1096-33-770 **Hajime Nagoya*** (nagoya.hajime@rikkyo.ac.jp), Nishi-Ikebukuro 3-34-1, Toshima-ku, Tokyo 1718501, Japan. *Schrödinger systems from hypergeometric integrals of Euler type.*

The Painlevé equations are written as Hamiltonian systems with polynomial Hamiltonians in canonical coordinates. Hence, their canonical quantization is naturally considered. We call Schrödinger equations as canonical quantization of the Painlevé equations, quantum Painlevé equations.

Hypergeometric solutions to the quantum Painlevé equations were given in [N, J. Math. Phys. 2011]. These hypergeometric solutions are polynomials in the canonical coordinate whose coefficients are hypergeometric integrals. For example, the hypergeometric integrals for the quantum sixth Painlevé equation are generalization of those for the Gauss hypergeometric equation.

In my talk, as an example, I explain that this hypergeometric integrals are not only solutions to the quantum sixth Painlevé equation, but also give the quantum sixth Painlevé equation itself. Generalizing the example above, we present a method of construction of Schrödinger systems from hypergeometric integrals of Euler type and give a conjecture that Schrödinger systems obtained from hypergeometric integrals of Euler type are quantization of isomonodromic systems related to the Fuchsian systems satisfied by the hypergeometric integrals. (Received September 10, 2013)