| Uncertainty source                                       | Туре          | Correlation 2016–2018          |
|--|---------------|--------------------------------|
| Experimental uncertainties                               |               |                                |
| Trigger efficiency                                       | Norm. / Shape | Uncorrelated                   |
| Integrated luminosity                                    | Norm.         | Uncorr. / Corr.                |
| b tagging efficiency and mistag rate                     | Shape         | Uncorr. (stat.) / Corr. (exp.) |
| Pileup reweighting                                       | Shape         | Correlated                     |
| L1 ECAL trigger inefficiency                             | Shape         | Uncorrelated                   |
| Jet energy scale and resolution                          | Shape         | Uncorr. / Corr.                |
| Energy scale of $\tau_h$                                 | Shape         | Uncorrelated                   |
| Identification and isolation efficiency for e            | Shape         | Correlated                     |
| Identification and isolation efficiency for $\mu$        | Shape         | Correlated                     |
| Identification efficiency for $\tau_h$                   | Shape         | Uncorrelated                   |
| Misidentified lepton background rate                     | Shape         | Correlated                     |
| Flip background rate                                     | Norm.         | Correlated                     |
| $p_{\mathrm{T}}^{\mathrm{miss}}$ resolution and response | Shape         | Correlated                     |
| Theoretical uncertainties                                |               |                                |
| $\mu_r/\mu_f$ scale                                      | Shape         | Correlated                     |
| PDF  | Norm.         | Correlated                     |
| tīH LO vs. NLO diferences                                | Norm.         | Correlated                     |
| Branching Ratio  | Norm.         | Correlated                     |
| Extrapolation of the WZ+jets and ZZ+jets                 | Norm.         | Correlated                     |
| t $ar{t}\gamma$ Normalization                            | Norm.         | Correlated                     |
| Rare background Normalization                            | Norm.         | Correlated                     |