



## **The Bridge Forum Dialogue**

together with

## **the Institute for Advanced Studies (IAS) at the University of Luxembourg**

have the pleasure of inviting you

**on Wednesday 22 November 2023 at 18:00**

to a conference under the title

## **WOMEN AND SCIENCE - PROGRESS AND CHALLENGES**

under the chairmanship of

### **Professor Catherine LEGLU**

*Vice-Rector of the University of Luxembourg*

*Member of the Executive Committee of the Bridge Forum Dialogue*

The speaker will be

### **Professor Katharine L. C. HUNT**

*Department of Chemistry, Michigan State University, East Lansing*

*Distinguished Fellow, Institute for Advanced Studies, University of Luxembourg*

This conference shall be held in a hybrid format.

**VIRTUALLY:** A few days before the event, the streaming link will be sent to the registered participants

**IN PERSON: Venue, within the limits of available seats**

Auditorium of Banque de Luxembourg

14, bd Royal L-2449 Luxembourg

A reception will take place afterwards

**REGISTRATION at the latest 15 November 2023**

Please mention on the registration form

If you will attend the event “virtually” or “in person”

[www.forum-dialogue.lu](http://www.forum-dialogue.lu)



When the quality of education that was offered to women began to improve early in the twentieth century, women researchers gained new opportunities to advance science and technology with their discoveries.

Marie Skłodowska Curie is probably the best-known woman scientist of the last century; but many other women have made important contributions. This talk will focus on several remarkable women scientists and inventors, beginning with a description of the work of Hedy Lamarr, who is best known for her portrayal of Delilah in the Hollywood film *Samson and Delilah*. She developed a frequency-hopping technology that allowed the Allies in World War II to evade jamming by the Axis powers. Then the talk will turn to Lise Meitner, who collaborated for decades with Otto Hahn in Germany, in research on radioactive isotopes. She continued her work in Sweden, publishing the first theoretical explanation of nuclear fission with her nephew Otto Frisch. Nuclei are known to have special stability when they have the “magic” numbers of nucleons, 2, 8, 20, 28, 50, 82, or 126. Maria Goeppert-Mayer worked out the explanation in ten minutes, after a brief conversation with Enrico Fermi! Emmy Noether’s work will be discussed next; she has been described as “the most important mathematician you’ve never heard of.” Noether established relationships between conservation laws and symmetries, which explain why energy, momentum, and charge are all conserved quantities. The talk will also cover the work of Baroness Ingrid Daubechies, whose wavelet methods are used in cell phones and JPEG standards; Barbara McClintock, who discovered “jumping genes;” Katelin Karikó, whose messenger RNA technology provides the basis for Covid vaccines, recent Nobel Laureates Donna Strickland and Anne L’Huillier; and German Chancellor Angela Merkel, who was a quantum chemist before she turned to politics. Challenges faced by all of these women will be described. This talk is suited for a broad audience. It will not be particularly technical. One goal of this talk is to inspire young women who want to become scientists.



Katharine Hunt received her Ph.D. from the University of Cambridge, England, in 1978, working with Professor A. D. Buckingham on intermolecular forces and the response to applied fields. She held a National Science Foundation National Needs Postdoctoral Fellowship at the Massachusetts Institute of Technology, working with John Ross on nonequilibrium thermodynamics. In 1979, she joined the faculty at Michigan State University. She became a University Distinguished Professor in 1992, and later chaired the Department of Chemistry there. She spent two sabbaticals at Stanford University. She is the author of 94 publications, covering topics related to dispersion forces, interaction-induced molecular properties, collision-induced spectroscopy, nonadiabatic transition theory, nonequilibrium thermodynamics, and quantum computing. Her current visit is supported by the Institute for Advanced Studies (IAS-funded “Distinguished” project) at the University of Luxembourg.