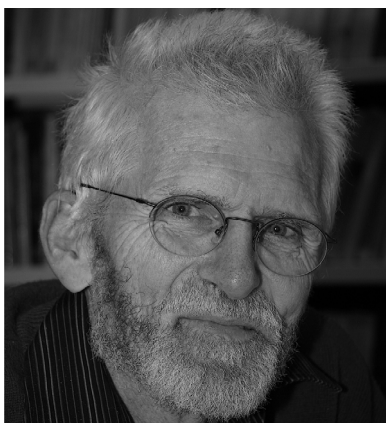


Editorial

J.J. (Hans) Duistermaat (1942–2010)



This Special Issue is dedicated to the memory of Johannes Jisse (colloquially known as “Hans”) Duistermaat, who passed away on 19 March 2010. He was born on 20 december 1942 in The Hague and studied mathematics in Utrecht with Braun and Freudenthal, completing his PhD in 1968. He started his career in Lund and Nijmegen, and joined Utrecht University in 1974 as full professor of “pure and applied mathematics”, supervising 25 Ph.D. students. In 1982 he was elected a member of the Royal Netherlands Academy and was appointed Academy Professor in 2004.

A few years ago, the Mathematical Institute at Utrecht installed the “Hans Duistermaat Room”, a location for mathematical discussions and small seminars, separated from the corridor by a glass pane prominently featuring the Duistermaat–Heckman formula (see Fig. 1). The room contains a plaque explaining the formula as well as the following biographical information: “Duistermaat was a world leading expert in geometric analysis. In Lund, he started working on Fourier integral operators and PDE’s with Hörmander, later culminating in his work with Guillemin on periodic bicharacteristics. He worked on Lie groups and symplectic geometry, leading to the famous Duistermaat–Heckman formula. Classical mechanics and dynamical systems remained a constant interest in his research, including action–angle coordinates, QRT-maps, and the Painlevé equation. His applied work was in seismic reconstruction, financial mathematics, earth magnetism and ocean streams. He (co-)authored influential research monographs on Fourier integral operators, the Spin<sup>c</sup> Dirac operator, and nonholonomic and discrete

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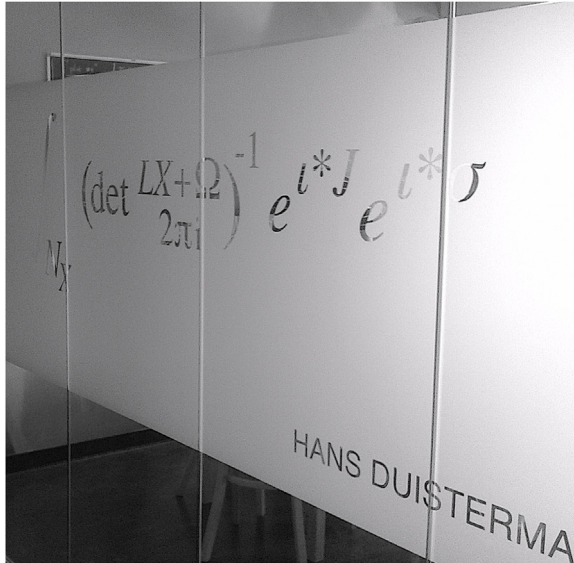


Fig. 1. Part of the Duistermaat–Heckman formula on the glass pane in the Hans Duistermaat Room at Utrecht University.

dynamical systems, as well as textbooks on analysis, ODE’s, Lie groups and the theory of distributions”.

His students and colleagues remember the sheer joy that Duistermaat radiated while talking about or doing mathematics, often starting from very concrete examples or problems. One of us (G.C.) recalls how he would bring objects to lunch and discuss their sometimes very intricate mechanics, how he would spend hours in the mathematical library studying older literature, sometimes bursting out of the reading room when an error was spotted or a new insight was gained, and how he would absorb entire mathematical fields (such as the theory of elliptic surfaces) and turn the subject upside down in his own way.

The varied contributions to this volume attest that Duistermaat’s mathematical legacy and way of doing mathematics lives on and will be us for a long time to come.

For more detailed information on Duistermaat, we refer the readers to the article “Remembering Johannes J. Duistermaat (1942–2010)”, Notices of the American Mathematical Society, 58 (6): 794–802 (2011), edited by Victor Guillemin, Álvaro Pelayo and San Vũ Ngọc.

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