

## 1st Announcement



"Shiki Matsu zu" drawn by Kano Tan-yu (Collection Daitokujj-Temple)

## 8th Plant Biomechanics International Conference 30th Nov ~ 3rd Dec 2015 in Nagoya, JAPAN (at ES-Hall Engineering and Science Building, Nagoya University)

Plant Biomechanics and Mechanobiology is an expanding interdisciplinary field, at the interfaces of biology, mechanics, physics and engineering. Over the years, the Plant Biomechanics International Conference has become the central event of this community, as well as a unique place for interdisciplinary exchanges around the amazing features that Plants have evolved to sense, acclimate and adapt to the mechanical challenges they have been submitted to.

8th PBM follows a series of conferences organised every third year since 1994 when the first of these conferences took place in Montpellier, France. Since then, conferences in Reading, UK (1997), Freiburg- Badenweiler, DE (2000), East Lansing, MI, US (2003), Stockholm, SE(2006), Cayenne, French Guyana (2009), Clermont-Ferrand, FR (2012) were organised. We hope that this forthcoming conference in Nagoya will be able to bring you a similar stimulating experience as the ones in the past.

**Conference format.** The sessions include keynote lectures, invited and contributed papers, and posters with short oral presentations. The official language of the conference is English.

**Topics of regular sessions.** The usual topics of preceding events will be addressed: Biomechanics of tree and wood – Mechano-perception, growth and morphogenesis – Fluid dynamics in plants – Micromechanics of cell wall, cell, and tissue – Scaling of pattern and development in plants – Biomechanics of root and root systems – Modelling and numerical simulation – Mechanics of the plant material and plant surface – Trade-offs and multifunctionality – Plant-animal interactions – Plant motions. Modelling as well as development of experimental devices and methods especially devoted to these topics will be welcome.

**Special session on “Plant Biomechanics and 500 million history of land plant evolution”.** The greening of the planet Earth over the past 500 million years has involved vast and intricate patterns of changing phylogenetic and functional diversity. Biomechanics lies at the heart of this diversification, from the colonisation of the land and the appearance of stems, roots and leaves to the complex and diverse growth forms and ecosystems we see today. The first aim of this special session is to discuss recent findings on some of the main biomechanical innovations that have characterized land plant evolution culminating in today's complexity and biodiversity; the second objective is to invite both empirical and theoretical discussions on how “biomechanical innovations” that have proved such a success for plants, can be used as bioinspiration for technical applications and biomimetics research.

A **Young scientists forum** will be organised to encourage participation of PhD students, postdocs and young staff.

A **Post-conference tour** to cultural places of technical interest within Nagoya area will be proposed on 4th December.

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### How to get to Nagoya, Japan?

1. From Nagoya International airport (Centrea, NGO) by train, 28~40 min to the city (Kanayama, Nagoya).
2. From Kansai International airport (KIX) by Kanku-Tokkyu Haruka train, from KIX to Shin-Osaka, 60 min, and Shinkansen, from ShinOsaka to Nagoya, 60 min.
3. From Narita (NRT) or Haneda (HND), you need to transit airplane to Nagoya (NGO).

### Accommodation in Nagoya

Nagoya is the 4th biggest city in Japan, having many hotels and guest houses with prices from 6,000 JY (=55 USD) to 20,000 JY.

### The Venue

Nagoya is the third-largest incorporated and the fourth most populous urban area (2.27 million live) in Japan. Located on the Pacific coast on central Japan, it is one of Japan's major ports along with those of Tokyo, Osaka, Kobe, Yokohama, Chiba, and Kitakyushu. It is also the center of Japan's third largest metropolitan domain, known as the Chukyo Metropolitan Region. One possible etymology for the city's name is the adjective nagoyaka, meaning "peaceful", with 400 years history since Nagoya Castle was built.

Nagoya is the center of Greater Nagoya which earned nearly 70 percent of Japan's trade surplus as of 2003.

Nagoya's main industry is the automotive business, as many Japanese automotive companies are based out of Nagoya, akin to how many U.S. automakers are based out of Detroit. Toyota's luxury brand Lexus is headquartered in Nagoya.

