

Curriculum Vitae — Yaping Li

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Education

- **2005/09 – 2009/06:** B.Sc. in Applied Physics
Department of Physics, Huazhong University of Science and Technology (HUST)
- **2011/09 – 2016/07:** Ph.D. in Theoretical Physics
Department of Physics (Department of Astronomy), Xiamen University
Dissertation: Multi-wavelength Emissions for Sgr A* and Low-Luminosity Active Galactic Nuclei, Supervisor: Prof. Feng Yuan

Research Experience & Employment

- **2012/02 – 2013/02:** Visiting student
Department of Astronomy, Peking University
- **2014/09 – 2014/12:** Visiting student
Department of Astronomy, University of Massachusetts Amherst
Supervisor: Prof. Daniel Q. Wang
- **2016/08 – 2018/10:** PostDoc in Astrophysics
Shanghai Astronomical Observatory (SHAO), Chinese Academy of Sciences
Collaborator: Prof. Feng Yuan
- **2018/02 – 2018/07:** Visiting Scholar
Theoretical Division, Los Alamos National Laboratory
Collaborators: Profs. Shengtai Li, and Hui Li
- **2018/10 – present:** Postdoctoral research associate
Theoretical Division, Los Alamos National Laboratory
Collaborator: Profs. Hui Li, Shengtai Li

Grants & Awards

- **Grant: Natural Science Foundation of China (Youth project), 2018/01–2020/12, RMB 270K, PI.**
Theoretical studies of flares from black hole systems and related transient phenomena.
- **Grant: Shanghai Sailing Program, 2017/05–2020/4, RMB 200K, PI.**
Studies of multi-wavelength flares from accreting black hole systems.
- **Computing time allocation: LANL Institutional Computing Projects, 2020, 10M CPU hours, PI.**
Exploring Planet-disk Interaction in Dusty Protoplanetary Disks and Their Observational Implications.
- **Computing time allocation: LANL Institutional Computing Projects, 2021, 11M CPU hours, PI.**
Interactions of Multiple Protoplanets in Dusty Protoplanetary Disks.
- **Observational project: JVLA, 2020, PI. Hauyu Liu**
The first constraint on the properties of dust vortex.

Invited Talks

- **2016/07/18 – 07/22:** [The Multi-Messenger Astrophysics of the Galactic Centre \(IAUS322\)](#), Palm Cove, Australia,
Report: Flares of the supermassive black hole in the Galaxy
- **2018/09/06:** Seminar at DoA of USTC, Hefei,
Stellar and AGN Feedback in Isolated Early-type Galaxies: The Role in Regulating Star Formation and ISM Properties
- **2019/07/28 – 08/01:** [XXXI IUPAP Conference on Computational Physics](#), Hong Kong,
Ringed Structures and Dust Growth in Protoplanetary Disks
- **2020/10/28 – 10/29:** Earth 2.0 Transit Survey Mission Meeting, Online,
Preservation of Super-Earths in Protoplanetary Disks

Contributed Talks/Posters (selected)

- **2015/06/01 – 06/05:** [Black Hole Accretion and AGN Feedback](#), SHAO, Shanghai,
Flares of the supermassive black hole in the Galaxy
- **2015/10/19 – 10/21:** [Chinese Astronomical Society Annual Meeting 2015](#), Peking University, Beijing,
*An MHD model for flares of Sgr A**
- **2015/12/04 – 12/06:** [Astrophysics Symposium](#), Suzhou,
*An MHD model for flares of Sgr A**
- **2016/05/23 – 05/27:** [M87 Workshop: Towards the 100th Anniversary of the Discovery of Cosmic Jets](#), Taipei,
Exploring the accretion flows of M87 and 3C 84 with the Faraday rotation measure observations
- **2016/10/16 – 10/21:** [Shining from the Heart of Darkness: Black Hole Accretion and Jets](#), Kathmandu, Nepal,
*Statistical and theoretical studies of flares in Sgr A**
- **2016/11/01 – 11/03:** [Chinese Astronomical Society Annual Meeting 2016](#), Wuhan,
Exploring the Accretion Model of M87, 3C 84 and Sgr A with Faraday Rotation Measure Observations*
- **2017/07/01 – 07/03:** [Cross-Strait Symposium of Astrophysics](#), Taipei,
Flares from the supermassive black hole in our Galaxy
- **2017/07/03 – 07/07:** [13th Asian-Pacific Regional IAU Meeting \(APRIM 2017\)](#), Taipei,
Flares from the supermassive black hole in our Galaxy
- **2017/08/24 – 08/25:** [SHAO-PKU Bi-Lateral Symposium 2017](#), SHAO, Shanghai,
Numerical study of star formation quenching by stellar feedback in ETGs
- **2018/03/12 – 03/16:** [SPF2: Star and Planet Formation in the Southwest](#), Oracle, Arizona,
Dust coagulation in protoplanetary disks (Poster)
- **2020/02/21:** [The 35th Annual New Mexico Symposium](#), Socorro, NM,
Understanding dust growth and sub-structures in protoplanetary disks
- **2020/06/01 – 06/03:** [American Astronomical Society 236th](#), Online,
The impact of dust growth on the observed sub-structures in protoplanetary disks

- **2020/11/13: The 36th Annual New Mexico Symposium, Online,**
Orbital evolution of binary black holes in active galactic nucleus disks: a disk channel for binary black hole mergers?
- **2020/11/17-20: Planetesimal formation meeting, Online,**
Effect of Dust Coagulation on the Sub-structures in Protoplanetary Disks (Poster)

References

- Prof. Feng Yuan
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- Prof. Hui Li
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Theoretical Division
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- Prof. Douglas N C Lin
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Department of Astronomy & Astrophysics
University of California, Santa Cruz

Publications

Refereed Publications (* corresponding authors)

- (1) **Li, Ya-Ping** and Dempsey, A. and Li, S. and Li, H. and Li, J.,
Orbital evolution of binary black holes in active galactic nucleus disks: a disk channel for binary black hole mergers? submitted to ApJ
- (2) **Li, Ya-Ping** and Chen, Yi-Xian and Lin, Douglas N. C. and Zhang, Xiaojia,
Accretion of Gas Giants Constrained by the Tidal Barrier,
2020, ApJ, in press
- (3) Lyu, Fen and **Li, Ya-Ping*** and Hou, Shu-Jin and Wei, Jun-Jie and Geng, Jin-Jun* and Wu, Xue-Feng*,
Self-organized criticality in multi-pulse gamma-ray bursts,
2020, FrPhy, 16, 14501
- (4) Chen Y., Zhang X., **Li Y.-P.**, Li H., and Lin D. C.,
Retention of Long-period Gas Giant Planets: Type II Migration Revisited,
2020, ApJ, 900, 44
- (5) Chen Y., **Li Y.-P.**, Li H., and Lin D. C.,
The Preservation of Super Earths and the Emergence of Gas Giants after Their Progenitor Cores have Entered the Pebble Isolation Phase,
2020, ApJ, 896, 135
- (6) **Li Y.-P.**, Li H., Ricci L., Li S., Birnstiel T., Drazkowska J. and Stammler S.,
Planet-induced Vortices with Dust Coagulation in Protoplanetary Disks,
2020, ApJL, 892L, 19
- (7) Laune J. T., Li H., Li S., **Li Y.-P.**, Walls, Levi G., Birnstiel T., Drazkowska J. and Stammler S.,
Ring Morphology with Dust Coagulation in Protoplanetary Disks,
2020, ApJL, 889L, 8
- (8) **Li Y.-P.**, Li H., Li S., Lin D. C.,
On the Dust Signatures Induced by Eccentric Super-Earths in Protoplanetary Disks,
2019, ApJ, 886, 62
- (9) Bu J., **Li Y.-P.**,
Constraints on axion-like particles with different magnetic field models from the PKS 2155-304 energy spectrum,
2019, RAA, 19,154
- (10) **Li Y.-P.**, Li H., Ricci L., Li S., Birnstiel T., Isella A., Ansdell M., Yuan F., Drazkowska J. and Stammler S.,
Effects of Ringed Structures and Dust Size Growth on Millimeter Observations of Protoplanetary Disks,
2019, ApJ, 878, 39
- (11) Ma R.-Y., Roberts S. R., **Li Y.-P.**, and Wang Q. D.,
Spectral energy distribution of the inner accretion flow around Sgr A - clue for a weak outflow in the innermost region,*
2019, MNRAS, 483, 5614

- (12) **Li Y.-P.**, Yuan F., and Dai X.,
Reconciling the quasar microlensing disc size problem with a wind model of active galactic nucleus,
2019, *MNRAS*, 483, 2275
- (13) **Li Y.-P.**, Yuan F., Mo H. J., Yoon D., Gan Z.-M., Ho L. C., Wang B., Ostriker J. P. and Ciotti L.,
Stellar and AGN Feedback in Isolated Early-type Galaxies: the Role in Regulating Star Formation and ISM Properties,
2018, *ApJ*, 866, 70
- (14) Yoon D., Yuan F., Gan Z.-M., Ostriker J. P., **Li Y.-P.** and Ciotti L.,
Active Galactic Nuclei Feedback in an Elliptical Galaxy with the Most Updated AGN Physics (II): High-Angular Momentum Case,
2018, *ApJ*, 864, 6
- (15) Yuan F., Yoon D., **Li Y.-P.**, Gan Z.-M., Ho L. C. and Guo F.,
Active Galactic Nuclei Feedback in an Elliptical Galaxy with the Most Updated AGN Physics (I): Low-angular Momentum Case,
2018, *ApJ*, 857, 121
- (16) Yu X.-D., Ma R.-Y., **Li Y.-P.**, Zhang H. and Fang T.,
The Profiles of Fe K α Line from the Inhomogeneous Accretion Flow,
2018, *MNRAS*, 476, 2045
- (17) Gong B. P., **Li Y.-P.**, Yuan J. P., Tian J., Zhang Y. Y., Li D., Jiang B., Li X. D., Wang H. G., Zou Y. C. and Shao L. J.,
Searching Ultra-compact Pulsar Binaries with Abnormal Timing Behavior,
2018, *ApJ*, 855, 35
- (18) **Li Y.-P.**, Yuan F. and Wang Q. D.,
A Magnetohydrodynamic Model for Multi-wavelength Flares from Sagittarius A (I): Model and the Near-infrared and X-ray flares*,
2017, *MNRAS*, 468, 2552
- (19) Yu X.-D., **Li Y.-P.**, Xie F.-G. and Ma R.-Y.,
A Monte Carlo Study of the Spectra from Inhomogeneous Accretion Flow,
2017, *RAA*, 17, 86
- (20) **Li Y.-P.**, Yuan F. and Xie F.-G.,
Exploring the Accretion Model of Low-Luminosity Active Galactic Nuclei with the Faraday Rotation Measure Observations,
2016, *ApJ*, 830, 78
- (21) **Li Y.-P.**, Yuan F., Yuan Q., Wang Q. D., Chen P. F., Neilsen J., Fang T., Zhang S. and Dexter J.,
Statistics of X-Ray Flares of Sagittarius A: Evidence for Solar-like Self-organized Criticality Phenomena*,
2015, *ApJ*, 810, 19
- (22) **Li Y.-P.**, Yuan F. and Wang Q. D.,
Confronting the Jet Model of Sgr A with the Faraday Rotation Measure Observations*,
2015, *ApJ*, 798, 22

- (23) Neilsen J., Markoff S., Nowak M. A., Dexter J., Witzel G., Barrière N., **Li Y.-P.**, Baganoff F. K., Degenaar N., Fragile P. C., Gammie C., Goldwurm A., Grosso N. and Haggard D., *The X-Ray Flux Distribution of Sagittarius A* as Seen by Chandra*, 2015, *ApJ*, 799, 199
- (24) Hou S.-J., Gao H., Liu T., Gu W.-M., Lin D.-B., **Li Y.-P.**, Men Y.-P., Wu X.-F., Lei W.-H. and Lu J.-F., *Variability of the Giant X-ray Bump in GRB 121027A and Its Possible Origin*, 2014, *MNRAS*, 441, 2375
- (25) Gong B., Kong S. W., Xue F., **Li Y.-P.** and Huang Y. F., *Non-ballistic Superluminal Motion in the Plane of the Sky - II.*, 2011, *MNRAS*, 418, 2451
- (26) Gong B. P., **Li Y.-P.**, Zhang H. C., *The First Kinematic Determination of Million-year Precession Period of Active Galactic Nuclei*, 2011, *ApJL*, 734, 32

Conference Proceedings

- (1) **Li Y.-P.**, *Dust Trapping and Coagulation in Protoplanetary Disks*, 2020, *IAU Symposium*, 345, 355
- (2) Yuan F., Ostriker J. P., Yoon D., **Li Y.-P.**, Ciotti L., Gan Z.-M., Ho L. C. and Guo F., *Numerical study of active galactic nucleus feedback in an elliptical galaxy with MACER*, 2020, *IAU Symposium*, 342, 101
- (3) **Li Y.-P.**, Yuan Q., Wang Q. D., Chen P. F., Neilsen J., Fang T., Zhang S. and Dexter J., *Statistical and Theoretical Studies of Flares from Sagittarius A**, 2017, *IAU Symposium*, 322, 31