

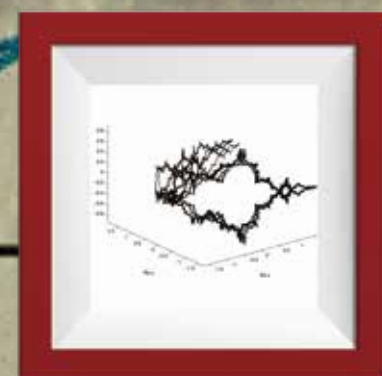
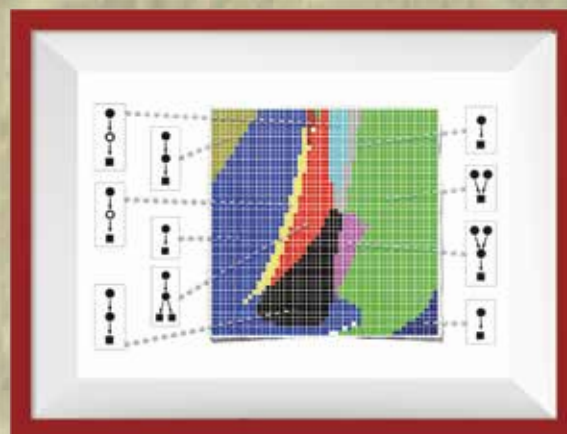
物事の変遷を捉える力学系の理論はいまや数理モデルの解析に欠かせない。力学系理論が計算機の発展とともに進歩してきたのは周知の事実である。近年では理論研究においても、計算機を駆使しながらの研究手法が不可欠になってきている。本講義では、力学系解析のための最新のツールの紹介とそれを用いた最前線の問題へのアプローチを解説する。受講者が自らの研究に計算機支援を有効に利用できるようにする。

2014

Dynamical system is now a substantial theory to study mathematical modeling. It is well-known that the theory of dynamical system has been developed under the strong influences from the computer simulations. Recently, it has been essential to take advantage from computations even for theoretical researchers. In this lecture, several recent tools to analyze dynamical system are introduced as well as the specific examples for the advanced problems. Participants can obtain sufficient knowledge and motivation to use computational approach for their researches.

Date: **18th, 19th, 20th, 21st November**
 PLACE: **Seminar-room 601, 6th floor**
Nakano Campus, Meiji University

Computational Approaches to Dynamical System



The lectures will be performed in English. 講義は全て英語で行います。

11/18 (TUE)

10:30 -12:00	TOSHI OGAWA	"INTRODUCTION TO COMPUTATIONAL DYNAMICAL SYSTEM I"
13:00 -14:30	TOSHI OGAWA	"INTRODUCTION TO COMPUTATIONAL DYNAMICAL SYSTEM II"
14:40 -16:10	TOSHI OGAWA	"INTRODUCTION TO COMPUTATIONAL DYNAMICAL SYSTEM III"

11/19 (WED)

10:30 -12:00	ZIN ARAI	"INTRODUCTION TO GLOBAL COMPUTATION FOR DYNAMICAL SYSTEMS I"
13:00 -14:30	ZIN ARAI	"INTRODUCTION TO GLOBAL COMPUTATION FOR DYNAMICAL SYSTEMS II"
14:40 -16:10	ZIN ARAI	"INTRODUCTION TO GLOBAL COMPUTATION FOR DYNAMICAL SYSTEMS III"
16:20 -17:50	ZIN ARAI	"PROBLEM SESSION"

11/20 (THU)

10:30 -12:00	KAZUYUKI YAGASAKI	"NUMERICAL COMPUTATION OF HOMOCLINIC ORBITS AND INVARIANT MANIFOLDS BY USING AUTO I"
13:00 -14:30	KAZUYUKI YAGASAKI	"NUMERICAL COMPUTATION OF HOMOCLINIC ORBITS AND INVARIANT MANIFOLDS BY USING AUTO II"
14:40 -16:10	KAZUYUKI YAGASAKI	"NUMERICAL COMPUTATION OF HOMOCLINIC ORBITS AND INVARIANT MANIFOLDS BY USING AUTO III"
16:20 -17:50	KAZUYUKI YAGASAKI	"PROBLEM SESSION"

11/21 (FRI)

10:30 -12:00	TOMOYUKI MIYAJI	"INTRODUCTION TO INTERVAL ARITHMETIC AND ITS APPLICATION TO ODES I"
13:00 -14:30	TOMOYUKI MIYAJI	"INTRODUCTION TO INTERVAL ARITHMETIC AND ITS APPLICATION TO ODES II"
14:40 -16:10	TOMOYUKI MIYAJI	"INTRODUCTION TO INTERVAL ARITHMETIC AND ITS APPLICATION TO ODES III"
16:20 -17:50	TOMOYUKI MIYAJI	"PROBLEM SESSION"



ZIN ARAI
HOKKAIDO UNIVERSITY



TOMOYUKI MIYAJI
MEIJI UNIVERSITY



KAZUYUKI YAGASAKI
KYOTO UNIVERSITY



TOSHI OGAWA
MEIJI UNIVERSITY

Everyone is welcome to attend!

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明治大学先端数理科学インスティテュート
 文部科学省 共同利用・共同研究拠点
 現象数理学研究拠点

