

## High Risk, High Return

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Hayabusa's seven-year journey to the asteroid Itokawa captured imagination and admiration of us all. In this issue of IPMU News, you find the interview of the Hayabusa mission director, Junichiro Kawaguchi, by our Ed Turner. You may read about how brave he was proposing such a mission, taking high risks hoping for a high return. Return it did. Overcoming many technical problems, it made back from the asteroid carrying particles of its material. Scientifically, it may shed light on the formation history of the solar system. But the reason why we jumped up and down when it reentered the atmosphere was different, a huge sense of achievement that a *mission impossible* was accomplished.

Indeed, scientific research is full of dramas. A stereotype of a scientist would be something like this: wearing a thick pair of glasses, always clad in a white lab coat, stone-faced with little emotion, not socially minded, moving about almost mechanically in a lab full of dangerous chemicals and microbes, and following protocols and never deviate from well-defined routines.

But you would be surprised watching how scientists actually work: taking risks into an uncharted territory, disappointed by hitting a dead end, excited to see light down the tunnel, laughing with friends, arguing to find out what is right, concentrating to endure difficult

tasks, stumbling on a totally unexpected directions, rivalry with people elsewhere in the world, and often working in a team enjoying the company. And science is totally global: wherever you go for conferences, workshops, schools, and seminars, you immediately find new friends working in the similar area of study.

The article by our PI Ken Nomoto shows how he ventured into the mystery of supernova explosions, an uncharted territory at that time, building the theory that now became standard, working with collaborators worldwide to prove his theory, and how it led to a totally unexpected discovery of dark energy.

Ken shared his story during the Open Campus days of the Kashiwa campus with an unexpectedly large audience. They were mesmerized by his lecture. On the previous day, Chiba-kun, a gender-neutral new mascot of the Chiba prefecture, visited me, and listened to my explanation how elementary particles interact with each other. Enjoy the snap shot.

