



‘IMILOA
Astronomy Center of Hawai‘i

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Galaxy Ecology, Is it Nature or Nurture
Topic for next Maunakea Skies Talk

Hilo, Hawai‘i – The classic question, is it “nature” or “nurture?” will be examined by Dr. Tadayuki Kodama, Subaru Telescope, at the next “Maunakea Skies” talk entitled *Galaxy Ecology* on Saturday, June 18, at 7:00pm at ‘Imiloa Astronomy Center.

Our present-day Universe is strongly structured with galaxies as referred to as the "cosmic web", which was originated from tiny density fluctuations seeded at the start of the Universe. Clusters of galaxies are amongst the largest and most conspicuous structures filled with hundreds and thousands of galaxies, and they grow at the crossroads of the cosmic web. Interestingly, shapes and star-forming activities of galaxies are highly dependent on the surrounding environment or density where they live in. High density regions like cores of galaxy clusters are dominated by round (elliptical) galaxies with old ages, while in low density regions outside galaxy clusters the majority are disky (spiral) galaxies of relatively young ages.

Is this habitable segregation by “nature”, where galaxies of different types were born at different environments in the first place, or is it by “nurture”, where galaxies were born equally but subsequently deformed by the influences of surrounding environments?

He will describe how the clusters of galaxies are developed within cosmic time, and show how the galaxies are shaped therein as they assemble to clusters. Data primarily based on Subaru Telescope’s wide-field observations of distant galaxy clusters and their surrounding environments as well as the modern numerical simulations.

Dr. Tadayuki Kodama was born in Japan and received his PhD at the University of Tokyo in 1997. He was a visiting fellow at the University of Cambridge and University of Durham, a postdoctoral fellow at the University of Tokyo, and served as an assistant

professor at the National Astronomical Observatory of Japan (NAOJ) before coming to Subaru in 2010. He specializes in the studies of galaxies and galaxy clusters.

Maunakea Skies host by Peter Michaud of Gemini Observatory, will provide observational highlights of the Summer night-time skies over Hawai'i, pointing out prominent constellations and stars one can see during this time of year.

The monthly Maunakea Skies planetarium presentations are held on the third Saturday of each month. Presented in 'Imiloa Astronomy Center's 120-seat planetarium, admission is \$5 for 'Imiloa members and \$8 for non-members. Pre-purchase tickets at the 'Imiloa front desk or by phone at (808) 969-9704; Visa and MasterCard accepted.

'Imiloa Astronomy Center of Hawai'i is located at 600 'Imiloa Place in Hilo, off Komohana and Nowelo Streets at the UH-Hilo Science and Technology Park. For more information, go to www.imiloahawaii.org, or call (808) 969-9703.



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