

## Message

Addresses given at  
the Kavli IPMU  
Naming Ceremony

## Hitoshi Murayama

Director of the Kavli Institute for the Physics and  
Mathematics of the Universe



Ladies and Gentlemen,

This is a great day. Thank you so much for coming to this ceremony today to celebrate naming of the Institute for the Physics and Mathematics of the Universe, IPMU, after Mr. Fred Kavli and his Kavli Foundation. I thank many who helped make this day a reality. And of course my deepest gratitude goes to Fred and President Bob Conn.

When we inaugurated this building right here, I said “Dreams do not come true very often. Today, some dreams did come true.” It is amazing that only two years later, another dream has come true. We joined the renowned Kavli family of institutes around the world, with a significant donation that created an endowment to help secure our future. This is actually a dream many of us had even before the IPMU existed, to establish a Kavli institute at the University of Tokyo here in Japan. It is my special pleasure to have directors from Kavli institutes at Cambridge, Chinese Academy, Peking, Stanford with us today, to welcome us to the Kavli

family.

When Fred, Bob, I met Prime Minister of Japan, Mr. Yoshihiko Noda yesterday, he made a beautiful remark to Fred. “Basic science is an important and common resource for all of humanity and we really admire what you are doing in terms of supporting basic science and the needs of science.” And he added “We are also honored that you have chosen Japan and the University of Tokyo to be supported by The Foundation. We at the government truly believe that we need to attract global talent to Japan to foster science in Japan. The fact that the IPMU has received global attention and your interest and investment is a wonderful thing.”

Then Minister Hirofumi Hirano added, “the fact that you have actually chosen one of the six WPI centers to become a Kavli institute is a very good sign that we have made the right choices.”

But what impressed me the most at the meeting is a truly pure motivation of Fred in supporting basic science using his own resources. He never tells

us what we should work on, whom to hire, what to spend the money on. I find his generosity simply amazing. Fred, you are such a wonderful man. I feel already that I’ve known you for a very long time.

Needless to say, Fred and Bob would never have chosen us to support unless we produce cutting-edge research. I thank every member of Kavli IPMU for your excellent work. And we can do even better!

Thanks to this gift, a strong commitment from President Hamada, and vigorous support from the MEXT, I believe we are making a big stride towards becoming a permanent institute.

Finally, I would like to add my big thanks to our staffs who worked around the clock behind the scenes to make this event happen so smoothly. We are all one team, aiming at the goal to become a truly world-leading international center of research attacking the most basic questions about the Universe.

Thank you, Fred, Bob, and all of you here today.

## Junichi Hamada

President of the University of Tokyo



Ladies and Gentlemen,

This is a wonderful day to name IPMU after Mr. Fred Kavli and his Foundation, honoring his very generous gift to the University establishing an endowment for the Kavli IPMU. I'd like to express my deepest gratitude to Mr. Kavli for his incredible support to IPMU and the University of Tokyo. I've been greatly impressed by his very pure, selfless, and sincere motivation in his philanthropic support of basic science to advance human knowledge.

I'd also like to thank distinguished guests from other Kavli institutes around the world to share the excitement and joy of this development. I'm happy to see that IPMU has joined such a powerful family of excellent research centers. It is also an honor to the University to be listed together with such prestigious universities that host Kavli institutes.

I regard Kavli IPMU as a treasure of the University. My vision for the University highlights "The Publicness of Knowledge and the Importance

of Internationalization," and IPMU is a poster child of my vision. It is the first truly international center within the University of Tokyo. It produces first-rate science on the most basic questions of humanity about the Universe we live in. Kavli IPMU is extremely visible both domestically and internationally. It shares its scientific fruit with the general public very well, and is creating a very positive and forward-looking perception of the University. This gift from Mr. Kavli is a wonderful concrete evidence of its international recognition.

Using this occasion let me reiterate my commitment to support the Kavli IPMU. In fact, I have created a new framework called Todai Institutes for Advanced Study, or TODIAS, to sustain Kavli IPMU as a permanent entity of the University. It was the first major structural reform of the University since 1948. In addition, I'm in the process of creating a sizable number of permanent positions for the Kavli IPMU, working with the Ministry as well as within the

University. I am boosting our effort to build up endowment, to create a stronger foundation for the secure future of the Kavli IPMU and the University as a whole. This gift is a model for the future of the University, and I will work with the government to make this kind of arrangements easier.

Lastly but not the least, I'd like to congratulate Prof. Hitoshi Murayama for his strong leadership and receiving this amazing gift.

Thank you to you all.

## Fred Kavli

Founder and Chairman of The Kavli Foundation



Good morning.

President Hamada, excellencies,  
ladies and gentlemen,

It's a great honor and special pleasure to be back here in Japan, such a strong and trusted friend and ally of the United States, and a partner in our mission to gain knowledge and understanding of the universe, nature and the human being.

I grew up on the other side of the planet Earth in a green valley in western Norway, flanked by tall mountains — where I would experience the power and beauty of nature as thunder and lightning would shake the valley from mountainside to mountainside.

And at times the whole sky was aflame with the northern lights shifting and dancing across the sky, down to the white clad mountaintops. In the stillness and loneliness of the white mountains, I would so clearly see the Milky Way and the stars and the immenseness of the universe — so big beyond imagination.

I pondered the universe, the planet, nature and the wonders of man. I'm

still pondering.

The universe so big beyond imagination yet composed of particles so small — beyond comprehension — and those little creatures that have taken command of the planet Earth — not because of their strength, not because of their longevity, but because of their brain.

It has been a long road from the white mountaintops of Norway. After studying physics at the Norwegian Technical University, I came to America and settled down in southern California where I had a long journey through the business world.

My interests are now back full circle to where I started — to the Universe — from the smallest building blocks to the vastness and incredible wonders of space and to the emerging master of nature, the human brain.

It's a special pleasure to welcome the IPMU into the Kavli international family in support of science for the benefit of humanity.

The IPMU is a proud example of the best of science, having acquired

an international reputation of excellence — probing the deepest secrets of the universe in humanity's quest for greater knowledge and understanding.

The Kavli Foundation is dedicated to advancing science, promoting public understanding of science and the role of scientific research, and supporting scientists and their work.

This is accomplished through our institutes and a network of activities that collectively we call our Kavli family.

The Kavli family now is composed of:

- Sixteen institutes worldwide;
- Kavli prizes for Astroscience, Nanoscience, and Neuroscience, sponsored in partnership with Norway;
- Kavli Endowed Professorships;
- Kavli Frontiers of Science, a program of the U.S. National Academy of Science;
- Kavli Futures Symposia;
- Science journalist workshops and awards;
- The Kavli Royal Society International Center in the U.K.,

and other activities.

The Kavli IPMU is joining 15 other Kavli Institutes. In Physics and Astrophysics, the Institutes are at:

- The University of California at Santa Barbara;
- Stanford University;
- The University of Chicago;
- The Massachusetts Institute of Technology;
- Peking University;
- The Chinese Academy of Sciences; and
- The University of Cambridge.

In Nanoscience, the Institutes are at:

- The California Institute of Technology;
- Cornell University;
- Delft University; and
- Harvard University.

And in Neuroscience, the Institutes are at:

- Yale University;
- Columbia University;
- The University of California at San Diego; and
- The Norwegian University of Science and Technology.

I support science because I believe

in its long-range benefit to humanity. Science helps us lead healthier lives. Practically everything we touch in our daily lives has been improved or developed through basic research. The progress of our entire standard of living is tied closely to the fruits of science and research.

We owe our comfort, health and longevity as we know it today to science and technology. One hundred years ago our life expectancy was 47 years. We had no cure for tuberculosis or polio. We had no antibiotics and so many diseases were deadly.

We travelled by foot or horse and communicated by letters which took months to reach us. We owe our life today to the progress science has provided us.

We support science worldwide through our philanthropic effort. Giving back to society is a great tradition in the United States and I am very pleased to be able to share our philanthropic tradition with Japan — a great friend of America. It is a privilege to partner with IPMU in our quest to support excellence in science

through cooperation across national borders worldwide.

Thank you.

## Robert Conn

President of The Kavli Foundation

Thank you very much and good morning. You can see from his enthusiasm why it's such a pleasure to work with Fred Kavli.

Let me begin by thanking President Hamada, Executive Vice President Matsumoto, with whom we worked in reaching our formal agreement, Director Murayama, and all at the University of Tokyo on this remarkable day – a day when we dedicate and celebrate The Kavli Foundation's gift to Todai and the naming of the Kavli IPMU.

The University of Tokyo is one of the world's great universities, consistently ranked among the top 20 worldwide. It has a very distinguished history of discovery in science by its faculty and students, and Japan's establishment of IPMU as a World Premier Institute (WPI) five years ago was another strong step forward in Todai's scientific leadership.

As Fred Kavli indicated, The Kavli Foundation believes that science underpins the betterment of life for all people. Others share this belief but we provide our support for science in a way that is different from most other philanthropies. The Kavli Foundation provides its support in the form of an endowment gift. This permanent gift to Todai is yours for

all time, and each and every year, the Kavli IPMU can use the income received from this endowment without restriction. I think this is what Director Murayama was reminding us about in his remarks.

Our approach to philanthropy, we believe deeply, gives all of our Kavli Institutes in science – now numbering sixteen around the globe – the flexibility each needs to pursue new discoveries, even before they may be ready to see the bright light of day. Each Institute, including the Kavli IPMU, has the means to support and pursue the brightest ideas of its people. That is what we are about.

We have been impressed with the excellence of the research being done at the Kavli IPMU – science that is of a very basic nature. And I'd like to recognize the many people in the room who are carrying out this research every day. You are making a difference in our world, so a "thank you" to all the scientists and staff of the Kavli IPMU.

President Hamada remarked about the international nature of the programs and people at the Kavli IPMU. This follows from the very strong guidelines of the WPI Program. We were impressed that the Institute adopted English as its language for



conversation, science and instruction, that it has employed a large number of non-Japanese researchers, and that it established a new organizational structure. This is unprecedented in Japan and points the way to the future for others in Japan.

Clearly, we believe the Kavli IPMU is truly an extraordinary international research institute with worldwide visibility in the scientific community. The fact that so many people, including other directors of Kavli Institutes, have come from around the world to help you celebrate is an indication of the stature that you have achieved.

It is an honor and a privilege to welcome the University of Tokyo and the Kavli IPMU to the family of Kavli Institutes around the globe. All the Kavli Institutes will benefit from your efforts. Your addition to the Kavli community of science will strengthen the efforts of all the Institutes, and through those efforts, we hope to make a better life for the people of the world. Thank you very much.

## Hiroo Imura\*

Executive Chairman of the WPI Program Committee



Thank you very much for your introduction. President of the University of Tokyo, Dr. Hamada, Founder of Kavli Foundation, Dr. Kavli, IPMU director, Dr. Murayama and ladies and gentlemen, as chair person of WPI Program Committee, I would like to express my congratulations for the holding of this Naming Ceremony and extend my greetings.

WPI was launched in 2007 to establish research centers that attract frontline researchers from around the world and allow researchers to discuss freely and vigorously by providing a research environment free of conventional systemic constraints, as it is of different nature from the usual funding programs operated mainly to provide support for research projects. Program Committee selected at first five centers and has carried out follow-up reviews to achieve objectives of WPI, working in close cooperation with Program director, Dr. Kuroki, Program officers and Working group members. Although in some cases, we gave severe comments or recommendations, I think the centers and the host institutions have worked together to react them with their maximum efforts. I would like to

take this opportunity to extend my appreciation for the efforts made by IPMU and the University of Tokyo. This is the first case that I thank to Dr. Murayama.

In view of Japan's geographical distance from Western countries and differences of language and social habits, to create international research centers is not straightforward. That was the point Program Committee concerned at first. However, IPMU has established itself as an internationally highly-evaluated center during the short period, only five years, thanks to efforts of Director Murayama and persons involved. As the committee has aimed to create "highly visible research centers" from all over the world, we are really pleased that the center has the honor to have the permanent support as a form of endowment from the Kavli Foundation. We appreciate it as a proof that IPMU has gained global recognition, so we declared our support for it. It is encouraging for us that a base, which will develop Kavli IPU into a permanent research institution in the future, has established.

As already mentioned by Dr. Kavli, Promotion of basic research is universal

and essential task for happiness and progress of humankind. It is needed to establish many centers which make it possible for researchers to engage in research, to go back and forth among institutions freely and to foster human resources. I think the Kavli Foundation's commitment and action must be also contributing to benefit of humanity. Kavli IPMU is still young and may face many difficulties in future and, needless to say, they need various and strong support for future development. President Hamada of the University of Tokyo is taking action now to reform Japanese universities into internationally-opened organizations at the head of the movement. I expect that President Hamada will make every effort towards further development of Kavli IPMU.

Finally, I would like to reiterate my sincere congratulations, and wish for the further success of institutions and everyone gathered here today. Thank you very much.

\* President of the Foundation for Biomedical Research and Innovation; Former President of Kyoto University (1991-1997).

## Daisuke Yoshida

Director-General of the Research Promotion  
Bureau, MEXT



Good morning and thank you for your introduction. On behalf of the Japanese Government, I would like to make a brief address on this occasion today.

I would at first like to congratulate you on the holding of this commemorative ceremony. I wish to express my high regard for all of the many efforts everyone connected to IPMU has made up to now.

As has been pointed out, so-called brain circulation of bright researchers has flourished globally over recent years. At the same time, Japan is promoting the reinforcement of world-class basic research and system reforms based on Science and Technology Basic Plan. WPI is a “flagship” program to achieve our objectives and one of the programs MEXT is focusing its efforts.

With many expectations, IPMU, established by WPI, has been making solid progress. Earning an “S” evaluation in the interim evaluation conducted last year, IPMU has demonstrated outstanding progress, bringing a “fresh wind” to the

research environment in Japan.

The Kavli Foundation, founded by Dr. Kavli with the noble mission of advancing science, is really an international organization that supports fundamental research around the world. We are pleased that IPMU has got recognition and receives the generous support of the Kavli Foundation. This can be said to be “international recognition” of the efforts made through the WPI, and the accomplishments made by IPMU up to now.

WPI expects and seeks that the center will sustain as a world premier international research center even after the WPI-grant period ends. Towards that aim, continued various support and efforts extended by the host institution, the University of Tokyo, are indispensable, in supplementing the center’s own efforts. We appreciate that IPMU’s receiving of the perpetual support is an achievement that will lead to its continuation.

I sincerely wish that Kavli IPMU, taking advantage of this opportunity,

will further enhance its international reputation, continue its splendid research activities, and increasingly develop itself. I would like to conclude my remarks by again expressing my high regard for all of the efforts, and hope for continued success of everyone gathered here today. Thank you very much.

## Jonathan Dorfan\*

President & CEO of the Okinawa Institute of Science and Technology Graduate University



Dear Hitoshi, Fred, President Hamada, and colleagues:

It is with much regret that Renè and I are unable to attend the celebrations to commemorate the opening of the Kavli IPMU. It would have given us much pleasure to join you to enjoy the initiating event of what we know will be a world-leading scientific institution. It has been my very distinct honor and pleasure to have worked with Fred and the Kavli Foundation for almost 10 years. I can attest first-hand to the enormous benefits and facilitation that being a member of the Kavli family brings. And given my recent relocation to Okinawa, I am thrilled that Japan is now a full-fledged member.

So please accept our warm and heartfelt congratulations. We wish you every good fortune with the full expectation, that under Hitoshi's inspired leadership, the Kavli Foundation's wise sponsorship, and the presence of the University of Tokyo, even your most visionary dreams will be fulfilled.

I am particularly pleased to see

the establishment of a Kavli IPMU, feeling more than just a friend and observer: it is as if my involvement in such endeavors has come full circle. It was in early 1999, as I contemplated my Directorship role at SLAC, that I conceived the idea to establish an institute of particle astrophysics and cosmology at Stanford. At that time, Stanford campus had a small, non-leading program in particle astrophysics and cosmology. But GLAST (now Fermi) was taking hold, which allowed the capabilities of SLAC and the main campus to be fused. A few short years later, with the generosity of the Chen family and the largesse and leadership from the Kavli Foundation, KIPAC was a reality. And with it, Stanford was able to attract Roger Blandford and Steve Kahn, and later a slew of talented faculty and young researchers. The result has been that Stanford now has a world-leading program. So dreams can become reality, even in the short space of 10 years.

Shortly after I stepped down as Director of SLAC in 2007, I received a

call from the late Yoji Totsuka, asking me about KIPAC and asking if I had an interest in helping to establish a similar institute at the University of Tokyo. I was deeply engaged at that time in an effort to bring hadron cancer therapy to Stanford, so I regrettably declined. Fortunately for us all, the University of Tokyo had the inspiration to attract Hitoshi to head the Institute. And I entered the Japanese orbit in quite a different way — as President of a sister university to Todai. It is my fond hope that OIST Graduate University can have very close contacts and collaboration with the University of Tokyo and with the Kavli IPMU.

Once again, congratulations and have a wonderful two days of celebration.

Sincerely,  
Jonathan Dorfan

\* Former director of the Stanford Linear Accelerator Center (1997-2007). Since he could not attend the ceremony, Simeon Hellerman read his message for him.



## Roger Blandford

Director of the Kavli Institute for Particle Astrophysics and Cosmology, Stanford University



President Hamada, Fred Kavli, and Director Murayama, on March the 17th of this year, the Kavli Institute for Particle Astrophysics and Cosmology at Stanford celebrated, as it does every year, the ninth anniversary of our inauguration. It has been a wonderful time watching our Kavli Institute grow, seeing my colleagues develop as scientists, observing projects evolve from ideas, to funded activities and, most of all, to witnessing the unfolding of scientific discovery. While I am proud of what we have done, none of this would have been possible without the visionary support and initiative of Fred Kavli and the Kavli Foundation.

Over this interval of time, I have watched the Kavli Foundation also grow with imagination, wisdom, and verve. It has developed new programs and grown new institutes. It has been a real joy to work with it and to use its wise counsel. It has also been great to work with our fellow institutes. Those involved with physics and with astrophysics and cosmology have a natural common

affinity but the other eight institutes also are part of the same family and we have, for instance, enjoyed two very successful international meetings with representations of all parts of the Kavli Enterprise exploring new avenues in computation, a subject that unites all of our institutes.

So, Hitoshi, it is my great pleasure to be here to help celebrate this naming ceremony. We have helped each other in the past. We will, I am sure, do so even more in the future. Each of our institutes has a common core but they also each have a different character. Yours, clearly, will be very important because of its strong and explicit connection to mathematics. Congratulations from my colleagues and myself. I look forward to years ahead of intense collaboration, cooperation, and I suspect even occasional competition. Congratulations to you all and welcome to the very happy Kavli family.

## George Efstathiou

Director of the Kavli Institute for Cosmology at Cambridge



We've heard mention many times of the Kavli Family of Institutes. Our institute, until today was the youngest of the Kavli Astrophysics Institutes. So, it's nice not to be the baby anymore. We are here celebrating a new arrival. But having come here, this is no ordinary baby. When you have a new arrival in the family, the older siblings have to look after the new baby and teach it things. But having come here, this is actually a very big baby, it's very well developed and already speaks several languages including group theory. So, the analogy I think breaks down.

Going back to something that Roger has touched on, our subject is a very international subject. We already have strong natural collaborative links between all of the Kavli Institutes. But I think an area that we could do more about is in developing common Kavli themes amongst the institutes. This is something that the Directors of the Kavli Institutes should discuss. In other words, it is nice to be part of a Kavli family, but we could also think about developing a Kavli family

business. This is an idea that I think we should explore.

So, let me convey my congratulations to the IPMU from the University of Cambridge, to Fred Kavli and to the Kavli Foundation. The universe is so interesting and full of surprises you cannot fail. Thank you.

## Xiaoway Liu

Acting Director of the Kavli Institute for Astronomy and Astrophysics at Peking University



On behalf of the Kavli Institute for Astronomy and Astrophysics at Peking University, I would like to extend our warmest congratulation to Mr. Kavli and to Director Murayama for a new family member.

I think the feeling is wonderful - just under 3 hours' flight time one is able to find colleagues and comrades who share a common vision and interest. Today is the first comprehensive university in Japan. Peking University, established in 1898, 20 years after Today, is also the first comprehensive university in China. Both universities are currently trying to modernize and face the challenge of the new century. And as President Hamada commented that the Kavli IPMU is the very first international institute in Japan, so is the KIAA in China. Both of us adopt English as the working language. More than 50% of the KIAA's faculty and postdocs are non-Chinese and a similar fraction of the Kavli IPMU's faculty are non-Japanese nationalities.

So, I think we share many things in common on this road of development

and reform. I am very pleased to have a companion like you. I am sure that in future we can work on many things together and help each other..... So welcome our new family member. Again we are very, very delighted by this new development. Many thanks to Mr. Kavli for this wonderful present to the Kavli family of institutes. Thanks again and congratulations.

## Yue-Liang Wu

Director of the Kavli Institute for Theoretical Physics China at the Chinese Academy of Sciences



Good morning. Thank you very much President Hamada, Chairman of the Kavli Foundation Mr. Kavli, and Director Hitoshi Murayama.

As one of the members of Kavli family, it's my great pleasure and honor to welcome the new member of Kavli family. As we heard here today, the IPMU has become an institute that is, we are now, identified to the whole world and also the Kavli IPMU is unique institute that combines mathematics, theoretical physics, and experimental physics. So, we now have many ideas more defined by theoretical physics from the point that needs to be discovered, on one hand, by exact mathematics. On the other hand, they also need to be tested by experiment, so that is the reason why Kavli IPMU is unique. It combines all components but at the present it's not enough with one and two help. We need support from other bodies and people, such a role is played by the university and the fund organization of government, also some foundations like the Kavli Foundation, so that all of the ideas

can become realized with the strong support.

And we know that the Kavli IPMU has focused on the fundamental problems: what is the origin of the universe, how the universe evolved from inflationary universe in the very beginning to the accelerating universe at present, why our universe consists of only matter without antimatter, and what is the origin of the mass of the elementary particles, and why we have three-generation of quarks and leptons. They are all fundamental questions that exist at Kavli IPMU and also some other family members of the Kavli Institute.

So, we have a lot to do together and then to have the cooperation. The cooperation is necessary for the rapid development of basic research sciences. The Kavli IPMU is the closest family member to the Kavli Institute for Theoretical Physics China (KITPC) at the Chinese Academy of Sciences and also to the KIAA in Peking University. I hope that we will have more cooperation and exchange programs. Actually, from the KITPC

programs we have had more and more participants from Japan, we hope that there will have more participants from Kavli IPMU in the future. I wish the Kavli IPMU to be more successful. Thanks.