

论文

# ON NICE SEQUENCES CONCERNING HAMILTONICITY OF GRAPHS

LIU Yiping(1), WU Zhengsheng(2)

(1)Department of Mathematics, Nanjing Normal University, Nanjing 210024, China;(2)Department of Mathematics, Nanjing Normal University, Nanjing 210024, China

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**摘要** In the paper, the  $(k-1)$ -traceable-nice  $((k-1)$ -T-nice) and  $k$ -homogeneously-traceable-nice ( $k$ -HT-nice) sequence are defined similarly to the definition of  $k$ -Hamilton-nice ( $k$ -H-nice) and  $(k+1)$ -Hamilton-connected-nice  $((k+1)$ -HC-nice) sequence. The relationships among these four nice sequences are discussed. The main results are as follows: Let  $\eta=(a_1, a_2, \dots, a_{k+1})$  be a non-negative rational sequence,  $k \geq 2$ . (1) If  $\eta$  is  $(k+1)$ -HC-nice and  $a_{k+1}=2$ , then  $\eta$  is  $k$ -HT-nice, (2) If  $\eta$  is  $k$ -HT-nice and  $a_{k+1}=2$ , then  $\eta$  is  $(k-1)$ -T-nice, (3) If  $\eta$  is  $k$ -H-nice, then  $\eta$  is  $k$ -HT-nice. Meanwhile, four unsolved problems on these topics are proposed.

**关键词** [k-H-nice sequence](#), [k-1-T-nice sequence](#), [k](#)

分类号

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**Abstract** In the paper, the  $(k-1)$ -traceable-nice  $((k-1)$ -T-nice) and  $k$ -homogeneously-traceable-nice ( $k$ -HT-nice) sequence are defined similarly to the definition of  $k$ -Hamilton-nice ( $k$ -H-nice) and  $(k+1)$ -Hamilton-connected-nice  $((k+1)$ -HC-nice) sequence. The relationships among these four nice sequences are discussed. The main results are as follows: Let  $\eta=(a_1, a_2, \dots, a_{k+1})$  be a non-negative rational sequence,  $k \geq 2$ . (1) If  $\eta$  is  $(k+1)$ -HC-nice and  $a_{k+1}=2$ , then  $\eta$  is  $k$ -HT-nice, (2) If  $\eta$  is  $k$ -HT-nice and  $a_{k+1}=2$ , then  $\eta$  is  $(k-1)$ -T-nice, (3) If  $\eta$  is  $k$ -H-nice, then  $\eta$  is  $k$ -HT-nice. Meanwhile, four unsolved problems on these topics are proposed.

**Key words** [k-H-nice sequence](#) [k-1-T-nice sequence](#) [k-HT-nice sequence](#) [\(k+1\)-HC-nice sequence](#)

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