

## Preface

The 7th International Workshop on Compound-Nuclear Reactions and Related Topics was held at Vienna International Centre, Vienna, from 8 to 12 July 2024. It was organized by the Nuclear Data Section, Division of Physical and Chemical Sciences, of the International Atomic Energy Agency (IAEA), following the cancellation of the workshop that was scheduled to be held in Athens in 2020 due to the fallout from the COVID-19 pandemic.

In keeping with the tradition of past workshops held in Yosemite (2007), Bordeaux (2009), Prague (2011), São Paulo (2013), Tokyo (2015), and Berkeley (2018), the workshop brought together 90 participants from 24 countries to share developments in and exchange know-how on compound-nuclear reactions and related topics. A total of 52 talks (12 keynote; 16 invited; 24 contributions) and 30 poster presentations were included in the program covering different facets of compound nuclear reactions such as reaction mechanisms of nucleons and complex particles, nuclear fission, surrogate methods and R-matrix theory, the optical model, statistical properties such as level densities and photon strength functions, the interplay between nuclear structure and nuclear reactions, measurements and facilities, and applications in nuclear astrophysics.

To emphasize the significance of compound nuclear reactions in nuclear technologies and applications, which are supported by international programs coordinated by the IAEA, two sessions focused on nuclear data evaluation methods and their outcomes.

Another highlight of the workshop was a special session dedicated to the late Eric Bauge (CEA, France) who passed away suddenly in May 2022. In this session, titled “Building Bridges”, eight presentations honoured Eric’s significant contributions to international and cross-disciplinary collaboration.

We sincerely thank the International Advisory Committee members and the reviewers for their invaluable efforts in reviewing the submitted articles.

Given the continued enthusiasm and support from the nuclear physics community for this workshop, and the ongoing interest in compound nuclear reactions, we look forward to many more successful CNR conferences in the future.

Paraskevi (Vivian) Dimitriou, Roberto Capote, Georg Schnabel

## In Memory of Eric Bauge



Eric Bauge was a CEA-DAM scientist driven by genuine curiosity beyond his area of expertise. His advances on the theoretical description of nucleon-nucleus optical models within the JLM semi-microscopic framework are still used today by theoretical physicists and evaluators to calculate cross sections of interest for nuclear energy applications. His contribution in this field of research has also been extended to be used in astrophysical applications, in particular for r-process studies.

He was also actively involved in many international collaborative projects, including the JEFF project, which he always followed despite the new functions entrusted to him. Particularly in this context, he was a major player in the evaluation of uncertainties in nuclear data with the well-known “forward-backward” method being one of its instigators. He also investigated the impact of cross section/spectrum/multiplicities correlations on integral benchmarks and the associated error compensations.

He was constantly following novelties or results likely to make advances in nuclear physics and regularly discussed with his colleagues the papers he had read and which he thought might be relevant.

He always contributed to the promotion of young talents and was a fervent defender of initiatives that strayed from the usual path. He was a strong promoter of microscopic approaches, which he believed were essential for progressing towards better modeling of nuclear reactions.

His commitment to sharing his knowledge internally at CEA-DAM or in an academic setting was constant. He maintained many collaborations with renowned scientists whose testimonies of affection have poured in.

Everyone underlined his constant availability, his scientific skills, his intellectual honesty, his professional commitment, his enthusiasm and, above all, his kindness.

A special session was devoted to his memory, during which his closest colleagues and friends presented activities on which they had been involved in close connection with Eric’s interest, showing how his influence has helped moving the frontiers in nuclear reaction modeling.

It emerged from this session that the most beautiful legacy of his scientific life are the bridges he helped build between different communities. Most of them still exist.

The bridges do not matter, the main thing is that we can use them.

Stéphane Hilaire, Sophie Péru