



Study on rings with Morita duality



Name	Koike Kazutoshi	E-mail	koike@okinawa-ct.ac.jp
Status	Professor		
Affiliations	Mathematical Society of Japan, Information Processing Society of Japan		
Keywords	Noncommutative rings, Morita duality, quasi-Frobenius rings		
Technical Support Skills	<ul style="list-style-type: none"> Theory of algebra (ring theory) Public lectures on mathematics 		

Research Contents Study on rings with Morita duality

I have been studying noncommutative ring theory. Recently I am interested in rings with Morita duality (self-duality). “Morita duality” is a duality (contravariant category equivalence) between certain categories of left R -modules and right S -modules, where R and S are two associative rings with identity. Most typical example of Morita duality is the usual vector space duality of finite dimensional vector spaces over a field. In case $R=S$ such as the vector space duality, Morita duality is called “self-duality”. I study the problem whether certain kind of rings have self-duality.

Available Facilities and Equipment

On global properties of solutions to the Einstein equations



Name	NARITA Makoto	E-mail	narita@okinawa-ct.ac.jp
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Status	Professor
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Affiliations	Mathematical Society of Japan, Japan Physical Society, International Society on General Relativity and Gravitation
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Keywords	Gravity, Singularity, Black Hole, Cosmic Censorship, General Relativity, Nonlinear Partial Differential Equations
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Technical Support Skills	<ul style="list-style-type: none"> • Theoretical calculations based on Physics (relativity) • Public lectures on physics and mathematics
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Research Contents On global properties of solutions to the Einstein equations

General relativity and partial differential equations

- Global solutions to the Einstein equations
- Initial singularity of the universe
- Formation of black holes

Available Facilities and Equipment



A Study of William Blake Translation of Ó Searcaigh's works into Japanese



Name	Eriko HOSHINO	E-mail	hoshino@okinawa-ct.ac.jp
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Status	Professor
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Affiliations	Japan Ireland Society Yeats Society of Japan
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Keywords	William Blake, Cathal Ó Searcaigh, William Butler Yeats, Irish Language, Gnosticism
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Technical Support Skills	
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Research Contents

Field of Study

- 1) Gnostic influence upon William Blake's poetry
- 2) A fundamental difference between William Blake and W. B. Yeats
- 3) A study of Cathal Ó Searcaigh and translation his works into Japanese

Recent Research Results

- Where has Blake's 'The Sick Rose' Gone?
(Annual Conference of Yeats Society of Japan, 2014)
- A Study of Cathal Ó Searcaigh---Writing Poems in Irish---
(*Bulletin of Musashino Academia Musicae*, 2012)
- Dreadful Contraries---Re-reading William Blake's 'The Mental Traveller'---
(Annual Conference of Yeats Society of Japan, 2012)
- Modern Irish Poetry: Máirtín Ó Direáin, Seán Ó Ríodáin, Nuala Ni Dhomhnaill and Cathal Ó Searcaigh
(Symposium, Annual Conference of Irish Studies, 2011, Japan Ireland Society)

Available Facilities and Equipment

Philosophical study of “self-awareness”



Name	AOKI Kumi	E-mail	aoki@okinawa-ct.ac.jp
Status	associate professor		
Affiliations	Japan Society for Buddhist-Christian Studies. Japanese Association for Comparative Philosophy		
Keywords	emptiness, dependent-arising, basho		
Technical Support Skills	<ul style="list-style-type: none"> •Buddhist study •Narrative Therapy 		

Research Contents

I have been studying Buddhist concept of *emptiness* and *dependent-arising* from the perspective of comparative philosophy, and thus considering what *self* is and how its relationship with *others* should be. The comparative study covers the logic of *basho* (Kitaro Nishida), Hegelian dialectic, phenomenology (Husserl), Nihilism (Nietzsche), language game (Wittgenstein), deconstruction (Derrida) and integral philosophy (Wilber)

Available Facilities and Equipment



- (1) The situations of modern performing arts in Japan
- (2) The relation between culture and society



Name	SAWAI Manami	E-mail	sawai@okinawa-ct.ac.jp
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Status	Associate Professor
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Affiliations	Japanese Society for Theater Research The Japanese Society for History of the Performing Arts Research
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Keywords	theater, performing arts, Japan, modern era , culture and society
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Technical Support Skills	extramural] lecture
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Research Contents

- (1) I have been studying modern performing arts in Japan. For example, the Edo-Tokyo Ningyo-joruri (the traditional puppet theater; had gone to ruin), the Biwa collaborating with various arts.
- (2) I give the lecture on the relation between culture and society . To activate Okinawa, I educate successful cases applying culture in industry, and stimulate our students to propose new ideas.(2012-2015)

Available Facilities and Equipment

研究タイトル:

氏名:

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E-mail:

職名:

学位:

所属学会・協会:

キーワード:

技術相談

提供可能技術:

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研究内容:

提供可能な設備・機器:

名称・型番(メーカー)



Name Hiroshi Yamamoto **E-mail** yamamoto@okinawa-ct.ac.jp

Status Associate Professor

Affiliations The Mathematical Society of Japan

Keywords Riemann Surface, Teichmüller Space

Technical Support Skills

- Riemann Surface
- Teichmüller Space

Research Contents

A one-dimensional connected complex manifold is called a Riemann surface. Let R be a Riemann surface of type (g, n) . Denote 2-dimensional complex manifold $R \times R \setminus \{(p, p) | p \in R\}$ by M . For every $t \in R$, the fiber $S_t = \pi^{-1}(t)$ is a Riemann surface of type $(g, n+1)$ where $\pi(p_1, p_2) = p_1$ is canonical projection of M onto R . Then Riemann surface S_t depends holomorphically on $t \in R$. This is a typical example of holomorphic families of Riemann surfaces (M, π, R) . I have been studying holomorphic families of Riemann surfaces using Teichmüller space theory.

A compact Riemann surface of genus 2.



Available Facilities and Equipment

Determinacy of Infinite Game in Second Order Arithmetic



Name	Keisuke Yoshii	E-mail	kyoshii@okinawa-ct.ac.jp
Status	Senior Assistant Professor		
Affiliations	Mathematical Society of Japan		
Keywords	Foundation of Mathematics, Determinacy of infinite Games		
Technical Support Skills	<ul style="list-style-type: none"> • Open lectures 		

Research Contents

The main theme of my research is to reveal some properties of sets of reals by using determinacy of infinite games. The infinite game is a perfect information game played by two players and called Gale-Stewart games.

Unlike games of Chess or Go, this is a mathematical game, and the goal is not to defeat the opponent players.

It is known that if there is a winning strategy for this game then sets of reals with certain complexity are constructed by using the winning strategy. Formalizing this game in second order arithmetic, we can see that the complexity of constructed sets is much more complicated than the complexity of games. In my research, we try to analyze the properties of sets constructed by winning strategies of infinite games, such as properties of Baire, perfect sets, and so forth.

In education, I believe that a mathematical way of thinking, such as making the complicated simple, is important for students.

I also have a strong passion for education. It is my dream to contribute the education of Okinawa and Japan.

To achieve this goal, I would like to keep learning how the education should be for Japanese industry.

Available Facilities and Equipment



Construction of Constant Mean Curvature Surfaces via Integrable System Methods, and their Singularities



Name Yuta Ogata **E-mail** y.ogata@okinawa-ct.ac.jp

Status Senior assistant professor

Affiliations Mathematical Society of Japan

Keywords Surface theory, Integrable system, Singularity theory

Technical Support Skills
· Public lectures on mathematics

Research Contents

I am interested in “constant mean curvature (CMC) surfaces”. CMC surfaces are well-known as the mathematical model of soap bubbles and have been studied by many researchers for a long time. Recently I study the construction of CMC surfaces in various spaceforms and analyze their singularities.

[My Research Keywords]

- Surface theory:
CMC surface, Spacelike CMC surface, Riemannian spaceforms, semi-Riemannian speceforms
- Integrable system:
DPW method, Loop group, Lax system, Liouville equation, sinh-Gordon equation, cosh-Gordon equation
- Singularity theory:
Wave front, Frontal

Available Facilities and Equipment

A Grammar of Motobu, Kunigami, Ryukyuan



Name	Masashi SAKIHARA	E-mail	mashi_s@okinawa-ct.ac.jp
Status	Senior Assistant Professor (Koshi)		
Affiliations	Okinawa Center of Language Study, Studies of the Society and Culture in Ryukyu and Asia, Circle of Studies of Yambaru, Foreign Language and Literature Society of Okinawa, The Society of Japanese Grammar, The Society of Japanese Linguistics, Okinankyo (present: Chura Shima Kikoe Shien Kyokai)		
Keywords	Descriptive Grammar (Phonology, Morphology, Syntax), Ryukyuan & Japanese Linguistics, Endangered Languages		
Technical Support Skills	<ul style="list-style-type: none"> Teaching Uchinaaguchi (Okinawan language) to Children Teaching How To Document a Language Teaching about Ryukyuan/Okinawan Languages in English 		

Research Contents Field-work based Description and Documentation on Ryukyuan Languages

【Ongoing Research (Renewed)】

Currently, I have been doing research on languages spoken in Town of Mobotu, which (the languages) belong to Kunigami, Ryukyuan. Languages spoken in Yamazato and Gushiken are under research now.

【How I Came to Do Research on This Topic】

I chose this field of language documentation of Ryukyuan languages for my research because I realized my strong identity as an Okinawan through study abroad experiences in Mainland U.S., Hawai'i, and in Korea. I have always been interested in language learning. Through mandatory English education at schools as a start, I also became interested in other languages such as Korean. My life in Korea has strengthened my identity as an Okinawan, and after I came back from Korea I started doing my research on Okinawan language documentation.

【Research Background】

Seven endangered languages are now recognized within the Ryukyu island chain: Amami, Kunigami, Okinawa, Miyako, Yaeyama, Yonaguni, and Hachijo spoken on the Daito Islands. *Shimakutuba* is used as the umbrella term to describe those seven languages (Ryukyuan Languages is used to describe the first six). The majority of native speakers are over 80 years old and all of them are bilingual with Japanese. To complicate matters more, the language domain where it is actually spoken is very limited to specific situations such as when talking with a very close friend who is from the same community. The influence of Japanese to Ryukyuan languages has caused the loss of traditional speech or grammatical expressions. Despite the struggle of Okinawa Prefecture as well as that of private organizations and activists to revitalize Ryukyuan, there is not much of an impact or change to the preservation of *Shimakutuba*. Ryukyuan linguists who are well aware of this fact have been working on language documentation on each local language ranging from Amami to Yonaguni.

【Past Research: Master's thesis and PhD dissertation】

Targeting the variety spoken in Shuri, located in the northeast of present Naha City, I did field work there multiple times and illustrated the grammatical characteristics of sentence final particles and modality.

【Other Related Activities】

Translating works into Ryukyuan, Teaching children Uchinaaguchi, Reading Uchinaaguchi picture books to children, Editing an Uchinaaguchi textbook written in English (see picture above).



Available Facilities and Equipment

研究タイトル：

コーチング

氏名： 島尻 真理子 / SHIMAJIRI Mariko E-mail: shimari5@okinawa-ct.ac.jp

職名： 講師 学位： 修士(スポーツ学)

所属学会・協会： 日本ハンドボール学会

キーワード： スポーツ科学、コーチング、ハンドボール

技術相談
提供可能技術：
・ハンドボール
・コーチング
・レフェリング



研究内容：

〈1〉

走・跳・投の基礎運動能力を必要とするハンドボール競技では、相手より1点でも多く点を取ることが求められる。この点を取るという「成功」を得るために、チームは、日々の体力・技術・戦術等のトレーニングが必要不可欠である。その中でも、実際に点を取るための戦術ならびにその指導方法に着目し、チーム状況やゲーム状況に応じた戦術の体系化や合理的な指導方法の研究を行い、ハンドボール競技の指導における一助とする。

〈2〉

スポーツにおける競技力向上には、「強化」はもちろん、その裾野を拡げるための「育成」が求められる。これに加え近年では、そのゲームを公正・的確にジャッジすることが求められる「レフェリー」の存在も、注目されている。ハンドボールにおいても過言ではなく、プレーヤー強化および指導とレフェリー強化が両輪となり、世界と戦うためのチームを目指している。しかし、レフェリーに関する研究は進んでいないのが現状である。そこで、レフェリーがゲームに及ぼす影響、レフェリングの実際の研究を行うことで、最終的にレフェリーの育成システムの構築を目指す。

提供可能な設備・機器：

名称・型番(メーカー)	



Coaching



Name	Mariko Shimajiri	E-mail	shimari5@okinawa-ct.ac.jp
Status	Senior Assistant Professor		
Affiliations	The Japanese Association of Handball Research		
Keywords	Sports science, Coaching, Handball		
Technical Support Skills	<ul style="list-style-type: none"> • Handball • Coaching • Refereeing 		

Research Contents

〈1〉

In the handball that needs the basic motor ability of running, jumping and throwing, it is important to score more points even at one point than the opponent team.

In order to obtain the "success" of the score, the team needs daily physical training, technical training, tactical training.

Among them, I will systematization of tactics according to team situation and game situation and study on rational teaching methods and help in handball coaching.

〈2〉

Strengthening and coaching athletes are indispensable for improving sports competitiveness.

In addition to this, in recent years, the existence of "referee", which is required to judge the game fairly and accurately, has also been drawing attention.

Also in handball, strengthening and coaching to player and coaching to referee become the two wheels, aiming to be a team to fight the world.

However, study on referee has not progressed at present.

So, I will study the influence of referee on games and refereeing, and aim to construct referee training system.

Available Facilities and Equipment

English as a Foreign Language ▪ Foreign Language Classroom Anxiety



Name	Makoa Carman	E-mail	makoac@okinawa-ct.ac.jp
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Status	Lecturer
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Affiliations	The Japan Association for Language Teaching (JALT)
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Keywords	English as a Foreign Language (EFL), Foreign Language Classroom Anxiety (FLCA)
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Technical Support Skills	<ul style="list-style-type: none"> • English oral communication • Curriculum design • Teaching English language learners
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Research Contents Foreign Language Classroom Anxiety (FLCA)

Teaching English language learners (ELL) with a focus on oral communication.

Many students in Japan associate speaking English with negative emotions. Foreign language classroom anxiety (FLCA) is an obstacle many ELLs never overcome. FLCA may result in a lack of motivation to study, feelings of hopelessness, panic, or withdrawal in the classroom.

I plan to research techniques to reduce the anxiety and improve the motivation of ELLs in EFL classrooms. I would like to explore the use of hypnotherapy to reduce anxiety and increase motivation and the possible application of hypnotherapy in the reduction of FLCA.

Available Facilities and Equipment

English Education・English Speech & Presentation Skills



Name	YOSHII, Risa	E-mail	ryoshii@okinawa-ct.ac.jp
Status	Senior Assistant Professor		
Affiliations	Society of English Language Teachers-Okinawa (SELT-Okinawa)		
Keywords	English Education, Educational Counseling, Teaching and Learning with Technology		
Technical Support Skills	<ul style="list-style-type: none"> • English Speech & Presentation Skills • Oral Communication • Motivational Learning 		

Research Contents Motivational Learning

Research interests lie in the following areas:

My research is focused on the development of “Students’ Creative Confidence through teaching English as a tool for Global Communication.” Through my teaching experience, I have learned that students show higher motivation when they have opportunities to express themselves regardless of their English abilities. Therefore, I try to “Teach English in English (TEE) as much as possible while creating Student-Centered Communicative Classes.”

Available Facilities and Equipment
