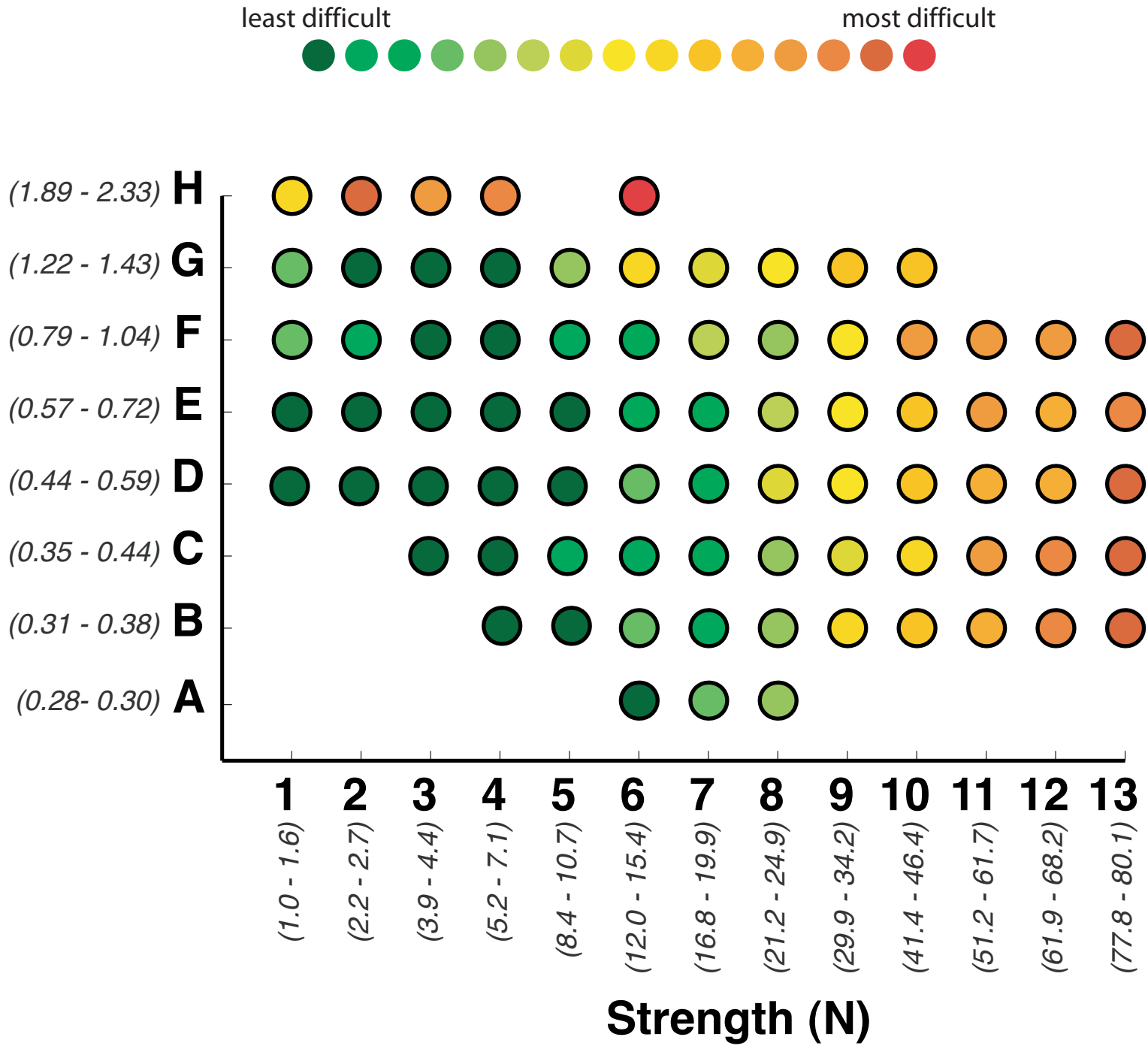


Dexterity (Dexterity Index, nondimensional)



Based on Table 1, we color-coded the springs in the SD-plane. As shown, the ordering by difficulty follows the expected trend that the more difficult springs lie at the periphery (i.e., higher dexterity and strength values). The most difficult spring is H6, followed by springs of both high strength and high dexterity. It is interesting to note that the Rasch analysis found highly unstable springs (e.g., H2) similarly difficult to highly stiff springs (e.g., B13), hence the interactions between strength and dexterity reported elsewhere in our results. In addition, the median difficult (in light ochre color) agrees well with the core zone bounded by G9 (indicated with dashed lines). We found this core region to be doable by all young adults tested in a prior study⁷. This suggests both that (i) the more able children we tested likely had already achieved the manual ability seen in mature young adults, and (ii) the range of sensitivity of the SD tests shows similar resolution for mature young adults (outside of the core) as it does for younger individuals. Importantly, there is a set of easiest springs (dark green) that are least informative for this TDC population and can likely be omitted without loss of information.