Summary in English

Jens Erik Fenstad, *Bent Birkeland, 1934 – 2006* (Norwegian).
Obituary for Professor Bent Birkeland, who died on April 9 this year. Birkeland was a highly regarded mathematician and teacher, with wide interests. He was President of the Norwegian Mathematical Society 1995–2000.

Christian Berg, *Orthogonal polynomials and the Hilbert matrix.* (Danish).
The article gives a short introduction to the theory of orthogonal polynomials and their connection to Hankel matrices, i.e. matrices such that the i, j'th element only depends on the sum of the indices. Important examples are the Hilbert matrices, for which the elements are reciprocals of natural numbers, and the analogous "Filbert matrices", where the elements are reciprocals of Fibonacci numbers.

As an important example of orthogonal polynomials the author considers the Legendre polynomials. They have integer coefficients, and it is shown how this can be used to prove that the inverse of the Hilbert matrices have integer entries.

At the end some recent results are mentioned illuminating the relationship between the indeterminate moment problem and different areas of mathematics.

A research paper by the author in English: *Fibonacci numbers and orthogonal polynomials* is going to appear in J. Comput. Appl. Math. and can be retrieved at `www.math.ku.dk/~berg/`.

Bjørn Toldbod and Uffe Thomas Jankvist, *Report from a Mars Mission* (Danish).

The article investigates some of the mathematics involved in the Mars mission of 2004 called the Mars Exploration Rovers mission (MER). MER was the result of many years of work done at NASA's Jet Propulsion Laboratory which serves as the basis of the investigation. The focus of the article is mainly on the use and development of mathematics at the JPL. In particular, the article discusses the possibility of doing mathematical work contributing to basic mathematical research at an institution like the JPL.

Many factors limit this possibility. These factors include deadlines, high demand for reliability leading to a lot of reuse from mission to mission, as well as the fact that much of the mathematics used is hidden in software. The article concludes that although the work done at the JPL concerning the Mars mission required a solid mathematical foundation, the work had little impact on basic mathematical research. Instead the JPL plays an equally important role for mathematics – that of a consumer.