EASY TO STATE but HARD TO SOLVE:
SOME OPEN QUESTIONS ABOUT CONVEX POLYHEDRA

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Convex polyhedra are familiar objects since our childhood. Indeed, cubes, pyramids, and triangles are common staples in all kindergardens! Unknown to most people polyhedra, in their high-dimensional version, are also widely used in applied mathematics (e.g. operations research, finances, computer networks, and more). Their beauty and simplicity appeal to all, but very few people know of the many easy-to-state difficult unsolved mathematical problems that hidde behind their beauty. The purpose of this lecture is to introduce an audience without prior background to some of these open questions.