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**Valentina Harizanov\*** ([harizanv@gwu.edu](mailto:harizanv@gwu.edu)), Department of Mathematics, Washington, DC 21044. *Building models as products of structures.*

Various products of structures have been used to build models of theories with desired and often unusual properties. We use infinite sets that are indecomposable with respect to computably enumerable sets to build products of countably many computable structures where the structures are given by an algorithmic sequence. We call such products effective products, and show how definable properties transfer from structures to their effective product. If all structures are equal, a product is called a power. We are especially interested in the cases when indecomposable sets are the complements of computably enumerable sets. In these cases, for some familiar structures we study isomorphism types of effective powers, automorphism groups of effective powers, and how such results can be applied to famous open problems in computable algebra. Recent results are obtained jointly with Rumen Dimitrov. (Received February 05, 2018)