The International Symposium & School on Crystal Growth Fundamentals, which had the specific title “New Insights into Crystal Growth Fundamentals: A Tribute to Profs. Ichiro Sunagawa and Pieter Bennema”, was successfully held 3–7 November 2018 in the Hotel Sakan (Sendai, Japan). The Japan Association of Mineralogical Sciences co-sponsored the symposium, and the International Joint Graduate Program on Earth and Environmental Sciences of Tohoku University provided financial support to the school part. The memorial talk by Hiroshi Ohimoto in memory of Prof. Ichiro Sunagawa

The following topics will be covered:

- Crystal chemistry and the occurrence of mineral fibres and naturally occurring asbestos (NOA)
- Definitions (e.g., of asbestos, fibre, NOA, NOMF, NOE)
- Identification of the occurrence, formation, and associated host rocks of the various NOA minerals
- Geological assessment and field sampling methods for NOA in rock and soil
- Experimental methods for the investigation of mineral fibres, with special attention to optical and electron microscopy
- Laboratory rock and soil testing, sample preparation, and analysis protocols
- Selected examples of NOA
- Protection of workers and the public from large and small construction projects
- Surface and biochemical properties of mineral fibres
- Asbestos-related diseases and biochemical mechanisms, inducing adverse effects in the human body
- In vitro and in vivo tests to assess cytogenotoxicity and carcinogenicity of mineral fibres
- Epidemiological studies of asbestos-related diseases and genetic factors

During the school, there will be afternoon practical sessions to let students practice the experimental methods for studying mineral fibres, two field trips, and an educational visit. At the end of each day, there will be time for open discussion. The distinguished Italian and international lecturers will be delighted to share their own outstanding scientific and life experiences with participating students and with interested colleagues.