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Eric O. D. Andriantiana* (e.andriantiana@ru.ac.za), Department of Mathematics (Pure & Applied), Rhodes University, PO Box 94, Grahamstown, 6140, South Africa, and **Valisoa R. Misanantenaina** and **Stephan G. Wagner**. *Extremal trees with fixed degree sequence*.

The so called greedy tree $G(D)$ and alternating greedy tree $\mathcal{M}(D)$ are known to be extremal graphs among elements of the set \mathbb{T}_D of trees with degree sequences D , with respect to various graph invariants. This talk will discuss generalized proof that cover a larger family of invariants for which $G(D)$ or $\mathcal{M}(D)$ is an extremal graph in \mathbb{T}_D . In addition to the known results on the Wiener index, the number of subtrees, the number of independent subsets, the Hosoya index, the terminal Wiener index, and the energy of graphs, new results on the number of rooted spanning forests, the incidence energy and the solvability of a graph also follow. By comparing greedy trees, and alternating greedy trees, with different degree sequences, the results in \mathbb{T}_D are extended to the set of trees whose degree sequences are majorized by D . (Received January 29, 2018)