Thermal convection in multiphase systems LUCA BIFERALE, University of Rome “Tor Vergata”, PRASAD PERLEKAR, TUE, Eindhoven, MAURO SBRAGAGLIA, ANDREA SCAGLIARINI, University of Rome “Tor Vergata”, FEDERICO TOSCHI, TUE, Eindhoven, ICTR COLLABORATION — We present preliminary results of a numerical study of two dimensional and three dimensional multiphase thermal convection close to the phase transition and in presence of phase coexistence. The numerical algorithm is based on a suitable implementation of multiphase Lattice Boltzmann scheme with non-ideal pressure tensor. We discuss the effects of droplets and bubbles formation on the global heat flux from bottom to top boundaries.