

한국동물분류학회

워크숍

- 주제: AI 기반 생물자원 활용 전문인력 양성 워크숍
- 일시: 2022. 8. 10. (수) 14:00 - 17:15
- 장소: 경북대학교 글로벌플라자 201호

14:00 - 14:05 사업 소개

김창배
상명대학교, 사업책임자

14:05 - 14:10 환영사

황의욱
경북대학교, 한국동물분류학회 회장

14:10 - 14:15 축사

노진학
국립생물자원관 생물자원활용부 부장

14:15 - 14:20 기념사진 촬영

14:20 - 14:50 Perspectives on Mathematical Modelling and Artificial Intelligence Applied to Ecological and Biological Resources

전태수
생태와미래지식인협동조합; 부산대학교 명예교수

Session I: AI 기반 생물자원 활용: 생태·분류 분야

좌장: 박영철(강원대학교)

14:50 - 15:10 Deep Learning-based Image Classification of Endangered Species and Wildlife

Jung-Il Kim
Department of Biotechnology, Sangmyung University

15:10 - 15:30 Identification and Prediction of Environmental Factors Using Transcriptome based on Machine Learning

Tae-June Choi
Department of Biotechnology, Sangmyung University

15:30 - 15:50 Species Identification for Environmental DNA-based Biodiversity Monitoring Using Supervised Machine Learning

Hyung-Eun An
Department of Biotechnology, Sangmyung University

15:50 - 16:00 휴식

Session II: AI 기반 생물자원 활용: 생물산업 분야

좌장: 김창배(상명대학교)

16:00 - 16:20 Identification of Novel Functional Peptides by Implementing Artificial Intelligence-Based Methods
Min Kyoung Shin
Department of Life Science, Dongguk University-Seoul

16:20 - 16:40 Functional Peptide Discovery via Deep Screening and Generative Model
Byungjo Lee
Department of Life Science, Dongguk University-Seoul

16:40 - 17:10 자문위원 총평

17:10 - 17:15 폐회사
김창배
상명대학교, 사업책임자

심포지엄 I

- 주제: Comparative Genomics and Metabarcoding Analysis for Studying Biodiversity
- 일시: 2022. 8. 11. (목) 15:30 - 17:40

사회: 최현기(국립생물자원관)

15:30 - 15:40 개회사
황익욱
경북대학교, 한국동물분류학회 회장

좌장: 석호영(영남대학교)

15:40 - 16:15 Genetic Signals of Adaptation in Genes and Genomes: A Lesson from the Bivalve Mussels
Joong-Ki Park
Division of EcoScience, Ewha Womans University

16:15 - 16:50 Understanding the Origins and Diversity of the Invasive Pinewood Nematode in Korea via a Population-scale Whole Genome Sequencing
Choongwon Jeong
School of Biological Sciences, Seoul National University

16:50 - 17:25 Environmental DNA (eDNA) Metabarcoding Analysis for Biodiversity Assessment of Freshwater Community
Jiyeon Kim
Animal & Plant Research Department, Nakdonggang National Institute of Biological Resources

17:25 - 17:40 휴식

총 회

- 일시: 2022. 8. 11. (목) 17:40 - 18:30
 - 장소: 경북대학교 글로벌플라자 203호
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심포지엄 II

- 주제: DNA 바코드 연구와 적용의 실제 (Research and Practical Use of DNA Barcode)
- 일시: 2022. 8. 12. (금) 10:50 - 12:10
- 장소: 경북대학교 글로벌플라자 203호

좌장: 최세웅(목포대학교)

10:50 - 11:10 자생생물 유전자 바코드 연구의 현황과 향후 활용 방안
변혜우
국립생물자원관

11:10 - 11:30 국립공원 핵심유전자원(생물자원) 연구 동향
김지영
국립공원공단 국립공원연구원

11:30 - 11:50 식물검역해충 DNA바코드 분석의 현재와 미래
김민지
농림축산검역본부 호남지역본부 시험분석과

11:50 - 12:10 법생물(동물) DNA바코드 분석의 표준가이드라인 연구
최은화
경북대학교 계통진화유전체학연구소

구두발표

- 일시: 2022. 8. 12. (금) 09:00 - 10:50
- 장소: 경북대학교 글로벌플라자 203호

좌장: 남동하(전남대학교)

09:00 - 09:08 Machine Learning-based Identification and Prediction of Environmental Factors Using Transcriptome of *Daphnia magna*
Tae-June Choi
Department of Biotechnology, Sangmyung University

09:08 - 09:16 Image Classification of the Genus *Amazona* (Psittaciformes: Psittacidae) by Object Detection Model based on Deep Learning
Jung-Il Kim
Department of Biotechnology, Sangmyung University

09:16 - 09:24 Consideration of Functional vs Neutral Aspects of MHC Allelic Diversity Reveals How the Polymorphism has Persisted in *Pungitius* Species
Dong-Young Kim
Department of Life Sciences, Yeungnam University

09:24 - 09:32 Historical and Anthropogenic Factors Affecting the Population Genomic Structure of *Squalidus multimaculatus*
Jeonghun Kim
Department of Life Sciences, Yeungnam University

09:32 - 09:40 Preliminary Assessment of Current Status of Eurasian Otter (*Lutra lutra*) Captive Population in South Korea, Using Studbook Information

Jee Hyun Kim

Conservation Genome Resource Bank for Korean Wildlife and Research Institute for Veterinary Science, College of Veterinary Medicine, Seoul National University

09:40 - 09:48 Population Genetic Study of Korean Brown Frog, *Rana coreana* in Korean Peninsula

Daecheol Jeong

Research Institute for Veterinary Science, College of Veterinary Medicine, Seoul National University

09:48 - 09:56 휴식

좌장: 임종욱(원광대학교)

09:56 - 10:04 Detecting Cryptic Diversity in Korean Endemic Harvestmen (Arachnida, Opiliones, *Kaolinonychus*) using Integrative Taxonomy and Machine Learning Methods

Dongyoung Kim

Department of Biological Science, Ajou University

10:04 - 10:12 Molecular Phylogeny and Evolutionary Hypothesis of Laelapidae (Acari: Mesostigmata) Inferred from Their Host

Jaeseok Oh

Laboratory of Insect Biosystematics, Department of Agricultural Biotechnology, Seoul National University

10:12 - 10:20 Discovery of Sympatric Distributions and Possible Geographic Barriers for Leptonetid Spiders (Araneae: Leptonetidae) based on Multi-gene Analysis

Jong-Hwa Oh

Laboratory of Insect Biosystematics, Department of Agricultural Biotechnology, Seoul National University

10:20-10:28 Molecular Phylogenetic, Population Genetic Studies of *Nodularia douglasiae* and *Nodularia breviconcha* in the Korean Peninsula based on *CO1* and *16S rRNA*

Gyeongmin Kim¹²

¹*Department of Biology Education, Teachers College & Institute for Phylogenomics and Evolution, Kyungpook National University;*

²*School of Life Sciences, Graduate School, Kyungpook National University*

10:28 - 10:36 Complete Mitochondrial Genome of Vector Mosquito *Culex pipiens* from South Korea

Ashraf Akintayo Akintola

School of Industrial Technology Advances, Kyungpook National University

10:36 - 10:44 Comparative Study of the Hemolymph Microbiome between Live and Recently Dead American Lobsters *Homarus americanus*

Jibom Jung

Division of EcoScience, Ewha Womans University
