"Nonlinear P. D. E. in Mathematical Physics"

Satellite conference of

International symposium on Particle Matter Hierarchy

Reserch Project :

Mathematical Science of the 21st century COE project

^r Exploring New Science by Bridging Particle-Matter Hierarchy _J ,

Graduate School of Science, Tohoku University

- **Date** : March 2, 2004

Organizer : Herbert Amann(Zürich University) Yoshihiro Shibata (Waseda University) Hideo Kozono (Tohoku University)

Program :

 $\begin{array}{l} 09:30 \sim 10:15 \quad \mathrm{Maria\ Specovious\ (Univ.\ Kassel)} \\ \mathrm{A\ pressure\ stabilization\ method\ for\ the\ stationary\ Navier-Stokes\ system} \\ 10:25 \sim 10:55 \quad \mathrm{Yuko\ Enomoto}(\mathrm{Waseda\ University}) \\ \mathrm{On\ a\ stability\ theorem\ of\ the\ Navier-Stokes\ equation\ in\ an\ exterior\ domain} \end{array}$

Tea Time

11:10 ~ **11:40** Takayuki Kubo(Waseda University) $L^p - L^q$ estimate of Stokes semigroup and its application to the Navier-Stokes equation in a perturbed half-space

 $11:45 \sim 12:15$ Norikazu Yamaguchi(Waseda University)

On an existence theorem of global strong solution to the magnetohydrodynamic system in three dimensional exterior domain

Lunch

 $13:45 \sim 14:15$ Takahiro Akiyama (Waseda University) On the L_p approach to a stationary and non-stationary problem of the Ginzburg-Landau-Maxwell equations

 $14:20 \sim 14:50$ Yoshie Sugiyama (Tsudajuku University)

Global existence of weak solutions for a quasilinear degenerate parabolic system of chemotaxis

14:55 \sim 15:25 Tokushi Sato (Tohoku University)

On positive solutions to some semilinear elliptic equations with convex nonlinearity involving nonnegative forcing term

Tea Time

 $15:50 \sim 16:20$ Hidemitsu Wadade(Tohoku University) Upper bound of the best constant of the Trudinger-Moser inequality $16:25 \sim 16:55$ Tomoyuki Suzuki (Tohoku University) Regularity criterion via pressure and vorticity on weak solutions to the Navier-Stokes equations 17:00 = 17:20 Hammach Vine (Yangi Haimarita Tabalar Haimarita)

 $17:00 \sim 17:30$ Hyunseok Kim
(Yonsei University, Tohoku University) Interior regularity criteria in weak spaces for the Navier-Stokes equations