초 청 장

2013년도 강원경기수학회(KKMS) 학술발표대회 및 정기총회를 아래와 같이 개최하오니 수리과학의 보급과 연구 협력을 증진하고 학술문화의 발전을 위해 많은 연구자의 참여와 성원을 부탁드립니다.

1. **일시 : 2013년 6월 21일(금) 13:30 ~ 21:00**

2. **장소 : 강원대학교 춘천캠퍼스 자연과학대학 2호관(건물번호:204)**
   - 교통편 및 위치 지도 링크
     ① 교통편 http://home.kangwon.ac.kr/main/html/introduction/location_01.jsp
     ② Campus Map http://home.kangwon.ac.kr/main/html/campusmap/campus_01.jsp

3. **학술대회 홈페이지** : http://www.kkms.org/conf2013/

4. 기타
   - 만찬장은 **왕소갈비**입니다. (프로그램의 약도 참조)
   - 초록 등 문의사항이 있으시면 아래 연락처로 연락주시기 바랍니다.
     (김광휘교수 : 010-2707-2893, ghkim@kangnam.ac.kr;
     조동현교수 : 010-8316-8952, j94385@kyonggi.ac.kr)

2013년 6월 17일

강원경기수학회장 

강원경기수학회 2013년도
학술발표회 및 정기총회

- 일시 : 2013.6.21(금) 13:30 - 21:00
- 장소 : 강원대학교 춘천캠퍼스 자연과학대학 2호관

- 주최 : 강원경기수학회
- 주관 : 강원대학교 수학과
  강원대학교 기초과학연구소
- 후원 : 대한수학회

강원경기수학회 2013년도

학술발표회 및 정기총회

1. 일　　시 : 2013년 6월 21일 (금) 13 : 30 – 21 : 00

2. 장　　소 : 강원대학교 춘천캠퍼스 자연과학대학 2호관

3. 세부일정

- 13:30 – 14:00 ..... 등록
- 14:00 – 14:10 ..... 개회식
- 14:10 – 14:20 ..... 대한수학회장 격려사
- 14:20 – 15:00 ..... 초청강연
- 15:00 – 15:10 ..... 휴식
- 15:10 – 16:10 ..... 논문발표(1부)
- 16:10 – 16:20 ..... 휴식
- 16:20 – 17:00 ..... 논문발표(2부)
- 17:00 – 17:10 ..... 휴식
- 17:10 – 18:10 ..... 논문발표(3부)
- 18:10 – 18:20 ..... 휴식
- 18:20 – 18:50 ..... 정기총회
- 18:50 – 21:00 ..... 만찬

4. 기타사항

- 임원회의장소 : 자연과학대학 2호관 401호
- 만찬장소 : 춘천시 퇴계동 **왕소갈비** (033-257-9982)
- 숙박을 하실 분은 비치된 방명록에 체크해 주시기 바랍니다.
- 우리 학회논문집을 인쇄해 온 **북스힐** 출판사에서 기념수건을 기증해 주었습니다.
- 연락처 : 박영호 교수(010-6474-8420), 조동현 교수 (010-8316-8952)

발표 및 행사장

- 등록 ..... 자연과학대학 2호관 411호
- 개회식 및 초청강연 ....자연과학대학 2호관 424호
- Session I ..... 자연과학대학 2호관 420호
- Session II ..... 자연과학대학 2호관 424호
- Session III ..... 자연과학대학 4호관 405호
- 정기총회 .....자연과학대학 2호관 424호
- 임원회의 .....자연과학대학 2호관 401호
- 휴게실 ..... 자연과학대학 2호관 412, 419호
- 만찬 .....왕소갈비

학술발표회 일정표

구분	시간	6월 21일(금요일)					
등록	13:30-14:00	참가자 등록				자연과학대학 2호관 411호	
개회	14:00-14:10	개회식 (강원경기 수학회장: 김광휘)				자연과학대학 2호관 424호	
	14:10-14:20	대한수학회장 격려사 (대한수학회장: 김명환)					
초청 강연	14:20-15:00	좌 장	최규흥 (인하대)				
		발표자	최재동 (공군사관학교)				
휴식	15:00-15:10	다과 및 환담 (휴게실: 자연과학대학 2호관 412, 419호)					
논문 발표	15:10-18:10	Session I (Algebra and applied mathematics 2호관 420호)		Session II (Analysis) 2호관 424호)		Session III (Discrete mathematics) 4호관 405호	
논문 발표 (1부)	15:10-16:10	좌 장	이상구(성균관대)	좌장	김병학(경희대)	좌 장	이형천(아주대)
	15:10-15:30	발표자	서종진*(광운대) 유천성(한남대)	발표자	김병수 (서울과학기술대)	발표자	표재홍(강원대)
	15:30-15:50	발표자	이희영*(한남대) 유천성(한남대) 김태균(광운대)	발표자	유 일(연세대)	발표자	장유선(강남대)
	15:50-16:10	발표자	강정욱*(한남대) 유천성(한남대)	발표자	조동현*(경기대) 유 일(연세대)	발표자	함남우*(인천대) 윤정희(인천과학고)
휴식	16:10-16:20	다과 및 환담 (휴게실: 자연과학대학 2호관 412, 419호)					
논문 발표 (2부)	16:20-17:00	좌 장	정세화(가천대)	좌 장	김영기(명지대)	좌 장	이정례(대진대)
	16:20-16:40	발표자	박영호(강원대)	발표자	손성익(강릉원주대)	발표자	박춘길*(한양대) Shahrokh Farhadabadi (Urima Univ.)
	16:40-17:00	발표자	김광연(강원대)	발표자	신안숙*(연세대) 김호범(연세대)	발표자	이주리*(충남대) 김학만(충남대)
휴식	17:00-17:10	다과 및 환담 (휴게실: 자연과학대학 2호관 412, 419호)					
논문 발표 (3부)	17:10-18:10	좌 장	유천성(한남대)	좌 장	유 일(연세대)	좌 장	김학만(충남대)
	17:10-17:30	발표자	남궁정일*(인하대) 김기태(인하대) 이익권(인하대)	발표자	최종근(연세대)	발표자	강보원*(충남대) 구남집(충남대) 이만섭(충남대)
	17:30-17:50	발표자	박숙영*(강원대) 박영호(강원대) 최완혁(강원대)	발표자	박천근*(경기대) 김인영(Virginia Polytechnic Institute and State Univ.)	발표자	남혜원(남서울대)
	17:50-18:10	발표자	김봉진(대진대)	발표자	송특섭(목원대)	발표자	김동석*(경기대) 방세정(영남대)
휴식	18:10-18:20	다과 및 환담 (휴게실: 자연과학대학 2호관 412, 419호)					
총회	18:20-18:50	정기총회 (자연과학대학 2호관 424호)					
만찬	18:50-21:00	만찬장: 춘천시 퇴계동 **왕소갈비** (033-257-9982)					

***사정에 따라 프로그램의 일부 조정이 있을 수 있습니다.**

Program

Registration and opening ceremony (자연과학대학 2호관 424호)

- 13:30 – 14:00 등록 (자연과학대학 2호관 411호)
- 14:00 – 14:10 강원경기수학회장 개회사 ..... 김광휘(강남대)
- 14:10 – 14:20 대한수학회장 격려사 ..... 김명환(서울대)

Invited talk (자연과학대학 2호관 424호)

[IT-1] 14:20 – 15:00 ..... 좌장: 최규흥(인하대)

Jaedong Choi(Korea Air Force Academy), *Aviation space exploration and mathematics*

- 15:00 – 15:10 휴식 (자연과학대학 2호관 412, 419호)

Session I (Algebra ans applied mathematics, 자연과학대학 2호관 420호)

[AA-1] 15:10 – 15:30 ..... 좌장: 이상구(성균관대)

Jong-Jin Seo*(Kwangwoon University) and Cheon-Seoung Ryoo(Hannam University), *A new family of q-analogue of Genocchi numbers and polynomials of higher order*

[AA-2] 15:30 – 15:50 ..... 좌장: 이상구(성균관대)

Hui Young Lee*(Hannam University), Cheon Seoung Ryoo(Hannam University) and Taekyun Kim(Kwangwoon University), *On reccurence formula for values of Euler zeta functions $\zeta(2n)$ at positive integers*

[AA-3] 15:50 – 16:10 ..... 좌장: 이상구(성균관대)

Jung Yoog Kang*(Hannam University) and Cheon Seoung Ryoo(Hannam University), *Generalized q-Genocchi polynomials associated with p-adic q-integrals and q-zeta functions*

- 16:10 – 16:20 휴식 (자연과학대학 2호관 412, 419호)

[AA-4] 16:20 – 16:40 ..... 좌장: 정세화(가천대)

Park Young Ho(Kangwon Natiional University), *Lifts of ternary quadratic residue codes of length* 24

[AA-5] 16:40 – 17:00 ..... 좌장: 정세화(가천대)

Kwang-Yeon Kim(Kangwon National University), *Recovery-type error estimators for finite element methods*

- 17:00 – 17:10 휴식 (자연과학대학 2호관 412, 419호)

[AA-6] 17:10 – 17:30 ..... 좌장: 유천성(한남대)

Cheongil Namgung*(Inha university), Kitae Kim(Inha university) and Ikkwon Yie(Inha university), *A note on Gauss period normal basis*

[AA-7] 17:30 – 17:50 ..... 좌장: 유천성(한남대)

Sook Young Park*(Kangwon National University), Young Ho Park (Kangwon National University) and Whanhyuk Choi(Kangwon National University), *Self-dual codes over* Z_{p^2} *of length* ≤ 4

[AA-8] 17:50 – 18:10 ..... 좌장: 유천성(한남대)

Bong Jin Kim(Daejin University), *Integration by parts formulas for analytic Feynman integrals on abstract Wiener space*

- 18:10 – 18:20 휴식 (자연과학대학 2호관 412, 419호)

Session II (Aanlysis, 자연과학대학 2호관 424호)

[AN-1] 15:10 – 15:30 ..... 좌장: 김병학(경희대)

Byoung Soo Kim(Seoul National University of Science and Technology), *A function space integral and a generalized analytic Feynman integral on* $C_{a,b}[0,T]$

[AN-2] 15:30 – 15:50 ..... 좌장: 김병학(경희대)

Il Yoo(Yonsei University), *A survey on change of scale formulas for Wiener integrals*

[AN-3] 15:50 – 16:10 ..... 좌장: 김병학(경희대)

Dong Hyun Cho*(Kyonggi University) and Il Yoo(Yonsei University), *Change of scale transformations for a generalized conditional Wiener integral on an analogue Wiener space*

- 16:10 – 16:20 휴식 (자연과학대학 2호관 412, 419호)

[AN-4] 16:20 – 16:40 ..... 좌장: 김영기(명지대)

Sung-Ik Sohn(Gangneung-Wonju National University), *Singularity and evolution of a vortex sheet in incompressible fluid*

[AN-5] 16:40 – 17:00 ..... 좌장: 김영기(명지대)

An Sook Shin*(Yonsei University) and Hobum Kim(Yonsei University), *Infinitesimal rigidity of hyperquadrics in semi-Euclidean space*

- 17:00 – 17:10 휴식 (자연과학대학 2호관 412, 419호)

[AN-6] 17:10 – 17:30 ..... 좌장: 유 일(연세대)

Jongkeun Choi(Yonsei University), *The Robin function for second order elliptic systems*

[AN-7] 17:30 – 17:50 ..... 좌장: 유 일(연세대)

Chun Gun Park*(Kyonggi University) and Inyoung Kim(Virginia Polytechnic Institute and State University), *A new selection method for resolution and basis function selection in wavelet series*

[AN-8] 17:50 – 18:10 ..... 좌장: 유 일(연세대)

Teuk Seob Song(Mokwon University), *Generalized Fourier-Feynman transform and its applcations*

- 18:10 – 18:20 휴식 (자연과학대학 2호관 412, 419호)

Session III (Discrete mathematics, 자연과학대학 4호관 405호)

[DS-1] 15:10 – 15:30 ..... 좌장: 이형천(아주대)

Jae-Hong Pyo(Kangwon National University), *Error estimates for the second order semi-discrete stabilized Gauge-Uzawa method for the Navier-Stokes equations*

[DS-2] 15:30 – 15:50 ..... 좌장: 이형천(아주대)

Yu-Seon Jang(Kangnam University), *Sequential estimation with beta protection for the exponential hazard rate*

[DS-3] 15:50 – 16:10 ..... 좌장: 이형천(아주대)

Nahmwoo Hahm*(University of Incheon) and Junghee Yun(Incheon Science High School) *A note on classification of two directional paper folding sequences*

- 16:10 – 16:20 휴식 (자연과학대학 2호관 412, 419호)

[DS-4] 16:20 – 16:40 ..... 좌장: 구남집(충남대)

Choonkil Park*(Hanyang University) and Shahrokh Farhadabadi(Urmia University), *New functional inequalities and applications*

[DS-5] 16:40 – 17:00 ..... 좌장: 구남집(충남대)

Juri Lee*(Chungnam National University) and Hark-Mahn Kim (Chungnam National University), *Fuzzy stability of Euler-Lagrange quadratic mappings*

- 17:00 – 17:10 휴식 (자연과학대학 2호관 412, 419호)

[DS-6] 17:10 – 17:30 ..... 좌장: 김학만(충남대)

Bowon Kang*(Chungnam National University), Namjip Koo(Chungnam National University) and Manseob Lee(Mokwon University), *Robustly transitive sets with inverse shadowing property on Riemannian manifolds*

[DS-7] 17:30 – 17:50 ..... 좌장: 김학만(충남대)

Hyewon Nam(Namseoul University), *Multiplicity results for the elliptic system using the minimax theorem*

[DS-8] 17:50 – 18:10 ..... 좌장: 김학만(충남대)

Dongseok Kim*(Kyonggi University) and Sejeong Bang(Yeungnam University), *A classification of transitive links and periodic links*

- 18:10 – 18:20 휴식 (자연과학대학 2호관 412, 419호)

Closing Ceremony and dinner (자연과학대학 2호관 424호)

- 18:20 – 18:50 정기총회
- 18:50 – 21:00 만찬 (왕소갈비)

강원경기수학회 2013년도
학술발표회 논문초록

Invited talk

IT-1

Aviation space exploration and mathematics

Jaedong Choi
Korea Air Force Academy, choijdong@gmail.com

1. Introduce relation of aviation space exploration and mathematics
2. Korea aerospace field plan
3. Present development plan of mathematics

Algebra and applied mathematics

AA-1

A new family of q-analogue of Genocchi numbers and polynomials of higher order

Jong-Jin Seo*
Kwangwoon University, sjj8483@hanmail.net
Cheon-Seoung Ryoo
Hannam University

In this work, we consider the generating function of Kim's q-Euler polynomials and introduce new generalization of q-Genocchi polynomials and numbers of higher order. Also, we give surprising identities for studying in Analytic Numbers Theory and especially in Mathematical Physics. Moreover, by applying q-Mellin transformation to generating function of q-Genocchi polynomials of higher order and so we define q-Hurwitz-Zeta type function which interpolates of this polynomials at negative integers.

AA-2

On recurrence formula for values of Euler zeta functions $\zeta(2n)$ at positive integers

Hui Young Lee*
Hannam University, normaliz@hnu.kr
Cheon Seoung Ryoo
Hannam University
Taekyun Kim
Kwangwoon University

The Euler zeta function is defined by $\zeta_E(s) = \sum_{n=1}^{\infty} \frac{(-1)^{n-1}}{n^s}$. In this paper, for $s \in \mathbb{N}$ we find the recurrence formula of $\zeta_E(2s)$ using the Fourier series. We discuss the methods to evaluate the value of Euler zeta function at positive integer. As the result, we find recurrence formula of Euler zeta function's values. Also we find the recurrence formula of $\sum_{n=1}^{\infty} \frac{(-1)^{n-1}}{(2n-1)^{2s-1}}$ where $s \geq 2 (\in \mathbb{N})$.

AA-3

Generalized q-Genocchi polynomials associated with p-adic q-integrals and q-zeta functions

Jung Yoog Kang*
Hannam University, rkdwjddnr2002@yahoo.co.kr
Cheon Seoung Ryoo
Hannam University

Our aim in this paper is to define generalized q-Genocchi polynomials and Barnes' type multiple generalized q-Genocchi polynomials. We investigate some properties which are related to generalized q-Genocchi polynomials and Barnes' type multiple generalized q-Genocchi polynomials. We also derive the existence of a specific interpolation function which interpolates generalized q-Genocchi polynomials at negative integers.

AA-4

Lifts of ternary quadratic residue codes of length 24

Park Young Ho

Kangwon Natiional University, yhpark@kangwon.ac.kr

We study the extended quadratic residue code of length 24 over $\mathbb{Z}_3$ and its lifts to rings $\mathbb{Z}_{3^e}$ for all e including 3-adic integer ring. We completely determine the weight enumerators of all these lifts.

AA-5

Recovery-type error estimators for finite element methods

Kwang-Yeon Kim

Kangwon National University, eulerkim@kangwon.ac.kr

In this talk we discuss a posteriori error estimators based on recovered gradient or flux approximations. This kind of error estimators tend to yield better results than the simple residual-based error estimator in terms of the effectivity index (the ratio of the estimated error to the actual error). Moreover, they show asymptotic exactness under some favorable conditions. Also, it is known that flux recovery is more reliable than gradient recovery for interface problems with highly discontinuous coefficients. So we present the so-called "locally conservative" flux recovery which delivers a guaranteed upper bound on the actual error and compare it with the flux recovery based on simple averaging.

AA-6

A note on Gauss period normal basis

Cheongil Namgung*
Inha university, namgung@inha.edu
Kitae Kim
Inha university
Ikkwon Yie
Inha university

Let p be a prime and $\mathbb{F}_{q^n}$ be a finite field of characteristic p. If the set of all conjugates of an element $\alpha \in \mathbb{F}_{q^n}$ forms a basis of $\mathbb{F}_{q^n}$ then we call α a normal element and the set of conjugates a normal basis. In this talk, we discuss on the complexity of affine transformation of Gauss period normal bases, which is a special kind of normal basis.

AA-7

Self-dual codes over Z_{p^2} of length ≤ 4

Sook Young Park*
Kangwon National University, erestugypsy@gmail.com
Young Ho Park
Kangwon National University
Whanhyuk Choi
Kangwon National University

In this article we classify self-dual codes over Z_{p^2} of length ≤ 4.

AA-8

Integration by parts formulas for analytic Feynman integrals on abstract Wiener space

Bong Jin Kim
Daejin University, bjkim@daejin.ac.kr

In this talk we discuss some results that exist on the analytic Feynman integral over paths in abstract Wiener space. Furthermore we obtain the integration by parts formulas for the analytic Feynman integral for some functionals on abstract Wiener space and for the analytic Feynman integral involving the Fourier Feynman transform of functionals in a Banach algebra.

Analysis

AN-1

A function space integral and a generalized analytic Feynman integral on $C_{a,b}[0,T]$

Byoung Soo Kim
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Cameron and Storvick discovered change of scale formulas for Wiener integrals of functionals in a Banach algebra $\mathcal{S}$ on classical Wiener space. Yoo and Skoug extended these results for functionals in the Fresnel class $\mathcal{F}(B)$ and in a generalized Fresnel class $\mathcal{F}_{A_1,A_2}$ on abstract Wiener space. We establish a relationship between a function space integral and a generalized analytic Feynman integral on $C_{a,b}[0,T]$ for functionals in a Banach algebra $\mathcal{S}(L^2_{a,b}[0,T])$. Moreover we obtain a change of scale formula for a function space integral on $C_{a,b}[0,T]$ of these functionals.

AN-2

A survey on change of scale formulas for Wiener integrals

Il Yoo

Yonsei University, iyoo@yonsei.ac.kr

In this talk, we survey change of scale formulas for Wiener integrals.

AN-3

Change of scale transformations for a generalized conditional Wiener integral on an analogue Wiener space

Dong Hyun Cho*

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Il Yoo

Yonsei University

Let $C[0,t]$ denote a generalized Wiener space, the space of real-valued continuous functions on the interval $[0,t]$ and define a random vector $Z_n : C[0,t] \to \mathbb{R}^n$ by $Z_n(x) = (\int_0^{t_1} h(s)dx(s), \cdots, \int_0^{t_n} h(s)dx(s))$, where $0 < t_1 < \cdots < t_n = t$ is a partition of $[0,t]$ and $h \in L_2[0,t]$ with $h \neq 0$ a.e. In the present talk, using a simple formula for a generalized conditional Wiener integral on $C[0,t]$ with the conditioning function Z_n, we evaluate a generalized analytic conditional Wiener integral of the function G_r having the form $G_r(x) = F(x)\Psi(\int_0^t v_1(s)dx(s), \cdots, \int_0^t v_r(s)dx(s))$, for F in a Banach algebra, and for $\Psi = f + \phi$ which need not be bounded or continuous, where $f \in L_p(\mathbb{R}^r)(1 \leq p \leq \infty)$, $\{v_1, \cdots, v_r\}$ is an orthonormal subset of $L_2[0,t]$ and ϕ is the Fourier transform of a measure of bounded variation over $\mathbb{R}^r$. Finally, we establish various change of scale transformations for the generalized analytic conditional Wiener integrals of G_r with the conditioning function Z_n.

AN-4

Singularity and evolution of the vortex sheet in incompressible fluid

Sung-Ik Sohn

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Vortex sheet is a fluid interface across which the tangential velocity is discontinous, and is an inviscid model for the interface of a parallel shear flow. The vortex sheet has an elegant formulation, but sufferes from instability and becomes ill-posed at finite time. In this talk, we discuss the instability and formation of singularity in the vortex sheet. We also present a vortex-blob regularization model, to overcome the singularity, and results of long-time evolutions of the vortex sheet.

AN-5

Infinitesimal rigidity of hyperquadrics in semi-Euclidean space

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Hobum Kim

Yonsei University

In this paper, we show that hyperquadrics are infinitesimally rigid in the semi-Euclidean space. We also show that hypersurfaces of hyperquadrics cut by hyperplanes not passing through the origin are infinitesimally rigid in the hyperquadrics, whereas those cut by hyperplanes through the origin are not infinitesimally rigid in the hyperquadrics. Furthermore, we prove that any hypersurface in semi-Euclidean space containing some open subset of a hyperplane is not infinitesimally rigid.

AN-6

The Robin function for second order elliptic systems

Jongkeun Choi
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We develop a theory of Green's functions for divergence form, second order strongly elliptic systems with Robin boundary condition, which is called Robin function, in a domain Ω, where Ω is an open connected set in $\mathbb{R}^n$, $n \geq 3$, such that a Friedrichs type inequality holds there. We derive the Robin function with various interior estimates under the assumption that weak solutions of the elliptic system satisfy an interior Hölder continuity estimate. We also establish global estimates for the Robin function under an additional assumption that weak solutions of the system with zero Robin data on a portion of the boundary satisfy a certain natural local boundedness estimate. Moreover, we prove that such the local boundedness estimate for weak solutions of the system is in fact equivalent to the global point-wise bound for the Robin function. We present a unified approach valid for both the scalar and vectorial cases, and discuss several applications of the results.

AN-7

A new selection method for resolution and basis function selection in wavelet series

Chun Gun Park*
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Inyoung Kim
Virginia Polytechnic Institute and State University

In this paper we propose a new method to determine a primary resolution and wavelet basis functions in wavelet regression. Most wavelet shrinkage methods focus on thresholding the wavelet coecients, given a primary resolution which is usually determined by the sample size. However, both a primary

resolution and the basis functions are aected by the shape of an unknown function rather than the sample size. Unlike existing methods, our method does not depend on the sample size and also takes into account the shape of the unknown function. Our approach is developed using a Bayesian framework. Our approach can reduce the computational burden if the chosen primary resolution is too high. We demonstrate the advantage of our approach using a simulation study and a real data application.

AN-8

Generalized Fourier-Feynman transform and its applications

Teuk Seob Song

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In 1993, Chung,Park and Skoug introduced generalized Feynman integrals. In 1995, Huffman, Park and Skoug developed generalized Feynman integrals and applied the theory to Fourier-Feynman transform and convolution theory. In this talk, we deal with various type for the generalized Fourier-Feynman.

Discrete mathematics

DS-1

Error estimates for the second order semi-discrete stabilized Gauge-Uzawa method for the Navier-Stokes equations

Jae-Hong Pyo

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The Gauge-Uzawa method [GUM], which is a projection type algorithm to solve the time depend Navier-Stokes equations, has been constructed and enhanced to apply to more complicated problems. Even though GUM possesses

many advantages theoretically and numerically, the studies on GUM have been limited on the first order backward Euler scheme except normal mode error estimate. The goal of this paper is to research the 2nd order GUM. Because the classical 2nd order GUM needs rather strong stability condition, we modify GUM to be unconditionally stable method using BDF2 time marching. The stabilized GUM is equivalent to the rotational form of pressure correction method and the errors are already estimated only for the Stokes equations. In this paper, we will evaluate errors of the stabilized GUM for the Navier-Stokes equations. We also prove that the stabilized GUM is an unconditionally stable method for the Naiver-Stokes equations. So we conclude that the rotational form of pressure correction method is also unconditionally stable scheme and that the accuracy results are valid for the Navier-Stokes equations.

DS-2

Sequential estimation with beta protection for the exponential hazard rate

Yu-Seon Jang

Kangnam University, ysjang@kangnam.ac.kr

Let $X_1, X_2, \cdots, X_n$ be a random sample having common exponential density with unknown mean μ. In the sequential confidence interval estimation with beta protection for the exponential hazard rate $\theta = 1/\mu$, the stopping rule

$$\tau = \min\left\{n \in \mathbb{N} : n \geq z_{\alpha/2}^2 \hat{\theta}^2/d^2 + 2\right\},$$

where d is the half length of prescribed confidence interval I_n and $\hat{\theta}$ is UMVU estimator for θ, is proposed. These estimated intervals I_τ are required to satisfy the coverage probability $P(\theta \in I_\tau) \geq 1-\alpha$ and the beta protection $P(\theta - \delta(\theta) \in I_\tau) \leq \beta$, where α, β, and the function $\delta(\cdot)$ are given by experimenter.

DS-3

A note on classification of two directional paper folding sequences

Nahmwoo Hahm*

University of Incheon, nhahm@incheon.ac.kr

Junghee Yun

Incheon Science High School

In 1970, C. Davis and D. E. Knuth introduced number representations of paper folding sequences. In 2012, J. Yun and N. Hahm computed the exact numbers of downward and upwards in $(R_pR_q)^n$. Note that there are 16 $(XY)^n$ when $X, Y \in \{R, L, U, D\}$. In this talk, we show that they are classified into exactly two types.

DS-4

New functional inequalities and applications

Choonkil Park*

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Shahrokh Farhadabadi

Urmia University

We introduce the following useful functional inequalities:

$$\begin{aligned}
&\left\|nf\left(\frac{x+y}{n}\right)+f\left(\frac{x-y}{n}\right)-f(y)\right\| \le \left\|f(x)-f\left(\frac{y-x}{n}\right)\right\|,\\
&\left\|f\left(\frac{x+y+z}{2}\right)+f\left(\frac{x+z-y}{2}\right)+f\left(\frac{x+y-z}{2}\right)-f(y)-f(z)\right\|\\
\le\ &\left\|f(x)-f\left(\frac{y+z-x}{2}\right)\right\|,\\
&\left\|f\left(\frac{\sum_{i=1}^{p}x_i}{p-1}\right)+\sum_{i=2}^{p}f\left(\frac{\sum_{\substack{j=1\\j\neq i}}^{p}x_j-x_i}{p-1}\right)-\sum_{i=2}^{p}f(x_i)\right\|\\
\le\ &\left\|f(x_1)-f\left(\frac{\sum_{j=2}^{p}x_j-x_1}{p-1}\right)\right\|
\end{aligned}$$

and apply to investigate J^*-homomorphisms and J^*-derivations.

DS-5

Fuzzy stability of Euler-Lagrange quadratic mappings

Juri Lee*
Chungnam National University, annans@hanmail.net
Hark-Mahn Kim
Chungnam National University

In this talk, we investigate the Hyers–Ulam stability of an Euler–Lagrange quadratic functional equation

$$f(kx+ly)+f(kx-ly)=kl[f(x+y)+f(x-y)]+2(k-l)[kf(x)-lf(y)]$$

in fuzzy Banach spaces, where k, l are nonzero rational numbers with $k \neq l$.

DS-6

Robustly transitive sets with inverse shadowing property on Riemannian manifolds

Bowon Kang*
Chungnam National University, wldusbb@daum.net
Namjip Koo
Chungnam National University
Manseob Lee
Mokwon University

In this talk we recall the notion of the inverse shadowing property which is a "dual" notion of the shadowing property. Using Hayasi connecting lemma and the generic of transitivity, we show that if $f|_\Lambda$ satisfies a inverse shadowing property on each robustly transitive set Λ, then Λ is a hyperbolic basic set.

DS-7

Multiplicity results for the elliptic system using the minimax theorem

Hyewon Nam
Namseoul University, hwnam@nsu.ac.kr

We have studied the relations between mulitiplicity of solutions and sour terms of the wave equation. In order to investigate the relations, the mountain pass theorem, the degree theory, linking theorem, etc. are used for a variety of topological methods. In this paper, we have extended the one-dimensional wave system

$$\begin{aligned} u_{tt} - u_{xx} + \mu g(u+v) &= f(u+v) \qquad \text{in } (-\frac{\pi}{2}, \frac{\pi}{2}) \times R, \\ v_{tt} - v_{xx} + \nu g(u+v) &= f(u+v) \qquad \text{in } (-\frac{\pi}{2}, \frac{\pi}{2}) \times R, \end{aligned}$$

with Dirichlet boundary condition. We find the linking inequlaity and apply this inequlaity to investigate the existence and multiplicity of solutions.

DS-8

A classification of transitive links and periodic links

Dongseok Kim*
Kyonggi University, dongseok@kgu.ac.kr
Sejeong Bang
Yeungnam University

We generalized the periodic links to transitive links in a 3-manifold M. We find a complete classification theorem of transitive links in a 3-dimensional sphere $\mathbb{R}^3$. We study these links from several different aspects including polynomial invariants using the relation between link polynomials of a transitive link and its factor links.

강원경기수학회 2013년도 정기총회

- 일시 : 2013.6.21(금) 18:20 - 18:50
- 장소 : 강원대학교 춘천캠퍼스 자연과학대학 2호관

- 강원경기수학회

강원경기수학회 2013년도

정 기 총 회

1. 일　　시 : 2013년 6월 21일 (금) 18 : 20 – 18 : 50

2. 장　　소 : 강원대학교 춘천캠퍼스 자연과학대학 2호관

3. 식　　순　　사회 : 총무이사

(1) 개회 ..... 회장

(2) 임원소개 ..... 총무이사

(3) 공로패수여 ..... 회장

(5) 재정보고 ..... 재무이사

(6) 감사보고 ..... 감사

(4) 학술지 업무보고 ..... 편집이사

(7) 업무보고 및 사업계획 보고 ..... 회장

(8) 안건토의 ..... 회장

(9) 폐회 ..... 회장

안 건

가. 감사보고 및 인준

* 재정보고 : 재무이사 표재홍 교수님(강원대)

* 감사보고 : 감사 천기상 교수님(성균관대)

나. 학술지 지원신청 - 한국과학기술 총연합회 경과보고

* 경과보고 및 종합의견 : 김광휘 회장(강남대)

다. 학술지 평가 - 한국과학기술 총연합회 경과보고

* 경과보고 및 종합의견 : 김광휘 회장(강남대)

라. 공로패 수여

* 전임회장 김 홍 철 교수님(강릉원주대)

마. 학회 활성화에 대한 의견 수렴

* 회원 및 재정 확충, 종합 의견

바. 기타

* 학회 홈페이지 구축과 Online 투고시스템 시연

  설명 : 표재홍 이사(강원대)

수입·지출 내역서

산정기간 2012. 5. 31 – 2013. 6. 3

내 용	수 입	지 출
▶ 우편물(논문)발송		2,157,260
▶ 전화 요금		56,620
▶ 논문편집수당		5,190,000
▶ 기타잡비		275,700
▶ 논문제작(북스힐)		3,875,550
▶ 학회 도메인 구입 및 홈페이지 착수금		1,017,000
▶ 회의비		331,200
▶ 초청강사료 및 논문발송 인건비		649,200
▶ 학회개최경비 및 간담회 경비		1,905,300
▶ 대한수학회 지원금	1,358,000	
▶ 논문게재료	10,510,000	
▶ 학회등록비	560,000	
▶ 서울여대 지원금	50,000	
▶ 강릉,성균관,인천대학교 산학협력단 지원금	690,000	
▶ 한국과총지원금2차	1,700,000	

(다음 페이지에 계속)

수입·지출 내역서

산정기간 2012. 5. 31 – 2013. 6. 3

내 용		수 입	지 출
▶ 이자		10,275	
합 계		14,878,275원	15,457,830원
차 액 (수입-지출)		14,878,275원-15,457,830원 =-579,555원	
이월금(5월31일)	신한은행	10,837,518원	
잔 액		10,257,963원	

2012년도 강원경기수학회 감사보고

강원경기수학회의 2012년도 정기총회 이후 (2012. 5. 31)부터 2013년 정기총회 이전(2013. 6. 3)까지의 재정 집행 사항을 감사한 결과 일반회계의 원칙에 따라 적정하게 집행되었음을 보고 드립니다.

2013년 6월 21일

강원경기수학회 감사 천 기 상

감사 노 재 옥

2013년도 사업계획 및 예산(안)

1. 사업계획 (2013. 1. 1 - 2013. 12. 31)

(1) 2013년도 정기총회 및 연구발표회 장소 - 강원대학교,
6월 21일(금요일)
(2) 학회홈페이지 도메인 등록 및 홈페이지 개편
(3) 강원경기수학회지 (제 21권 1, 2, 3, 4호) 간행
(4) 강원경기수학회지를 온라인 학술지와 병행하여 발간
(5) 강원경기수학회지 편집위원 개편
(6) 강원경기수학회지 온라인 투고시스템 도입
(7) 기타 협의 사항
- 학술지발행 지원신청(5월신청)

2. 세입세출예산(안) (2013. 1. 1 - 2013. 12. 31)

계획 중

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강원도 춘천시 퇴계동 690
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M/E/M/O