Yasuhiro Hasegawa **Curriculum Vitae**

Jet Propulsion Laboratory
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RESEARCH INTERESTS
Formation of stars and planetary systems
Evolution of protoplanetary disks, planetary systems, and planetary atmospheres
Origins of the solar and extrasolar systems
Big data and machine learning

EDUCATION
Ph.D. in Physics, McMaster University, Canada Nov. 2012
M.Sc. in Physics, McMaster University, Canada Nov. 2008
B.Sc. in Physics, Tokyo University of Science, Japan Mar. 2006

EMPLOYMENT
Research Scientist at JPL (Strategic hire; Level II) 2017-present

Exoplanetary Science Initiative Postdoctoral Fellowship 2015-2017
JPL/Caltech (independent on research); working on evolution of protoplanetary disks, planet formation in star-forming regions, implications for planetary atmospheres

EACOA Postdoctoral Fellowship (independent on research) 2012-2015
National Astronomical Observatory of Japan (NAOJ); 2014-2015
working on protoplanetary disks, chondrule formation, the solar system
Academia Sinica, Institute of Astronomy and Astrophysics (ASIAA); 2012-2014
working on planet formation, planetary migration, disk observations

HONORS AND AWARDS (selected)
JSPS Leading Initiative for Excellent Young Researchers (declined) 2016
CASCA Plaskett Medal for the best PhD thesis in Canada 2013
EACOA Research Fellowship (USD 400,000 over 5 years) 2012
(newly established by four key East Asian observatories)

PUBLICATIONS
17 first-author publications in peer-reviewed international journals
27 peer-reviewed publications as co-author

LEADERSHIPS /INITIATIVES (selected)
Organizer of conferences and workshops
(e.g., SOC/LOC chair of 3rd DTA workshop in Japan)
Core member of initiating/maintaining scientific activities at local institutes
(e.g., Proposal writing workshop at JPL, Colloquium committee at NAOJ)

PROGRAMMING SKILLS
Python, C/C++, IDL, Fortran
code development experience for more than 14 years; used supercomputers for running single-core jobs; developed a number of codes for modeling planet formation processes in protoplanetary disks

FUNDING

Total external grants as Principal Investigator after PhD:
JPY 27 million over 5 years, USD 650,000 over the past 7 years
Total internal grants at JPL: USD 112,000.
Total external/internal grants during PhD: the total of CAD 148,000

NASA ROSES XRP as CoI (PI: Hansen at UCLA; USD 302,000)	2019
JPL internal grants as PI (USD 112,000)	2017-present
JSPS Leading Initiative for Excellent Young Researchers	2016
(JPY 27 million over 5 years after employed by a Japanese University - declined)	
JPL Exoplanetary Science Initiative Fellowship (USD 250,000)	2015-2017
EACOA Fellowship (USD 400,000; two-year-extension was declined)	2012-2015
Ontario Graduate Scholarship (CAD 15,000)	2011-2012
The Natural Science and Engineering Research Council (NSERC)	2010-2012
of Canada CREATE Canadian Astrobiology Training Program (CAD 48,000)	
McMaster Prestige Scholarships (CAD 33,000)	2008-2011
SHARCNET Graduate Fellowship (Round VI; CAD 52,000)	2007-2009

MEDIA EXPOSURE

7. Highlight by AAS NOVA (Bi et al. 2020; link)
6. CNN News (Flock et al. 2019; link)
5. A&A highlights selected by the editor (Hasegawa et al. 2019; link)
4. Subaru/ALMA telescope Press releases (Kudo et al. 2018; link, link)
3. NASA article about exoplanets (link)
2. NBC News & Yahoo News via Space.com (Hasegawa & Pudritz 2011b; link, link)
1. Citation about planetary systems in Wikipedia (Hasegawa & Pudritz 2011b; link)

PROFESSIONAL SERVICES

Journal referee: The Astrophysical Journal (ApJ), Astronomy & Astrophysics (A&A), Monthly Notices of the Royal Astronomical Society (MNRAS), Research in Astronomy and Astrophysics (RAA); 1-2 paper assignments per year
Reviewer: panelist for NASA grant proposals; external reviewer of NPPs
Session Chair: 233 AAS meeting at Seattle, 2019; 235 AAS meeting at Honolulu, 2020

ADVISING EXPERIENCE

8. Ye Won Emily Byun: undergraduate student at Brown Univ. 2020-present
:advising on her summer intern project at JPL about machine learning and correlations between stellar elemental abundances and the presence of exoplanets under the SURF program at Caltech

7. Christopher Valenzuela: undergraduate student at UC Riverside 2019-present
:advising on his summer intern project at JPL about the multiplicity of exoplanetary systems under the FIELDS program funded by NASA MIRO program

6. Brandon Hilliard: graduate student at Cal State University, LA 2019-present
:co-advising with Prof. Susan Terebey on his MSc thesis projects about the origin of multiple gaps in protoplanetary disks under the NASA DIRECT STEM program

5. Kevin Hayakawa: graduate student at UCLA 2018-present

:co-advising with Prof. Brad Hansen on his PhD thesis projects about formation of distant planets and the origin of debris disks

4. Tze Yeung Mathew Yu: graduate student at UCLA 2018-present
:co-advising with Prof. Brad Hansen on his PhD thesis projects about N-body simulations and the origin of multiple close-in super-Earths observed by Kepler

3. Debanjan Sengupta: currently NASA Postdoctoral Fellow at Ames 2016-2018
:co-advised with Prof. Sally Dodson-Robinson at University of Delaware and Dr. Neal Turner at JPL on his PhD thesis projects about dust growth and non-ideal magneto-hydrodyanmics

2. Jennifer I-Hsiu Li: currently graduate student at Univ. of Illinois UC 2014-2017
:co-advised with Drs. Naomi Hirano and Hau-Yu Baobab Liu on her MSc thesis project about dust growth of Class 0/I YSOs at ASIAA

1. Cheng Chen: currently graduate student at Univ. of Nevada LV 2014
:advised on his summer student project about planet-disk interactions at ASIAA

TEACHING EXPERIENCE

Teaching Assistant, McMaster University, Canada 2006-2012

- Physics 1B03: Labs and Tutorials on Introductory Physics Courses for 1st-year Science students
- Physics 1D03, 1E03: Labs and Tutorials on Introductory Physics Courses for 1st-year Engineering students
- Astrophysics 2E03: Planetary Science Course for 2nd-year Science students
- Astrophysics 3Y03: Stellar Structure Course for 3rd-year Science students

OTHER ACTIVITIES

Co-I of accepted observational proposals (selected)

- ALMA-cycle7, 2019 (PI: T. Muto -10 hrs; PI: H.-Y. B. Liu - 7.3 hrs)
- VLT/MUSE-104A, 2019 (PI: J. Hashimoto - 2 hrs;PI: R. Dong - 1hr)