Eliciting claims development patterns and costs hidden in backlogs

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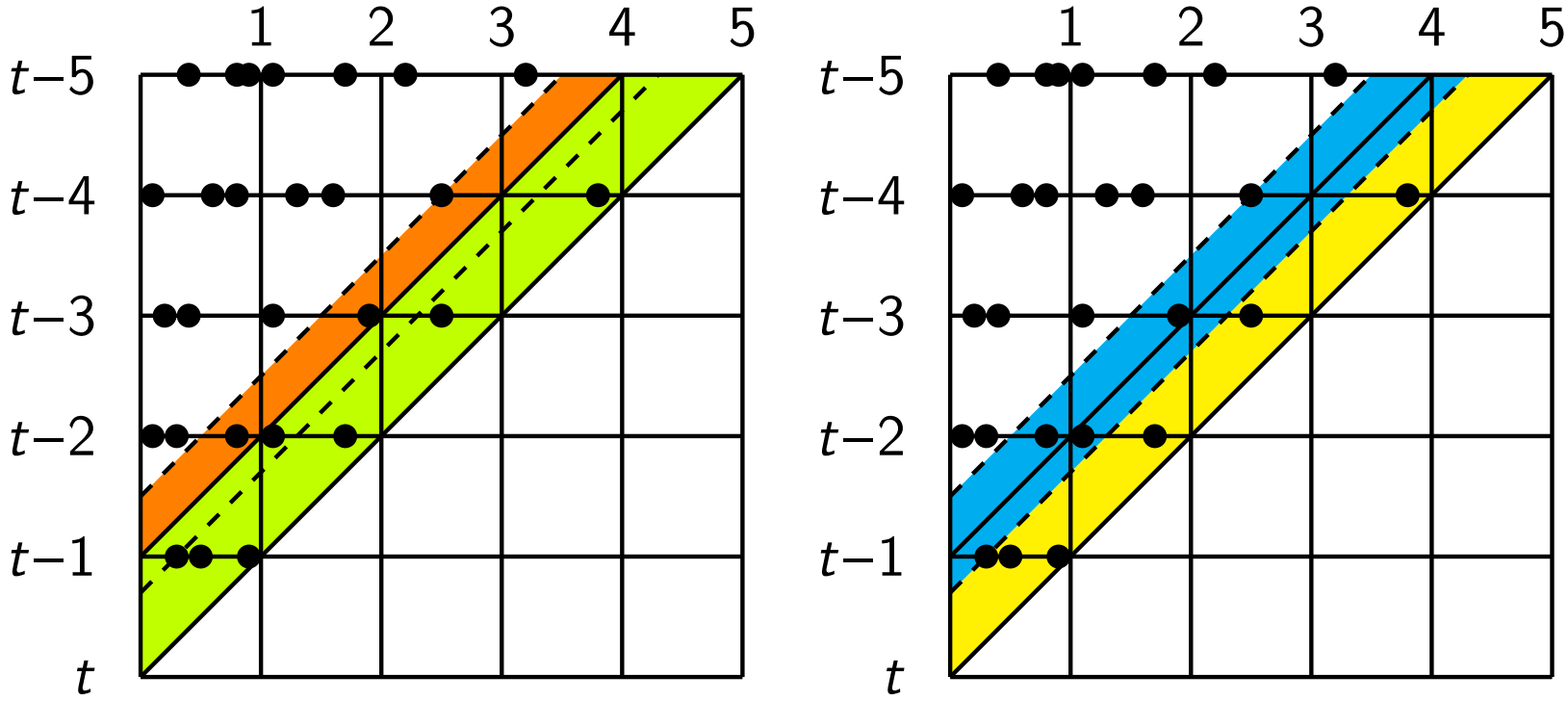
Illustration: first come first served



$B_t = 2$: points in the orange region, $R_t = 7$: points in the lime region, $P_t = \min(B_t + R_t, C_t) = 4$: points in the blue region, $B_{t+1} = B_t + R_t - P_t = 5$: points in the yellow region.

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  - How can development patterns hidden in backlogs be extracted from such data in order to do claims reserving?
- On the one hand backlogs imply delayed claims payments which may make claims more costly. On the other hand large processing capacity implies substantial fixed costs.
  - How should optimal capacity sizing for claims handling units be done in order to minimize total costs (fixed and delay adjusted claims costs)?