Chuanfei Dong

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EDUCATION

2015 – Ph.D., **2012 –** M.S., Planetary and Space Sciences, and **2015 –** Ph.D., Scientific Computing, University of Michigan.
2014 – M.S.E., Nuclear Engineering and Radiological Sciences, University of Michigan.
2010 – M.S., Earth and Atmospheric Sciences, Georgia Tech.
2009 – B.S., Space Science, University of Science and Technology of China.

PROFESSIONAL EMPLOYMENT

2023.01 – Assistant Professor, Department of Astronomy, Boston University.
2021.04 – 2022.12 Staff Scientist, Princeton Plasma Physics Laboratory (DOE).
2018.01 – 2022.12 Associate Research Scholar, Department of Astrophysical Sciences, Princeton University.
2016.01 – 2017.12 NASA Jack Eddy Fellow, Princeton University.
2015.09 – 2015.12 Postdoctoral Scholar, Space Sciences Laboratory, University of California, Berkeley.

SELECTED HONORS, FELLOWSHIPS, AND AWARDS

2019: New Leaders in Space Science, National Academy of Science.
2018: Young Researcher Awards, European Space Agency (ESA).
2016, 2018: Group Achievement Award to MAVEN Science Team, NASA.
2018: Winner of MBR Space Settlement Challenge, Dubai Future Foundation.
2016: Robert H. Goddard (RHG) Exceptional Achievement for Science to the MAVEN Science Team, NASA.
2015: NASA Jack Eddy Postdoctoral Fellowship.
2015: MICDE Fellowship, Michigan Institute for Computational Discovery and Engineering.
2015: Richard and Eleanor Towner Award for Distinguished Academic Achievement, University of Michigan.
2013 – 2015: NASA Earth and Space Science Fellowship.
2014: MIPSE Fellowship, Michigan Institute for Plasma Science and Engineering.
2013: Vela Fellowship, Los Alamos National Laboratory.

PROFESSIONAL SERVICE AND AFFILIATIONS

2023 – present: Selection Committee of NASA Jack Eddy Postdoctoral Fellowship.
2023 – present: Graduate Admission Committee, Department of Astronomy, Boston University.
2022 – present: Steering Committee Member of NASA's Venus Exploration Analysis Group (VEXAG).
2021 – **2022**: Program Committee Member of American Physical Society (APS) Division of Plasma Physics (DPP).
2020 – present: Executive Committee Member of NASA's LWS Program Analysis Group
2019 – present: Co-I of ESA-JAXA BepiColombo mission to Mercury.

2019 – present: Working Group Lead on Planetary Environments and Evolution of the TRAPPIST-1 JWST Community Initiative.
2019 – present: Member of Parker Solar Probe Venus Working Group.
2019, 2021: Invited by NASA to participate in the NASA Research Exhibit at SC19, SC21 to present NASA-funded planetary research to the Public.
2018: Selected to attend NASA's 30th Annual Planetary Science Summer Seminar (for a New Frontiers mission concept study to Uranus), JPL.
2018 – present: Steering Committee Member of NASA's Nexus for Exoplanet System. Science (NExSS) Council; PI of a Nexus for Exoplanet System Science (NExSS) Team
2018 – present: Member of ESA-JAXA BepiColombo Hermean Environment Working Group (HEWG).
2018: Invited to give lectures on (exo)planetary space weather and habitability to ~100 students during the 2018 Heliophysics Summer School in Boulder, CO.
2016 – present: Panelist, and External Reviewer for NASA Planetary Science Division review panels, Austrian Science Fund, and United Arab Emirates Space Agency.
2014: Give student tutorials to ~100 students at the 2014 SHINE conference.
2014 – present: Judge for AGU/EGU/JpGU/AAS/SHINE Outstanding Student Paper Awards.
2011 – present: Member of Mars Atmosphere and Volatile EvolutioN (MAVEN) Mission
2010 – present: Member of AGU, APS, AAS, EGU, IAU.
2009 – present: Referee for Nature Astronomy; The Astrophysical Journal; Geophysical Research Letters; JGR - Space Physics; JGR - Planets; Icarus; Planetary and Space Science; International Journal of Astrobiology; Review of Scientific Instruments.

SELECTED INVITED COLLOQUIA, SEMINARS, AND CONFERENCE TALKS

2023: Lunar and Planetary Laboratory, University of Arizona.
2023: Department of Physics and Applied Physics, University of Massachusetts Lowell.
2023: Plasma Science and Fusion Center (PSFC), MIT.
2022: Invited Talk, American Geophysical Union Fall Meeting.
2022: Invited Talk, Dubai Future Forum, funded by the Dubai Future Foundation.
2022: Invited Talk, COSPAR Scientific Assembly.
2022: Department of Astronomy, Boston University.
2021: UW Astrobiology Colloquium, University of Washington.
2020: Invited Talk, The EGU General Assembly.
2020: NERS, University of Michigan.
2020: Princeton Plasma Physics Laboratory (DOE).
2019: Department of Astronomy, Columbia University.
2019: Lockheed Martin Solar and Astrophysics Laboratory (LMSAL).
2019: Department of Astronomy, Cornell University.
2019: Department of Earth, Atmospheric, and Planetary Sciences, MIT.
2019: Harvard-Smithsonian Center for Astrophysics (CfA).
2019: Department of Astrophysical Sciences, Princeton University.
2019: Department of Space Science, University of Alabama in Huntsville.
2018: Invited Talk, The Triennial Earth-Sun Summit (TESS).
2018: Laboratory for Atmospheric and Space Physics, University of Colorado Boulder.
2017: Department of Physics and Astronomy, George Mason University.

SELECTED REFEREED PUBLICATIONS (98 in total, 27 as lead author and more than 300 conference presentations) Google Scholar: Citations – 3228, h-index – 32

1. C. Dong, L. Wang, Y.-M. Huang, L. Comisso, T. A. Sandstrom, A. Bhattacharjee, Reconnection-driven energy cascade in magnetohydrodynamic turbulence, *Science Advances* **8**, eabn7627 (2022).
2. C. Dong, M. Jin, M. Lingam, Atmospheric Escape From TOI-700 d: Venus versus Earth Analogs, *ApJ Letters* **896**, L24 (2020).
3. C. Dong, L. Wang, A. Hakim, A. Bhattacharjee, J. A. Slavin, G. A. DiBraccio, K. Germaschewski, Global Ten-Moment Multifluid Simulations of the Solar Wind Interaction with Mercury: From the Planetary Conducting Core to the Dynamic Magnetosphere, *Geophys. Res. Lett.* **46**, 11584-11596 (2019).
4. C. Dong, M. Jin, M. Lingam, V. Airapetian, Y. J. Ma, B. van der Holst, Atmospheric escape from the TRAPPIST-1 planets and implications for habitability, *Proc. Natl. Acad. Sci.* **115**, 260-265 (2018).
5. C. Dong, L. Wang, Y.-M. Huang, L. Comisso, A. Bhattacharjee, Role of the Plasmoid Instability in Magnetohydrodynamic Turbulence, *Phys. Rev. Lett.* **121**, 165101 (2018).
6. C. Dong, Y. Lee, Y. J. Ma, M. Lingam, S. W. Bougher, J. G. Luhmann, S. M. Curry, G. Toth, A. F. Nagy, V. Tenishev, X. H. Fang, D. Mitchell, D. Brain, B. Jakosky, Modeling Martian Atmospheric Losses over Time: Implications for Exoplanetary Climate Evolution and Habitability, *ApJ Letters* **859**, L14 (2018).
7. C. Dong, M. Lingam, Y. J. Ma, and O. Cohen, Is Proxima Centauri B habitable? A study of atmospheric loss, *ApJ Letters* **837**, L26 (2017).
8. C. Dong, Z. G. Huang, M. Lingam, G. Toth, T. I. Gombosi, A. Bhattacharjee, The dehydration of water worlds via atmospheric losses, *ApJ Letters* **847**, L4 (2017).
9. C. Dong, S. W. Bougher, Y. J. Ma, G. Toth, Y. Lee, A. F. Nagy, V. Tenishev, D. J. Pawlowski, M. R. Combi, and D. Najib, Solar wind interaction with the Martian upper atmosphere: Crustal field orientation, solar cycle and seasonal variations, *J. Geophys. Res. Space Physics* 120, 7857-7872 (2015).
10. C. Dong, Y. X. Chen, X. Ma and B. K. Chen, "Advanced Information Feedback Coupled with an Evolutionary Game in Intelligent Transportation Systems", Chapter 2 in the Book "Game Theoretic Analysis of Congestion, Safety and Security", pp 41-66, Edited by K. Hausken and J. Zhuang, Springer, New York (2015).
11. C. Dong, S. W. Bougher, Y. J. Ma, G. Toth, A. F. Nagy, and D. Najib, Solar wind interaction with Mars upper atmosphere: Results from the one-way coupling between the multi-fluid MHD model and the M-TGCM model, *Geophys. Res. Lett.* **41**, 2708-2715 (2014).
12. C. Dong, Minor ion heating in spectra of linearly and circularly polarized Alfvén waves: Thermal and non-thermal motions associated with perpendicular heating, *Phys. Plasmas* **21**, 022302 (2014).
13. C. Dong and N. Singh, Ion pseudoheating by low-frequency Alfvén waves revisited, *Phys. Plasmas* **20**, 012121 (2013).
14. C. Dong and C. S. Paty, Heating of ions by low-frequency Alfvén waves in partially ionized plasmas, *Phys. Plasmas* **18**, 030702 (2011).