Revisited" MacVicar Day Symposium, MIT, Cambridge, MA. <http://mitworld.mit.edu/video/765/>
- 6.47 June 25, 2010, "Human Spaceflight: The Future Possibilities", Universe Workshop for the Knight Journalism Fellows at MIT, Cambridge, MA.
- 6.48 August, 2010 "Secret Life of Scientists", Online feature of Dava Newman, <http://www.pbs.org/wgbh/nova/secretlife/scientists/dava-newman/>, nominated for Emmy.
- 6.49 October 18, 2010, "Second Skin Bio-Suit", Give me Shelter: Second Skin for Extreme Environments, MIT Program in Art, Culture, and Technology, MIT, Cambridge, MA.
- 6.50 November 3–5, 2010. Keynote Presentation. "A New Age of Exploration: Human Spaceflight from Earth to Mars, Joint Engineering Conference, Helena, MT.
- 6.51 November 9, 2010, "Human Performance: Enabling Astronauts to Athletes", Adidas Creative Series, Portland OR.
- 6.52 November 2011-December 2012, "Beyond Planet Earth: The Future of Space Exploration" at the American Museum of Natural History.
- 6.53 April 26-27, 2011, "MIT150 Symposia – Earth, Air, Ocean and Space: The Future of Exploration", Exploration Visions, Chair of the Symposium, MIT.
- 6.54 July 15, 2011, "Human Performance: Enabling Astronauts to Athletes", NIKE Creative Strategy, Portland OR.
- 6.55 November 2011, "An Invitation to Explore: RE:SEARCH from Earth to Mars", disruptive interestingness across creative culture and media arts" PopTech 2011, Camden, ME.
- 6.56 November 2011, "Exploration from the Earth to Mars", Keynote, NASA Innovative Advanced Concepts (NIAC), Arlington, VA.
- 6.57 December 2011, "An Invitation to Explore: Women Athletes, Scholars and Leaders, MIT, Advising Seminar: From Good to Great and a second lecture to the MIT Women's Varsity Basketball Team.
- 6.58 April 2012: Architecting Tomorrow, Human Exploration, design, and adventure; E.G. 6 Conference, Monterey, CA. April 2012.
- 6.59 November 2012, "The Extreme Architects: How to Travel Space in a Light Suit", Think 2012 Conference, Goa, India.
- 6.60 November 2012; European Science TV and Media Awards, Human Spaceflight; Earth to Mars, Lisbon – Pavilhão do Conhecimento – Ciência Viva, Keynote.
- 6.61 February 5, 2013, Suited for Space Exhibit. American Textile History Museum, Lowell, MA.
- 6.62 May 28, 2013 Future Human Space Exploration: Human Discovery, Distinguished Space Speak Series, Exploration Works Museum, Helena, MT.
- 6.63 May 6, 2013 Human Exploration: The Desert as a Metaphor for Space, Conferencias del Desierto (Conference of the Desert) San Pedro de Atacama, Chile.
- 6.64 May 10, 2013 Designing for Humans in Extreme Environments, University of Santiago, Depts.

Industrial Design, Graphics, Illustration, and Fashion. Santiago, Chile.

6.65 September 17, 2013 The Future of Human Space Exploration: Human Discovery Business Innovation Forum (BIF9) Providence, RI.

6.66 December 5, 2013 Design for Human Space Exploration: Human Discovery, TED Talk, TEDWomen2013: Invented Here, San Francisco, CA.

6.67 July, 2014. Design for Extreme Exploration: Self, Sea and Space. Keynote. ESM Conference and American Society of Biomechanics. Boston.

6.68 September 30, 2014 Design for Extreme Environments Wired X Design Skywalker Sound, Marin, County, CA.

6.69 25 October 2014 From Baker House to Mars Keynote Speech: MIT Family Weekend Cambridge, MA.

17. Please identify each instance in which you have testified orally or in writing before Congress in a governmental or non-governmental capacity and specify the date and subject matter of each testimony.

None.

18. Given the current mission, major programs, and major operational objectives of the department/agency to which you have been nominated, what in your background or employment experience do you believe affirmatively qualifies you for appointment to the position for which you have been nominated, and why do you wish to serve in that position?

With over 25 years of experience as an aerospace engineering educator, researcher, and leader, I am passionate about achieving NASA's vision, missions, and goals for the United States. As a Professor at MIT, I teach and advise undergraduate students aerospace engineering design, and graduate students aerospace biomedical engineering and leadership development. I have published over 200 research publications, including an Introductory Aerospace Engineering Design text and CDROM (2002), and have supervised 80 graduate student theses and supervised and mentored over 140 undergraduate researchers. I was named a Best Inventor of 2007 for my BioSuit™ system by Time Magazine, which has been exhibited at over ten major international museums from the Metropolitan Museum of Art in New York to the Paris City Museum of Science and Industry to London's Albert and Victoria Museum to the American Museum of Natural History in New York. I was an invited speaker at TEDWomen 2013 and spoke about the excitement of exploration, and achieving NASA's exploration goals. I have taught and mentored thousands of students during my academic career, and always use NASA's past accomplishments and future vision as the driving force behind my passion for aerospace engineering.

I design, development and fly experiments in all extreme environments (space, earth analog environments, and undersea), and have served as the PI on 3 spaceflight experiments flown onboard the Space Shuttle and the Mir Space Station, as well as a fourth experiment scheduled to fly on the International Space Station. My teaching, mentoring, and leadership development with students extends well beyond the class room. For example, I have served as a faculty housemaster at MIT for the past 10 years living in Baker House dormitory with 330 undergraduates and a dozen graduate student academic mentors. Outreach and STEM activities are part of my daily life, which I fully embrace.

My management experience includes leading MIT's Technology and Policy Program for the past 11 years, which is MIT's largest graduate program that extends across all five schools (engineering; science; management; humanities, arts and social sciences; and architecture and planning). I also serve as the faculty director of the MIT Portugal Program, which is in its 8th year where I work with hundreds of MIT and Portuguese faculty and students realizing excellence in education and research in innovation, bioengineering systems, design, energy, and transportation. My leadership and service experience includes

having been on numerous National Academies committees related to NASA as well as having served on the NASA Advisory Council's Innovation, Technology and Engineering committee.

I wish to serve as NASA Deputy Administrator to work with the Administrator to realize NASA's vision and three strategic goals to "1) expand the frontiers of knowledge, capability and opportunity in space, 2) advance our understanding of Earth and develop technologies to improve life here on our home planet, and 3) serve the American public and accomplish NASA's mission through effective management of people, technical capabilities and infrastructure" (NASA Strategic Plan, 2014, nasa.gov, pg. iv). NASA's long-term goal is to send humans to Mars and I am passionate about helping to make this goal a reality for future generations.

19. What do you believe are your responsibilities, if confirmed, to ensure that the department/agency has proper management and accounting controls, and what experience do you have in managing a large organization?

The responsibilities of the NASA Deputy Administrator encompass working with the Administrator on strategy, policy and outreach, personnel, and STEM education and technology development. I will work closely with Administrator Bolden and the Administration on the topics above including to ensure proper management and accounting controls.

My experience includes managing and leading the MIT Portugal Program, MIT's largest partnership in Europe (2006-2017) involving 270 Portuguese faculty and staff, 70 MIT faculty and staff, over 500 graduate students, 6 universities and 28 total Portuguese higher education and research institutions involved in R&D activities, and 59 industry affiliates to date. The program reflects ~\$150 million investment in Innovation, Education and Research synergies for Portugal's work force development and economic stimulus. For the past ten years I have served as Director of MIT's Technology and Policy Program, the Institute's largest multidisciplinary graduate research program across all five Schools with over 1,100 alums. I am a full professor in the departments of Aeronautics and Astronautics and Engineering Systems; a Harvard-MIT Health, Sciences, and Technology faculty member; and a MacVicar Faculty Fellow. I also serve as Co-Director of the Man-Vehicle Laboratory at MIT, which is world recognized for contributions to enhance pilot performance, human-machine systems, and human spaceflight over the past 50 years. I have served on 68 MIT faculty committees and 35 professional committees/reviews/boards for NASA, the National Academies, and the aerospace engineering community. I have been the Principal Investigator (PI) for the Space Shuttle Dynamic Load Sensors (DLS) experiment that measured astronaut-induced disturbances of the microgravity environment on mission STS-62. An advanced system, the Enhanced Dynamic Load Sensors experiment, flew on board the Russian Mir space station from 1996-1998. I was a Co-Investigator on the Mental Workload and Performance Experiment (MWPE) that flew to space on STS-42 to measure astronaut mental workload and fine motor control in microgravity, and have developed the MICRO-G space flight experiment to provide a novel sensor suite and study human adaptation in extreme environments. I am the MIT PI for the ISS Skinsuit technology demonstration to fly aboard the Station in 2015 through ESA's sponsorship.

20. What do you believe to be the top three challenges facing the department/agency, and why?

The United States and NASA are at a critical time in space exploration. Three of the top challenges for NASA are: 1) realizing the long-term goal of the exploration vision to send humans to Mars while assuring US commercial space transportation to the International Space Station in the near-term; 2) increasing our understanding of the universe and our place in it, while caring for and protecting our planet, and 3) helping to make air travel more efficient, safe, and clean. All three challenges should significantly contribute to workforce development and have an explicit goal to inspire and excite all learners. NASA's international leadership on the ISS could be a model for the ultimate future challenge of leading a global effort to demonstrate the technologies and capabilities needed to send humans to explore the red planet and safely return them to Earth. Looking into the unknown, discovering Earth-like planets, and reflecting back on Earth stand to contribute the highest scientific return to leverage US preeminence in science and technology

as well as to better understand and improve life on Earth. The exponential growth in commercial transport (piloted and unpiloted) serves as a challenge and an opportunity to encourage innovation and to strengthen the American economy.

B. POTENTIAL CONFLICTS OF INTEREST

1. Describe all financial arrangements, deferred compensation agreements, and other continuing dealings with business associates, clients, or customers. Please include information related to retirement accounts.

For the past three years, I have a completed NASA OGE Form 450, 5 CFR Part 2634, Subpart I as a Special Government Employee (SGE) for serving on NASA's Advisory Council's Technology, Innovation, & Engineering Committee. **Please see my financial assets/business associates disclosed in the OGE 278 Executive Branch Personnel Public Financial Disclosure Report.**

2. Do you have any commitments or agreements, formal or informal, to maintain employment, affiliation, or practice with any business, association or other organization during your appointment? If so, please explain.

I will return as a full professor of Aeronautics and Astronautics at Massachusetts Institute of Technology (MIT) after completing my service as Deputy Administrator of NASA.

3. Indicate any investments, obligations, liabilities, or other relationships which could involve potential conflicts of interest in the position to which you have been nominated.

None.

4. Describe any business relationship, dealing, or financial transaction which you have had during the last ten years, whether for yourself, on behalf of a client, or acting as an agent, that could in any way constitute or result in a possible conflict of interest in the position to which you have been nominated.

Past/Current sponsored NASA-related research to MIT that I served as the PI or Co-I on are all listed below, but I do not believe they constitute a possible conflict of interest. If confirmed as NASA Deputy Administrator, my ongoing grants will be transferred to another MIT faculty colleague to assure student support throughout their graduate studies.

Completed NASA Projects in the past 10 years

Project/Proposal Title:

Development of Compression Technologies Using Advanced Materials for MCP- Graduate Fellowship for B. Holschuh

Source of Support: NASA – Goddard Space Flight Center

Total Award Amount: \$198,000

Total Award Period Covered: 09/01/2011 - 08/31/2014

Montana's Big Sky Space Education: The NASA Exploration Space at Exploration Works

Source of Support: NASA funded project. Subaward to MIT through ExplorationWorks in Helena, MT

Total Award Amount: \$179,839.54

Total Award Period Covered: 06/04/2009 - 06/03/2013

Bioastronautics Flight Opportunities

Source of Support: NSBRI through Baylor College of Medicine

Total Award Amount: \$92,253

Total Award Period Covered: 11/01/2008 - 08/31/2009

Advanced EVA Spacesuit Systems

Source of Support: ILC Dover, Inc.

Total Award Amount: \$24,688.18

Total Award Period Covered: 03/01/2008 - 08/31/2008

Mission Contingencies for Team Mission Control Interactions

Source of Support: NASA CalTech Jet Propulsion Lab

Total Award Amount: \$75,000

Total Award Period Covered: 08/01/2007 - 07/20/2008

Robotic Testing of Right Knee Joint for the Space Suit Simulator

Source of Support: Wyle Laboratories

Total Award Amount: \$6,000

Total Award Period Covered: 06/01/2007 - 05/31/2008

STTR: Lightweight Rubbery Aerogel Composites for High Performance Protections

Source of Support: Aspen Aerogels

Total Award Amount: \$30,000

Total Award Period Covered: 01/19/2007 - 01/18/2008

Advanced EVA Biomedical Energetics Performance and Space Suit Assessment

Source of Support: NSBRI through Baylor College of Medicine

Total Award Amount: \$99,945.61

Total Award Period Covered: 11/01/2006 - 04/30/2008

Graduate Student Research Program Fellowship for E. Wagner

Source of Support: NASA Goddard Space Flight Center

Total Award Amount: \$72,000

Total Award Period Covered: 09/01/2004 - 10/31/2007

Graduate Student Research Program Fellowship for B. Webster

Source of Support: NASA Goddard Space Flight Center

Total Award Amount: \$22,000

Total Award Period Covered: 01/01/2005 - 08/31/2005

Microgravity Investigation of Crew Reactions

Source of Support: NASA Johnson Center

Total Award Amount: \$1,360,710.76

Total Award Period Covered: 08/20/2004 - 06/30/2008

Space Biomedical/Sciences and Engineering Curriculum and Outreach Program

Source of Support: NSBRI through Baylor College of Medicine

Total Award Amount: \$184,967.07

Total Award Period Covered: 12/01/2003 - 3/31/2005

Astronaut Bio-Suit System for Exploration Class Missions

Source of Support: NASA through USRA

Total Award Amount: \$596,629.02

Total Award Period Covered: 9/1/2003 - 7/10/2006

Ongoing NASA Projects

Project/Proposal Title:

The Gravity Loading Countermeasure Skinsuit - Graduate Fellowship for D. Kendrick

Source of Support: NASA - Goddard Space Flight Center

Total Award Amount: \$202,000

Total Award Period Covered: 08/01/2012 - 07/31/2015

Modular portable life support system (PLSS) to increase EVA mobility and reduce consumables - Graduate Fellowship for N. Vadhavkar

Source of Support: NASA – Goddard Space Flight Center

Total Award Amount: \$68,000

Total Award Period Covered: 08/01/2014 - 07/31/2015

Spacesuit Trauma Countermeasure System for Intravehicular and Extravehicular Activities

Source of Support: NASA – Johnson Space Center

Total Award Amount: \$637,952.26,000

Total Award Period Covered: 11/30/2011 - 11/29/2014

Enhanced Dynamic Load Sensors on the International Space Station (EDLS-ISS)

Source of Support: Aurora Flight Sciences SBIR Phase II award from NASA

Total Award Amount: \$174,000

Total Award Period Covered: 6/1/2014-5/31/16

5. Describe any activity during the past ten years in which you have been engaged for the purpose of directly or indirectly influencing the passage, defeat, or modification of any legislation or affecting the administration and execution of law or public policy.

None.

6. Explain how you will resolve any potential conflict of interest, including any that may be disclosed by your responses to the above items.

At the time I am appointed to assume this position, my ongoing grants sponsored by NASA will be transferred to other MIT faculty colleagues to assure student support throughout their entire graduate program.

C. LEGAL MATTERS

1. Have you ever been disciplined or cited for a breach of ethics by, or been the subject of a complaint to any court, administrative agency, professional association, disciplinary committee, or other professional group? If so, please explain.

No.

2. Have you ever been investigated, arrested, charged, or held by any Federal, State, or other law enforcement authority of any Federal, State, county, or municipal entity, other than for a minor traffic offense? If so, please explain.

No.

3. Have you or any business of which you are or were an officer ever been involved as a party in an administrative agency proceeding or civil litigation? If so, please explain.

No.

4. Have you ever been convicted (including pleas of guilty or *nolo contendere*) of any criminal violation other than a minor traffic offense? If so, please explain.

No.

5. Have you ever been accused, formally or informally, of sexual harassment or discrimination on the basis of sex, race, religion, or any other basis? If so, please explain.

No.

6. Please advise the Committee of any additional information, favorable or unfavorable, which you feel should be disclosed in connection with your nomination.

None.

D. RELATIONSHIP WITH COMMITTEE

1. Will you ensure that your department/agency complies with deadlines for information set by congressional committees?

Yes.

2. Will you ensure that your department/agency does whatever it can to protect congressional witnesses and whistle blowers from reprisal for their testimony and disclosures?

Yes.

3. Will you cooperate in providing the Committee with requested witnesses, including technical experts and career employees, with firsthand knowledge of matters of interest to the Committee?

Yes.

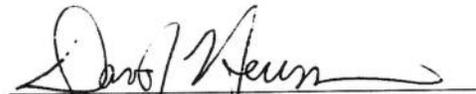
4. Are you willing to appear and testify before any duly constituted committee of the Congress on such occasions as you may be reasonably requested to do so?

Yes.

(Nominee is to include this signed affidavit along with answers to the above questions.)

F. Affidavit

Dava J. Newman being duly sworn, hereby states that he/she has read and signed the foregoing Statement on Biographical and Financial Information and that the information provided therein is, to the best of his/her knowledge, current, accurate, and complete.


Signature of Nominee

Subscribed and sworn before me this 16 day of 16, 2015


Notary Public

