力学系通信

NO. 21 (1994/03)

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tel : 0764 - 34 - 2281 ext. 2740

1次元力学系研究集会の講義録について

1992年5月19 - 24日に中津川研修センターで行われた「一次元力学系研究集会 ーリノーマライゼーションを中心にしてー」の報告集が、「一次元力学系のリノーマライゼーション (Seminar Notes on Differential Topology #12)」として出版されました。当該研究集会の出席者の方には既にお送りしてありますが、それ以外で送付を希望される方は、京都大学・国府寛司氏に連絡してください。(国府氏は4月中旬まで訪仏の予定です。)

学会・シンポジウム情報 (国内)

International conference on dynamical systems and chaos - Tokyo 1994

1994年5月23日 - 27日　東京都立大学

問い合わせ: ICDC Secretariat, Department of Physics, Tokyo Metropolitan University
tel: 0426 - 77 - 1111 ext. 3375
FAX: 0426 - 77 - 2483
e-mail: saito@phys.metro-u.ac.jp

学会・シンポジウム情報 (国外)

Colloque "points paraboliques" a Luminy

1994/04/25 - 29 at Luminy

Organizer : A. Douady, P. Sentenac (Orsay) [e-mail : sentenac@suntopo.matups.fr]

Second conference on function spaces

1994/05/25 - 28, Southern Illinois University at Edwardsville.....[巻末資料 1 参照]

Conference on the interaction between functional analysis, harmonic analysis, and probability

1994/05/30 - 06/03, University of Missouri-Columbia.....[巻末資料 2 参照]

学会・シンポジウム報告

Foliations Tokyo 1993

1993/11/15 - 26, Chuo University and TITech.....[巻末資料 3 参照]

Dynamical Zeta Functions

1993/12/5 - 11, Oberwolfach.....[巻末資料 4 参照]

プレプリント情報

（［ ］内は、所有者（敬称略））

［足立 俊明（名古屋工業大学教養部数学教室）］

Pollicott, M., Large deviations, Gibbs measure and closed orbits for hyperbolic flows.

Pollicott, M. and Sharp, R., Orbit counting for some discrete groups acting on simply connected manifolds with negative curvature.

Pollicott, M. and Sharp, R., Automatic group structures and comparison theorems in hyperbolic geometry.

［松岡 隆（鳴戸教育大学数学教室）］

Bothe, H. G., Expanding attractors with stable foliations of class C0.

Bothe, H. G., The Hausdorff dimension of certain attractors.

Jiang, B., Estimation of the number of periodic orbits.

Marzantowicz, W., Finding periodic points of a smooth mapping using Lefschetz numbers of its iterations.

プレプリントの ftp システムについて

これまでにも力学系通信において幾つか紹介してきましたように、最近、プレプリントを集めた ftp, ftp-mail 等のシステムが次々と設立されるようになってきました。これらのシステムには数多くのプレプリントが主として TeX 原稿の形で蓄積されており、internet を経由して、自由にプレプリントを取り出すことができます。また、自分の論文の TeX 原稿をそのシステムに投稿することもできます。これらのシステムを活用することにより、現在までの「プレプリントを送る・送られる」というコミュニケーションの形態に比して、はるかに早く情報を発信・受信することができます。本号では、新たに２ケ所のシステムを紹介します。

Several Complex Variables preprint network.....[三波篤郎氏（北海道大学）の紹介]

多変数複素解析のプレプリントを集めたシステム。高次元複素力学系関係を含んでいる。.....[巻末資料５参照]

Foliation ftp site

Foliation のプレプリントを集めた ftp site。S. Hurder により個人的に運用されているシステムで、Foliations Tokyo 1994 において紹介された。.....[巻末資料６参照]

日本国内においても、力学系関係のプレプリントを集めたサービスを始めるべき時点にきているのではないかと思います。これまでに、京都大学や数理研に打診をお願いしてみましたが、いずれも計算機資産などの問題で、否定的な回答でした。どなたか、internet に接続された計算機資産をある程度自由に使うことができる方で、このようなサービスを始めて頂ける方はいらっしゃいませんでしょうか？

資料1

SECOND CONFERENCE ON FUNCTION SPACES
May 25-28, 1994
Southern Illinois University at Edwardsville

TENTATIVE LIST OF PARTICIPANTS as of October 1, 1993

J. Arazy	University of Haifa, Haifa 31905, Israel
H. Arizmendi	Universidad Nacional, Mexico City 04510, D. F., Mexico
R. Aaron	Kent State University, Kent, OH 44242, USA
S. Axler	Michigan State University, East Lansing, MI 48824, USA
A. Bernard	Institut Fourier, Grenoble 1, France
E. Briem	University of Iceland, Reykjavik, Iceland
B. Burckel	Kansas State University, Manhattan, KS 66506, USA
M. Cambern	University of California, Santa Barbara, CA 93106, USA
Cho-Ho Chu	University of London, London SE14 6NW, UK
P. Curtis	University of California, Los Angeles , CA 90024, USA
J. Diestel	Kent State University, Kent, OH 44242, USA
G. Emmanuele	Citta' Universitaria, 95125 - Catana, Italy
P. Enflo	Kent State University, Kent, OH 44242, USA
J. Feinstein	University of Nottingham, Nottingham NG72RD, UK
F. Forelli	University of Wisconsin-Madison, Madison, WI 53706, USA
T. W. Gamelin	University of California, Los Angeles , CA 90024, USA
P. Gorkin	Bucknell University, Lewisburg, PA 17837, USA
S. Grabiner	Pomona College, Clermont, CA 91711, USA
P. Greim	The Citadel, Charleston, SC 29409, USA
O. Hatori	Tokyo Medical College, Shinjuku-ku, Tokyo 160, Japan
K. Jarosz	Southern Illinois University, Edwardsville, IL 62026, USA
K. B. Laursen	Kobenhavns Universites, 2100 Kobenhavns, Denmark
D. Lubinsky	University of Witwatersrand, 2050 Johanenesburg, RSA
J. Mendoza	Universidad Complutense, Madrid 28040, Spain
M. Neumann	Mississippi State University, MS 39762, USA
D. Pathak	M.S. University of Baroda, Baroda 390-001, India
A. Pelczynski	Polish Academy of Sciences, 00-950 Warsaw, Poland
N. V. Rao	University of Toledo, Toledo, OH 43606, USA
T.S.S.R.K. Rao	Indian Statistical Institute, Bangalore 560 059, India
R. Rochberg	Washington University, St. Louis, MO 63130, USA
W. Rudin	University of Wisconsin-Madison, Madison, WI 53706, USA
S. J. Sidney	University of Connecticut, Storrs, CT 06268, USA
S. Saccone	Brown University, Providence, RI 02912, USA
T. Tonev	University of Montana, Missoula, MT 59812, USA
L. Tzafriri	Hebrew University of Jerusalem, 91904 Jerusalem, Israel
K. Yale	University of Montana, Missoula , MT 59812, USA
J. Wermer	Brown University, Providence, RI 02912, USA
W. Werner	Universitat-GH-Paderbron, D-33095 Paderborn, Germany
Pei Yuan Wu	National Chiao Tung University, Hsinchu, Taiwan
W. Zelazko	Polish Academy of Sciences, 00-950 Warsaw, Poland

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PROGRAM:

The conference will feature several invited talks on function algebras, spaces of analytic functions, L^p-spaces, spaces of vector valued functions, and other topics. There will also be parallel sessions of contributed talks.

LOCATION:

Southern Illinois University at Edwardsville is located 20 miles North-East from St. Louis on a 2600 wooded acres outside the town of Edwardsville.

SCHEDULE:

May 24	-	registration
May 25-28	-	talks
May 29	-	a bus will be arranged for participants joining the Conference "On Interaction Between Functional Analysis, Harmonic Analysis, and Probability" at the University of Missouri-Columbia.

PROCEEDINGS:

We plan to publish proceedings of the conference in a Marcel Dekker series Lecture Notes in Pure and Applied Mathematics.

Proceeding of the first Conference on Function Spaces at SIUE were published in 1992 in the same series, # 136.

DEADLINES and FEES:

Abstracts for contributed talks should be 7.5" wide by at most 5" inches high. Please E-mail a TEX file or mail a photo ready copy, as soon as possible, but not later than April 1, 1994.

The registration fee will be $40 through March of 1994, and $50 thereafter.

ACCOMODATIONS:

Arrangements have been made for participants who wish to stay on campus. The rates are as follows:

a private bedroom in a two bedroom student's apartment is $19 per night

and double occupancy (four people per an apartment) is $12.50 per person, per night.

Blankets and sheets are provided, no kitchenware.

The number of apartments on campus is limited, please reserve as early as possible.

More luxurious accomodation is available in several local hotels, however none of the hotels is located in a walking distance from the campus.

Send all correspondence to: K. Jarosz
Department of Mathematics & Statistics
Southern Illinois University at Edwardsville
Edwardsville, Illinois 62026, USA
E-mail: CJ01@SIUEMUS.BITNET
fax: (618) 692 3174;
tel.: (618) 692 2354

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資料 2

The Department of Mathematics at the University of Missouri-Columbia

announces

a

Conference

On the Interaction Between
Functional Analysis,
Harmonic Analysis, and
Probability.

May 30- June 3, 1994

Supported by The University of Missouri
and the National Science Foundation
The following people have agreed to speak.

Earl Berkson (University of Illinois)
Jean Bourgain (I H E S, France)
Don Burkholder (University of Illinois)
Robert Fefferman (University of Chicago)
William B. Johnson (Texas A&M)
Alexander Pełczynski (Polish Academy of Sciences)
Peter Jones (Yale University)
Gilles Pisier (University of Paris/Texas A&M)
Richard Rochberg (Washington University)
Michel Talagrand (University of Paris/Ohio-State University)
Lior Tzafriri (Hebrew University of Jerusalem)
Guido Weiss (Washington University)

For Additional Information send an e-mail message to:
conf@esaab.cs.missouri.edu

資料 3 Foliations Tokyo 1993

First Week

Chuo University, Surugadai Memorial Hall

	15	16	17	18	19
10:00–10:45	registration /opening meeting	Hurder	Hurder	Hurder	Kanai
11:00–11:30	Tsuchiya	El Kacimi	Zhuzhoma	Gómez–Mont	Schweitzer
12:00–12:45	Vogt	Tsuboi	Conlon	Lehmann	Ghys
14:15–15:00	Mitsumatsu	*T.B.A.* → Soloduv		Brasselet	~~Walczak~~
15:15–15:45	Fenley	Nakayama		Kawazumi	Egashira
16:15–16:30	Kabila ← →	Mizutani		Moriyama	Macias
16:40–16:55	Currás–Bosch	Kubarski		Sanmartin	~~Nishimori~~
17:05–17:20	Urzua Luz	Fukui		~~Zorich~~ Nishimori	
17:30–17:45		Kellum		Frankel	

November 15 **10:30-** : *Opening Meeting*
November 16 **18:00-** : *Reception*
(The president of Chuo University inveites all the participants and accompanying persons.)

16:45 – 17:15 S. Matsumoto

Second Week

TITech., International House

	22	23	24	25	26
10:00–10:45	Molino	Molino	Molino	H. Sato	Tondeur
11:00–11:30	Herrera	Gallego	dos Santos	Meigniez	Hashiguchi
12:00–12:45	Hector	Hector	Hector	Zeghib	~~Masa~~
14:15–15:00	Natsume	Dynnikov		Levitt	~~T.B.A.~~ → Zorich
15:15–15:45	Moriyoshi	Special S.		Alcalde	
16:15–17:00	Kamber	Sergiescu		Morita	

November 23 **15:15-** : *Special Session*
November 25 **18:00-** : *Farewell party*

13:15 – 14:00 Zorich
14:15 – 15:00 Masa

Mini Courses

G. Hector: *Conjecture de Baum–Connes pour certains feuilletages*

S. Hurder: *The coarse geometry of foliations*

P. Molino: *Orbit-like foliations in Riemannian and symplectic geometry*

Lectures

F. Alcalde–Cuesta: *Préquantification de certaines variétés de Poisson*

S. Aranson, V. Mamaev, E. Zhuzhoma: *Asymptotical properties of foliations and And Weyl problem*

J.–P. Brasselet: ~~*Geometry of singularities of foliations*~~ Residues and Nash construction for singular holomorphic foliations

J. Cantwell and L. Conlon: *Foliation cones*

C. Currás–Bosch: *On symplectic linearisation*

N. dos Santos: *Differential conjugation of actions of* $\mathbf{R}^p$.

I.Dynnikov: *Asymptotical properties of the foliation connected with the semi-classical electron motion in the lattice under the action of the magnetic force*

S. Egashira: *Expansion Growth of Various Foliations*

A. El Kacimi and E. Gallego Gomez: *Applications harmoniques feuilletées*

A. El Kacimi and M. Nicolau: *Differentiably stable foliations*

S. Fenley: *Topological and homotopic properties: Anosov flows in 3–manifolds*

S. Frankel: *Harmonic measure and Euler characteristics for foliations*

K. Fukui: *Stability of Hausdorff Foliations of 5–Manifolds by Klein bottles*

E. Ghys: *Umbilical foliations and transversely holomorphic flows*

X. Gómez–Mont *On the holonomy pseudogroups of holomorphic foliations in* CP^2

N. Hashiguchi: *On a perturbation of the PL–representation of a surface group*

G. Hector and S. Matsumoto: *Bouts de feuilles et classification des feuilletages de Lie*

B. Herrera Gomez: *Transverse structure of Lie foliations*

T. Inaba, S. Matsumoto, N. Tsuchiya: *Codimension one transversely affine foliations*

A. Kabila: *Equisingularity problems for holomorphic foliations*

F. Kamber: *Index theory for Riemannian foliations*

M. Kanai: *Vanishing of tangential cohomology of foliations and rigidity of discrete group actions*

N. Kawazumi: *An application of the second Riemann continuation theorem to cohomology of the Lie algebra of vector fields of the complex line*

M. Kellum: *Uniformly k–Lipschitz foliations and their measurable orbit equivalence*

J. Kubarski: *Tangential Chern–Weil homomorphism*

D. Lehmann: ~~*Comparison of differential systems and residual Euler classes of higher order*~~ Residues for singular varieties which are invariant by an holomorphic vector field.

G. Levitt: *Foliations and* $\mathbf{R}$*–trees*

E. Macias–Virgós: *Homotopy groups in Lie foliations*

E. Macias and C. Sanmartin: *The manifold of bundle–like metrics*

X. Masa: *Minimal model of nilpotent Lie foliations*

G. Meigniez: *Trying to characterize holonomy groups of Lie foliations*

Y. Mitsumatsu: *Linking pairing, Anosov flows, and contact-symplectic structures*

T. Mizutani: *Characteristic classes of foliations and the group cocycles of* Diff$F$

S. Morita: *The Structure of the Mapping Class Group and Characteristic Classes of Surface Bundles*

Y. Moriyama: *Polycyclic groups of diffeomorphisms on the half–line*

H. Moriyoshi: *On cyclic cocycles associated with the Godbillon–Vey Classes*

H. Nakayama: *On non–Hausdorff sets of plane homeomorphisms*

T. Natsume: *Another look into the foliation index theorem*

T. Nishimori: *Some remarks in a qualitative theory of similarity pseudogroups*

H. Sato: *Foliations of spheres by great circles*

P. Schweitzer: *Foliations with constant mean curvature (Tentative title)*

Tel.: (0)7834/979-0
Fax: (0)7834/979-38

Dynamical Zeta Functions

05.12. (Anreisetag) - 11.12.1993 (Abreisetag)

Leitung: Dieter Mayer, Clausthal-Zellerfeld
Samuel J. Patterson, Göttingen
David Ruelle, Bures-sur-Yvette

Vorläufige Teilnehmerliste:

Baladi, Viviane (Lyon)
Kneading matrices for zeta functions with weights of bounded variation

Bogomolny, E.B. (Orsay)
Transfer operators and zeta functions

Efrat, Isaac (College Park)

Felshtyn, Alexander (Göttingen)
Dynamical zeta functions, Nielsen theory and Reidemeister torsion

Fried, D. (Boston)
Asymptotic expansions for smooth expanding maps

Haydn, Nicolai (Los Angeles)
Generalised Gibbs' state for flows

Hill, R. (Göttingen)
An explanation of the rationality of the Reidemeister zeta function

Juhl, Andreas (Berlin)
Zeta funcitons and index theory

Keller, Gerhard (Erlangen)
Zeta functions for Collet-Eckmann maps

Levin, G. (Jerusalem)
Distribution of eigenvalues of the transfer operator

Mayer, Dieter H. (Clausthal-Zellerfeld)
Thermodynamic formalism and Selbery theory

Morgado, Sanchez (Mexico)

Patterson, Samuel James (Göttingen)
The division of the Ruelle zeta function

Perry, Peter A. (Lexington)
Divisor of the Selberg Zeta function for Klenian groups

Pollicott, Mark (Coventry)

Ruelle, David (Bures-sur-Yvette)
Dynamical zeta functions and transfer operators

Rugh, H.H. (Lyon)
Correlation functions for hyperbolic analytic maps

Schubert, V. (Göttingen)

Sharp, R. (London)

Voros, A. (Gif-sur-Yvette)
Spectral zeta functions
or:
On the quantum Baker's map

Waddington, S. (Göttingen)
Large deviation asymptotics for Anosov flows

Bitte beachten Sie, daß das Institut am Anreisetag erst ab 16 Uhr geöffnet ist.
On Sunday, the Institute does not open before 4 p.m.

Freiburg, den 1. Oktober 1993

資料4

V. Sergiescu: *Homological aspects of groups of one-dimensional piecewise homeomorphisms*

V. Slodov: *Title to be announced*

Ph. Tondeur: *Minimal gauge orbits*

T. Tsuboi: *On the stability of hyperbolic compact leaves*

N. Tsuchiya: See [T. Inaba, S. Matsumoto, N. Tsuchiya]

R. Urzua Luz: *Action of Z^2 on the affine group of T^q.*

E. Vogt: *Negative Euler characteristic as an obstruction to foliate an open 3-manifold by circles*

P. Walczak: *Transverse dynamics of flows tangent to foliations*

A. Zeghib: *On continuous geodesic foliations of hyperbolic manifolds*

A. Zorich: *Asymptotic flag of an orientable measured foliation*

資料5

ELECTRONIC SEVERAL COMPLEX VARIABLES LIBRARY
(formerly Hoosier SCV Library)

The electronic SCV library aims to increase the awareness of preprints that are available in either electronic or conventional form. Everyone in the SCV community is invited to send in an abstract or preprint.

Send abstracts, preprints, comments, and queries to boas@math.tamu.edu .

ACCESSING THE LIBRARY.

1. Gopher is the easiest way to retrieve items from the electronic several complex variables library. Execute the command
gopher gopher.tamu.edu
and select in succession the menu items
Browse Information by Subject/
Mathematics/
Electronic Preprints from Several Complex Variables Library/

If your system does not have a gopher client, you can use the American Mathematical Society gopher as follows.
Execute the command
telnet e-math.ams.org
and login with name e-math and password e-math. Then select in succession
E-MATH GOPHER
Mathematical Preprints/
Electronic Preprints from Several Complex Variables Library/

Unfortunately the AMS gopher is slow. For better performance, ask your system manager to install the useful free gopher software.

2. Anonymous ftp is another way to access items in the electronic several complex variables library.
Execute the command
ftp iu-math.math.indiana.edu
and login with username "anonymous" and password <your e-mail address>.
Change directories with the command
cd pub/scv .
You can then list the available items via
and retrieve items with the command
get <filename> .

3. If you cannot use the above methods, or if you prefer not to use an interactive method, you can have files sent to you by e-mail from an ftpmail server. Send e-mail to ftpmail@decwrl.dec.com with a message body of the following form:

```
connect iu-math.math.indiana.edu
chdir pub/scv
get <filename>
get <another filename>
quit
.
```

The ftpmail server will retrieve the files at its leisure and e-mail them to you.

Warning: The Internet mutates rapidly. The information in 1, 2, 3 above was valid as of 11/93, but it could change at any time.

SOME SPECIAL FILES

You may wish to retrieve some of the following special files:

README	an informational file
Index	a listing of all papers
Abstracts	a file of all abstracts
New	a listing of recent additions
Citations	bibliographic data for items now published

Harold P. Boas
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Phone: 409 845-7269 (office)
409 845-3261 (dept. office)

A guide to access and use of the
foliations ftp site

ftp (= *file transfer protocol*) is a very easy way to exchange files with other computers over the internet. The computer *babe.math.uic.edu* at the **University of Illinois at Chicago** has an ftp site with a directory "pub/foliations" for the support and exchange of papers in the field of foliations. The following is a short introduction to the use of *ftp* and a guide to use of the *foliations ftp* site. *For more detailed information on ftp, type "man ftp" in a terminal window.*

Access to the foliations ftp site

1) Enter the commands in a terminal window:
ftp babe.math.uic.edu (CR)
or outside the USA it may be necessary to use the internet number
ftp 128.248.180.100
where (CR) stands for carriage return.

Then when the computer responds with a login, follow the login procedures for anonymous ftp:

login: *anonymous* (CR)
password: <<user name>> (CR)

where <<user name>> is the name of the user account from which you are running ftp. For example, if the user *fwood@boss.math.uic.edu* is ftp'ing to the babe, then he would have <<user name>> = fwood

2) Change the directory to *pub/foliations* by typing the command
cd pub/foliations (CR)

3) To find out what authors have preprints in the directory, type
ls (= "ell" s) (CR)

4) To change to the subdirectory of a particular author, type
cd <<author name>> (CR)

5) To list the contents of an author directory, type
ls (CR)

or, to get a more detailed listing of the files with their sizes, type
ls -al (CR)

6) When you are done, type
quit (CR)

To get a paper from the foliations ftp site

1) Log into the ftp site following the steps 1 to 4 above.

2) (optional - for unix systems) Change your local directory to where you want the incoming files to be placed by typing
lcd <<your local directory name>> (CR)

For example, if the user *fwood@boss.math.uic.edu* has a directory "foliations/library" to place the papers in, then he would command
lcd foliations/library

3) a) To get an individual file, type
get <<filename>> (CR)

b) To get several files most easily, type
mget * (CR)

You will then be asked about each file in the list from *ls -al*, whether you want to get it. Type
y (CR) - if you want the file
n (CR) - if you do not want the file

4) When it is done getting the files from an author's directory, type
quit (CR)

if you want to quit, or type
cd .. (CR) - that is, cd followed by "two periods"

to get back up to the directory *foliations*,
then move down to another author directory.

Posting a paper to the foliations ftp site:

HOW TO POST A FILE

1) Log into the ftp site following step 1 above.

3) Move to the directory *submissions* by typing
cd pub/foliations/submissions (CR)

4) Change to your local directory where the paper files are located by typing
lcd <<your local directory>> (CR)

(This is primarily for *unix* systems where the files are stored in local subdirectories.)

5) Type
put <<file name of your paper>> (CR)

Repeat step (5) for each file you want to submit.

The system operator will then post the paper tex file, and any accompanying files, into the appropriate author directory

Posting a paper to the foliations ftp site:

RULES

1) Always include at the top of the file some basic identifying information:
a) your name, address and email address
b) the name of the file submitted
c) what flavor of tex is being used: tex, latex, amstex or lamstex

2) All files must be in *ascii* - no special word processor formats should be used. *Do not post ".dvi" files!*

3) Post in your directory any special macro that you are using. If the document has an "\input <<name>>.sty" statement at the beginning, this file has to be available to others for them to "tex" your file.

4) If you use BiBTeX to make your references, don't forget to either insert your ".bbl" file into the tex document, or to post the ".bib" file you are using.

5) If you have postscript files included in your document, please post them only if they are of reasonable length. Their size is included in the total space allowed each person.

All of this is strictly voluntary and being organized by Steve Hurder. (hurder@boss.math.uic.edu.) If it gets "*too crazy*," the site will be suspended. So limit the amount posted to at most 1 megabyte, *maximum*. This is about 10 average papers of 30 to 40 pages with no pictures.

Finally, there is always the possibility that the files you submit may be deleted, by accident or otherwise.

Do not make this directory your only copy of a file!!!

We (the system operator, steve hurder, or random chance) reserve the right to remove a directory from the system if the need arises.