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Unveiling protostellar disk formation : around low-mass stars

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Curriculum vitae

I was born in Sumenep, Indonesia, which is located on the island of Madura. It is located about 140 minutes from a few nice, serene white sand beaches. I attended a Catholic primary school 'Sang Timur' built by the Dutch missionaries. After 11 years living in Indonesia, my brother and I migrated to United States (apparently, I was persistent in wanting to leave). I finished my last year of primary school (6th year) in the greater Los Angeles area, a few minutes away from the Santa Monica beach.

After finishing high school at Chaminade College Preparatory (West Hills, California) in 2003, I started my B.Sc. in astrophysics at the University of California, Los Angeles with a minor in mathematics. During this time, I worked with Dr. Michael Muno on compiling X-ray fluxes from O and B stars in young stellar clusters using data taken by the *Chandra X-ray Observatory*. In the middle of my third year, I participated in the Research Experience for Undergraduate (REU) program in La Serena, Chile, which is located on ocean terraces. The program is hosted by Cerro-Tololo Inter-American Observatory (CTIO). I worked with Dr. Roberto de Propriis on the luminosity function of cluster galaxies using images taken by the *Hubble Space Telescope*. During my stay, I gained some experience in observation utilizing the 1 meter and the 4 meter Victor M. Blanco telescope.

I moved to Leiden, a few minutes from the beach, after obtaining my B.Sc. degree to continue my studies in astronomy supported by Oort and Huygens scholarships. For my minor project, I worked with Dr. Richard Alexander on characterizing the transport properties of self-gravitating disks. For my major project, continuing my trend in shifting to the lower energy part of the spectrum, I worked with Dr. Lars Kristensen and Dr. Ruud Visser on submillimeter and near-IR molecular emission from young stellar objects in the Serpens molecular cloud. Thus, I have completely moved from looking for keV photons to meV radiation (6 orders of magnitude in energy) in roughly 4 years.

After my M.Sc., I started my Ph.D. in Leiden. I organized the astrochem seminars in my first 2 years. I was also a teaching assistant for the 'Star and Planet Formation' course by Prof. Ewine van Dishoeck, and the 'Radiation Processes in Astrophysics' course by Dr. Elena Rossi. During the past 4 wonderful years, I have presented the results of my thesis in international conferences in Europe and in the USA. I also had the opportunity to visit the James Clerk Maxwell Telescope in Hawaii. After finishing, I will be a postdoctoral researcher at Institute for Theoretical astrophysics (ITA) in Heidelberg, Germany. For the first time, I will be living inland away from the beaches.

Refereed publications

16. **D. Harsono** et al., *Discriminating protostellar disk formation models with continuum and spectral line observations*, 2014, A&A, subm.
15. M. N. Drozdovskaya et al., *Methanol along the path from envelope to protoplanetary disk*, 2014, MNRAS, subm.
14. C. Walsh et al., *ALMA hints at the presence of two companions in the disk around HD100546*, 2014, ApJL, 791, L6
13. J. E. Lindberg et al., *ALMA observations of the kinematics and chemistry of disc formation*, 2014, A&A, 566, A74
12. M. V. Persson et al., *The deuterium fractionation of water on solar-system scales in deeply-embedded low-mass protostars*, 2014, A&A, 563, A74
11. **D. Harsono** et al., *Rotationally-supported disks around Class I sources in Taurus: disk formation constraints* 2014, A&A, 562, A77
10. N. Murillo et al., *A Keplerian disk around a Class 0 source: ALMA observations of VLA1623A*, 2013, A&A, 560, A103
9. J. K. Jørgensen et al., *A recent accretion burst in the low-mass protostar IRAS 15398-3359: ALMA imaging of its related chemistry*, 2013, ApJL, 779, 22
8. G. S. Mathews et al., *ALMA imaging of the CO snowline of the HD 163296 disk with DCO⁺*, 2013, A&A, 557, 132
7. U. A. Yıldız et al., *Water in low-mass star-forming regions with Herschel (WISH-LM) High-J CO survey observed with HIFI*, 2013, A&A, 556, 89
6. **D. Harsono** et al., *Evolution of CO lines in time-dependent models of protostellar disk formation*, 2013, A&A, 555, 45
5. L. E. Kristensen et al., *Water in star-forming regions with Herschel (WISH): II. Evolution of 557 GHz 110-101 emission in low-mass protostars*, 2012, A&A, 542, 8
4. R. Visser et al., *Modelling Herschel observations of hot molecular gas emission from embedded low-mass protostars*, 2012, A&A, 537, 55
3. **D. Harsono**, R. D. Alexander and Y. Levin, *Global gravitational instabilities in embedded discs*, 2011, MNRAS, 413, 423
2. **D. Harsono**, and R. De Propris. *The luminosity function of galaxies to $M_{BgVriz} \sim -14$ in $z \sim 0.3$ clusters*, 2009, Astronomical Journal, 137, 3091
1. **D. Harsono** , and R. De Propris. *The cluster galaxy luminosity function at $z = 0.3$: a recent origin for a faint-end upturn?*, 2007, MNRAS, 380, 1036

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