

**Mitja Rosina:** A phenomenological estimate of the binding energy and width of the  $T_{bc}^0$  dimeson (tetraquark)

The discovery of the dimeson  $T_{cc}^{++}$  at CERN 2021 at the predicted energy supported the successful application of the quark model beyond the 2-body and 3-body hadronic systems. Now we are eager to get more support by studying experimentally and theoretically heavier double-heavy tetraquarks. A good candidate is  $T_{bc}^0$  whose properties are expected to be between the dimeson  $T_{cc}^{++}$  and compact tetraquark  $T_{bb}^{--}$ . Different estimates are designed to guide (or mislead!) future experiments. We assume that the wave functions of the two light antiquarks around the diquark  $bc$  in the tetraquark are very similar to those around the heavy quark in  $\Lambda_b$  and that the  $1/m$  corrections are neglected. Of course, further refinements are in progress. We predict that  $T_{bc}^0(1^-)$  is bound and  $T_{bc}^0(0^+)$  is not.