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Representation problems for unit interval and unit circular-arc graphs

The last decade saw an increasing research on numerical representation problems for unit circular-arc models (UCA) and related classes. In these problems we are given a proper circular-arc model \mathcal{M} and we have to find a UCA model \mathcal{U} , related to \mathcal{M} , that satisfies certain numerical constraints. In the classical representation problem, for instance, we are given a proper circular-arc model and we have to find an equivalent unit circular-arc model whose extremes are all integer and have a polynomial size. In this talk I present a common framework to efficiently solve different numerical representation problems for UCA models.