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Nota di contenuto	1. Theoretical aspects and Analysis overview -- 2. The Large Hadron Collider and the ATLAS experiment -- 3. Dataset and simulated event samples -- 4. Object reconstruction -- 5. Event Selection and categorization -- 6. Systematic uncertainties -- 7. Statistical Treatment -- 8 - Results of the VH(bb) boosted analysis -- 9. Cross-section measurements of the VZ production -- 10. Conclusions -- Appendix: A - EFT eigenvector results in the VH(bb) resolved analysis -- Appendix: B - The Tile Calorimeter design, calibration methods and the photomultiplier stability -- Appendix: C - Efficiency studies in the event selection -- Appendix: D - Pull plots.
Sommario/riassunto	The analysis described in this thesis is the search for the Higgs boson, decaying into bb pair, in the associated production with a vector boson, in the extreme Higgs boson transverse momentum region where the Higgs boson is reconstructed using the large-R jet technique. The use of the large-R jets allows to add a part of the phase space unexplored so far, which is particularly sensitive to possible new physics. The analysed data have been collected at LHC by the ATLAS detector between 2015 and 2018 at a centre-of-mass energy of s = 13 TeV. The same dataset has been used to perform the differential pp ZH and pp WH cross-section measurements used to extract the information on the Higgs couplings and to put limits on Beyond the

Standard Model effects. Furthermore the analysis has been re-used to perform a cross-section measurement of the diboson ZZ and WZ processes because the diboson and the Higgs processes have a similar topology. For the first time the ZZ(bb) and WZ(bb) cross-sections are measured at s = 13 TeV and the observed cross-section measurements are consistent with the Standard Model predictions.