

## FIGHTING BUGS WITH HPC – THE LATEST CHALLENGES IN DESIGNING AND DEMONSTRATING ASEPTIC PERFORMANCE OF FILLING MACHINES FOR MILK

ULF LINDBLAD

*Senior Technology Specialist at Tetra Pak,  
Finland*

Aseptic packaging was pioneered by Tetra Pak half a century ago. It revolutionized food distribution and is today a natural part of modern life all around the world. Globalisation, continued urbanization, demand on product diversification and increased speed of market change puts high demands on product development. In much shorter time than ever new systems must be developed with higher capacity at lower cost and at the same time the aseptic performance must be assured.

A short intro to the world of milk will be given followed by a discussion of the present challenges of aseptic packaging and why HPC is the solution Tetra Pak has chosen. Some reflections and experiences on commercial software versus Open Source from industrial usage point of view will be given.



**Ulf Lindblad** is a Technology Specialist at Tetra Pak. He has over 20 years of experience in CAE analysis, and extensive experience in using advanced analysis methods for the prediction of fluid flow and heat transfer in a wide area of industrial applications in the food and packaging area. In the last 10-12 years, large case HPC (High Performance Computing) has completely changed the way product development and product life cycle is carried out. Ulf has been involved in the challenging transformation process from a tradition of successful but costly physical testing into simulation driven design at Tetra Pak.