

# Space Charge 2026

## 7<sup>th</sup> ICFA Beam Dynamics Mini-Workshop

### Workshop Chairs:

Adrian Oeftiger, Oxford Uni  
Shinji Machida, ISIS - STFC

30 September - 2 October

Dennis Sciama Lecture Theatre,  
Denys Wilkinson Building,

Physics Department, University of Oxford

### Programme Committee:

Andreas Adelman, PSI  
Michael Blaskiewicz, BNL  
Nicholas Evans, ORNL  
Giuliano Franchetti, GSI  
Elias Métral, CERN  
Hiroki Okuno, RIKEN  
Thomas Planche, TRIUMF  
Ji Qiang, LBNL  
Kiersten Ruisard, ORNL  
Yoichi Sato, JPARC - KEK  
Guodong Shen, IMP - HIAF  
Giulio Stancari, FNAL  
Rob Williamson, ISIS - STFC  
Yaoshuo Yuan, CSNS

*Accommodation at Trinity College*



### Workshop Administration:

Julieta Estremadoyro-Vermejo  
Kim Proudfoot



# Ingo Hofman @ SC26

Space Charge 2026

October 1<sup>st</sup>, Oxford UK

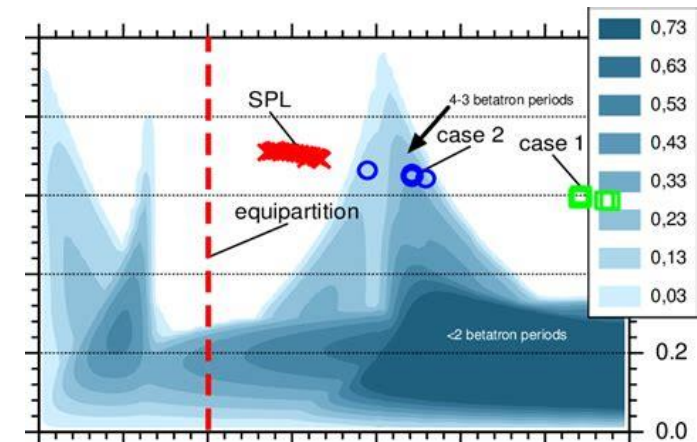
# On behalf of the Space Charge 2026 organizing committee (and broad consensus)

I am pleased to give this introduction to honor



**Ingo Hofmann**

American Physical Society Fellow



# Scientific Contributions

Ingo Hofmann's scientific work has had a profound and lasting impact.

- Building on his doctoral research in plasma instabilities, he developed some of the earliest and most influential theoretical insights into high-intensity beam dynamics, especially the **behavior of instabilities in periodic focusing lattices**—an area central to heavy-ion inertial fusion.
- He subsequently made seminal contributions to the **theoretical understanding of collective instabilities driven by space charge and anisotropy**.
- These mechanisms are now recognized as **fundamental limits** in the design and operation of large-scale linear accelerators, including spallation neutron sources and accelerator-driven transmutation systems.
- His 1998 introduction of **stability charts** for high-intensity linacs has been validated by simulation and experiment and is now **widely adopted** by the accelerator community. These results continue to inform the conceptual design and optimization of high-power linacs worldwide.

## Service and Leadership

In addition to his scientific achievements, Ingo Hofmann has provided extensive service to the international accelerator community.

- He has served on advisory committees for LBNL, J-PARC, and C-ADS, among others, and has held leadership roles in major international initiatives.
- He co-chaired with G. Plass (CERN) the European HIDIF Study (1994–1998), chaired the EURATOM Inertial Fusion Energy Working Group (2008–2013),
- long-serving member of the ICFA Beam Dynamics Panel (1996–2021), serving as its Chair from 2019 to 2021.
- He also contributed to the ICFA-ICUIL working group on laser-driven proton acceleration and therapy.

## In summary



- **Ingo Hofmann has been, throughout his career, one of the leading and most influential scientists in accelerator physics.**
- **He earned recognition and esteem from the founders of the field, many of whom were his contemporaries and regarded him as a peer.**
- **His scientific legacy is widely acknowledged by the current generation of leading accelerator physicists (approximately ages 40–65).**
- **He played a central and unifying role in shaping the high-intensity accelerator community during the pivotal period from 1998 to 2012.**
- **His research on collective instabilities driven by space charge and anisotropy has had a lasting and profound impact on the design principles of modern high-power linear accelerators and continues to guide and inspire current research.**

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We thank  
Ingo Hofmann for



***“seminal contributions to the theory of collective instabilities driven by space charge and anisotropy—mechanisms that constitute fundamental limits in the design and operation of large-scale linear accelerators—and for his scientific leadership.”***