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*DP-complete Problems Derived from Extremal NP-complete Properties*

In contrast to the extremal variants of coNP-complete problems, which are frequently DP-complete, many extremal variants of NP-complete problems are in P. We investigate the extremal variants of two NP-complete problems, the extremal colorability problem with restricted degree and the extremal unfrozen non-implicant problem, and show that both of them are DP-complete. As far as we know, no extremal variant of an NP-complete problem has been shown to be DP-complete before.

This is a joint work with Dr. Joseph Culberson and Dr. Lorna Stewart.