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FE-4	**Asymptotic property in variation for nonlinear differential systems via t_{\iinfty}-similarity**

비선형 미분계의 점근성질 중 점근 평형점과 점근적 동치개념을 변동미분계를 통하여 살펴보고 점근적 동치개념과 변동 점근적 동치 개념들의 동치성을 주로 비교원리와 t_∞-상사개념을 이용하여 보인다.

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FE-5	**On the stability of a Difference Equation**

In this talk, we investigate the Hyers–Ulam stability problem for the difference equation

$f(x+p, y+q) + \varphi(x, y)f(x, y) + \psi(x, y) = 0$. As a result we obtain: Suppose that functions $f, \psi : \mathbf{N}_k \times \mathbf{N}_k \to \mathbf{R}$ and φ satisfy the inequality

$$|f(x+p, y+q) + \varphi(x, y)f(x, y) + \psi(x, y)| \leq \delta$$

for all $x, y \in \mathbf{N}_k$. Then there exist unique functions

$T, T_h, T_p : \mathbf{N}_k \times \mathbf{N}_k \to \mathbf{R}$ such that T, T_p satisfy the equation

$$f(x+p, y+q) + \varphi(x, y)f(x, y) + \psi(x, y) = 0,$$

T_h satisfies the equation

$$f(x+p, y+q) + \varphi(x, y)f(x, y)$$

and the relations

$|f(x, y) - T(x, y)| \leq \delta\varepsilon(x, y),$
$|f(x, y) - T_{h(x, y)}| \leq \delta\varepsilon(x, y) + |\varepsilon'(x, y)|,$
$|T_p(x, y)| \leq |\varepsilon'(x, y)|,$
$T(x, y) = T_h(x, y) + T_p(x, y)$

hold for all $x, y \in \mathbf{N}_k$. If the range of f is in $(0, \infty)$, then the range of T_h is in $(0, \infty)$.