

23 NOVEMBER 2015

Aula Maynense 9:30 – 17:30

**International Seminar on Light
and its applications**

In 20th December 2013, the United Nations, at its 68th General Assembly Session, proclaimed 2015 as the International Year of light and light-based technologies.

In January 2015, UNESCO has Launched the International Year of Light and Light-based Technologies.

At this launching ceremony it was stated:- *The International Year of Light is a global initiative that will highlight the importance of light and optical technologies in our daily lives, for the future, and for the development of society. It is a unique opportunity to inspire, educate, and connect the citizens of the world on a global scale.*

This International Year has been the initiative of a large consortium of scientific bodies together with UNESCO, and will bring together many different stakeholders including scientific societies and unions, educational institutions, technology platforms, non-profit organizations and private sector partners.

In proclaiming an International Year focusing on the topic of light science and its applications, the United Nations has recognized the importance of raising global awareness about how light-based technologies promote sustainable development and provide solutions to global challenges in energy, education, agriculture and health. Light plays a vital role in our daily lives and is an imperative cross-cutting discipline of science in the 21st century. It has revolutionized medicine, opened up international communication via the Internet, and continues to be central to linking cultural, economic and political aspects of the global society (UNESCO, 19th January, 2015).

The Academy of Sciences of Lisbon, considering the prime role of light in life, human being, economy as well as in new and emerging high throughput technologies, decided to organize a seminar on **Light and its Applications**, bringing together specialists working on different subjects related to light and light-based technologies. It is foreseen that this seminar will constitute a forum for exchange knowledge and discuss ideas on such an important discipline which developments in the present century will largely contribute for a higher development and human welfare in a global world.

An International Year of Light is a tremendous opportunity to ensure that international policymakers and stakeholders are made aware of the problem-solving potential of light technology. We now have a unique opportunity to raise global awareness of this. (John Dudley, Chairman of the IYL 2015 Steering Committee).

PROGRAMME

09:30 — Opening — President of the Academy of Sciences of Lisbon — Prof. Dr. Luís Aires-Barros

09:45 — *Light – An overview* — Prof. Dr. Luís Bernardo

10:15 — *Lasers and Plasmas* — Prof. Dr. Luís Oliveira e Silva

10:45 — Coffee Break

11:00 — *Optic fibers* — Prof. Dr. António Luís Teixeira

11:30 — *Light in Communications* — Prof. Dr. António Luís Teixeira

12:00 — *Light in diagnosis and therapy* — Prof. Dr. Carlos Marques Neves

12:30 — General discussion

12:45 — Lunch

14:30 — *Deep revelations...on beams of light* — Prof. Dr. Gabriel Martins

15:00 — *Fluorescence and luminescence, potentialities and applications in cell biology* — Prof. Dr. Rui Malhó

15:30 — *Optogenetics* — Prof. Dr. Klaus Palme

16:00 — Coffee brake

16:15 — *Light and Space* — Prof. Dr. António Amorim

16:45 — *The symbolism of light* — Prof. Dr. João Alves Dias

17:15 — Closing Session