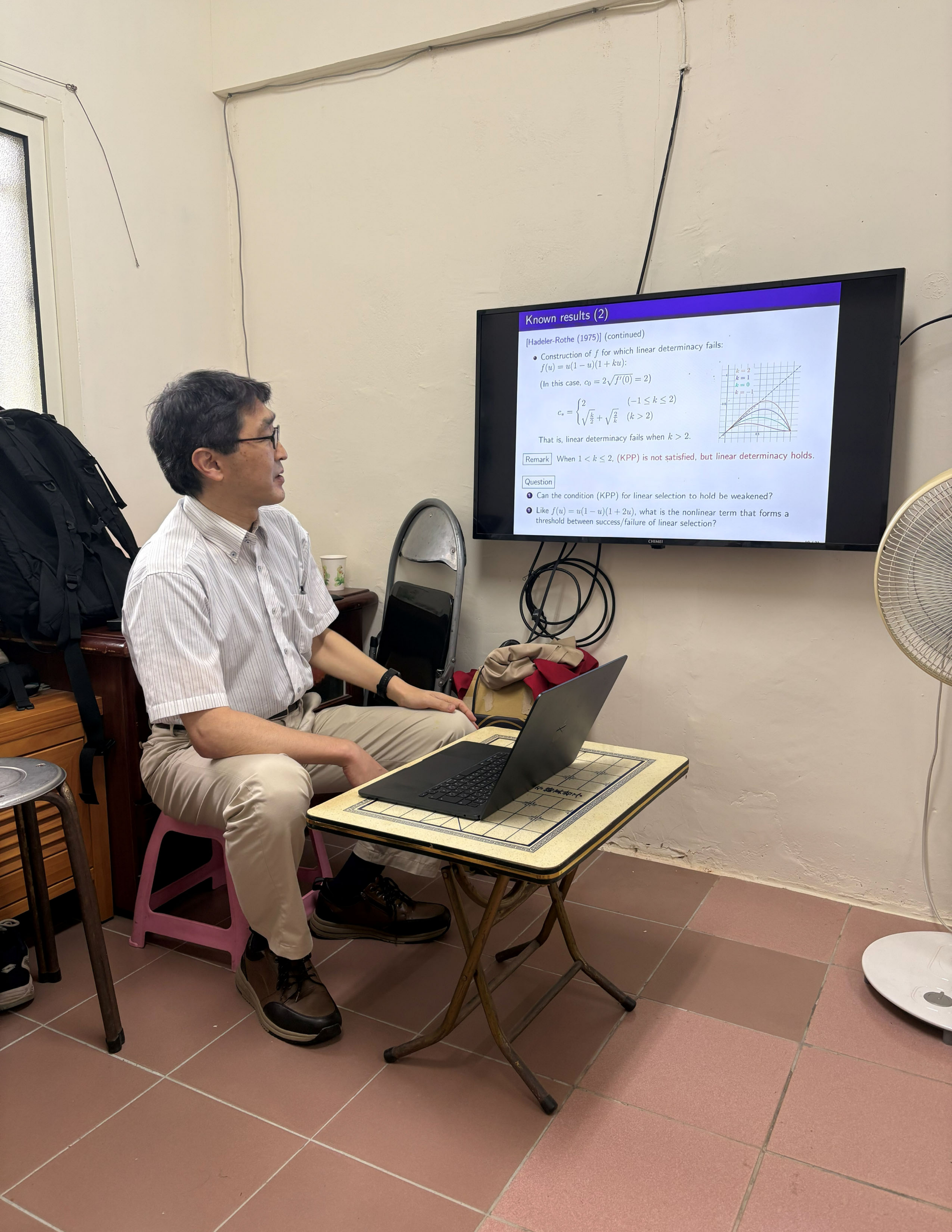

Known results (2)
[Hadeler-Rothe (1975)] (continued)
Construction of f for which linear determinacy fails:
$f(u) = u(1-u)(1+ku)$:
(In this case, $c_0 = 2\sqrt{f'(0)} = 2$)
$c_* = \begin{cases} 2 & (-1 \le k \le 2) \\ \sqrt{\frac{k}{2}} + \sqrt{\frac{2}{k}} & (k > 2) \end{cases}$
That is, linear determinacy fails when $k > 2$.
$k = 2$
$k = 1$
$k = 0$
$k = -1$
0.5
0.5
Remark When $1 < k \le 2$, (KPP) is not satisfied, but linear determinacy holds.
Question
Can the condition (KPP) for linear selection to hold be weakened?
Like $f(u) = u(1-u)(1+2u)$, what is the nonlinear term that forms a threshold between success/failure of linear selection?
CHIMEI