

Preface to the 15th Takagi Lectures

The Takagi Lectures are expository lectures by the finest contemporary mathematicians.

The Mathematical Society of Japan (MSJ) inaugurated the Takagi Lectures as prestigious research survey lectures. The Takagi Lectures are the first series of the MSJ official lectures in mathematics to be honored with this respected Japanese mathematician's name [2]. The lectures are intended for a wide range of mathematicians, and are as a rule held twice a year. The first Takagi Lectures took place in November 2006 at Research Institute for Mathematical Sciences (RIMS), Kyoto. Since then Takagi Lectures have been delivered by the following distinguished mathematicians: P.F. Baum, Y. Benoist, S. Bloch, J.-P. Bourguignon, S. Brendle, A. Connes, É. Ghys, A. Guionnet, S. Gukov, M. Harris, M. Hopkins, U. Jannsen, C. Khare, C. Kenig, M. Khovanov, M. Kontsevich, L. Lafforgue, P.-L. Lions, A. Lubotzky, J. Makino, P. Malliavin, C. Manolescu, D. McDuff, J. McKernan, A. Naor, K.-H. Neeb, N.A. Nekrasov, H. Oh, H. Ooguri, S. Popa, P. Scholze, R. Seiringer, S. Smale, G. Tian, A. Venkatesh, O. Viro, D.-V. Voiculescu, C. Voisin, and M. Yor.

The Takagi Lectures bear the name of the principal creator of Class Field Theory, Professor Teiji Takagi (1875–1960). In Japan, he is also known as the founder of the Japanese School of modern mathematics [1,3]. Internationally, he served as one of the first Fields Medal Committee Members in 1936 together with G.D. Birkhoff, É. Cartan, C. Carathéodory, and F. Severi.

The 15th Takagi Lectures are to be held June 27–28, 2015, at Tohoku University. The distinguished lecturers for the 15th Takagi Lectures are V.F.R. Jones, A. Vershik, and C. Villani.

The lecture notes of the Takagi Lectures are to be published by the *Japanese Journal of Mathematics* (JJM). It is the oldest continuously published mathematical journal in Japan (founded in 1924) and its third series was relaunched in 2006 as a mathematical journal of research survey articles of the highest scientific level in cooperation with Springer. The editors of JJM, Y. Kawahigashi,

H. Nakajima, K. Ono, T. Saito, and I, also serve as the organizers of the Takagi Lectures. Videos of the lectures will be available on the Internet.

This scheme of the Takagi Lectures is intended to support the mission of continuing the advancement of mathematics, not only in Japan but throughout the world.

The Takagi Lectures are financially supported by the surplus from the International Congress of Mathematicians, which was held in Kyoto in 1990, with funding provided by the MSJ.

The Takagi Lectures have primarily been organized in Tokyo or Kyoto. However, after the Tohoku Region Pacific Coast Earthquake of 2011, the organizers began discussing the idea of holding the Takagi Lectures in Sendai in the near future, to express our heartfelt support for the Tohoku region's rapid recovery. Accordingly, I am very pleased that the 15th Takagi Lectures will be held in Sendai with the collaboration of Tohoku University's Department of Mathematics and Advances Institute for Materials Research (AIMR).

I would like to take this opportunity to thank the distinguished lecturers and all those who have supported our endeavors. I hope that the Takagi Lectures will gain the respect of a worldwide audience and will continue to promote future progress in mathematics.

Toshiyuki Kobayashi

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and

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Teiji Takagi (1875–1960)

Biography of Teiji Takagi

- 1875.4.21 Born in Gifu Prefecture, Japan
 - 1894 Entered the Department of Mathematics, Imperial University of Tokyo
 - 1897 Entered the Graduate School of the same university
 - 1898–1901 Studied in Berlin and Göttingen
 - 1903 Received the degree of Doctor of Science from the Imperial University of Tokyo
 - 1904 Appointed Professor at the Imperial University of Tokyo
 - 1920 Published his main paper on the class field theory
 - 1925 Elected Member of the Imperial Academy of Japan
 - 1936 Served on the 1st Fields Medal Committee
 - 1938 Published the book *A Course on Analysis* (in Japanese)
 - 1940 Received Culture Medal
 - 1960.2.28 Died at the Hospital of Tokyo University
- Decorated posthumously with the Order of the Rising Sun of the First Grade

References

- [1] S. Iyanaga, Chronological synopsis of the life of Teiji Takagi. In: *Teiji Takagi Collected Papers, Second Enlarged Edition*, Springer-Verlag Tokyo, 1990.
- [2] T. Kobayashi, On the establishment of the Takagi Lectures. *Japan. J. Math.*, **2** (2007), 145–148.
- [3] K. Miyake, Teiji Takagi, Founder of the Japanese School of Modern Mathematics. *Japan. J. Math.*, **2** (2007), 151–164.