

***Mathematical Models to the Multiperiod  
Cutting-Stock Problem with Leftovers***  
by Professor Dr. Kelly Cristina Poldi,  
Universidade Federal de Sao Paulo (Brasilien)

In this talk, I will present optimization models to the multiperiod one-dimensional cutting-stock problem with (usable) leftovers. This problem arises in several industrial settings, where a number of large objects have to be cut in smaller sizes to meet demands in consecutive time periods. In most of the industrial processes, the cutting stage may generate residual piece(s). However, if a residual piece is large enough to be cut again, then it can be reused to fulfill demands from the next period on. The multiperiod cutting stock problem also considers the possibility of anticipating the production of some items, possibly leading to a better combination and consequently reducing material waste. Moreover, stock objects (pieces to be cut) not used in a period become available for the next period. A preliminary comparison with a lot-for-lot solution will also be discussed.