

PROGRAMME

Sunday, 8 September 2024

- 15:00-18:00 **SIBE CRASH COURSE** (SZN Conference room, detailed info below)
18:00-20:00 **REGISTRATION OPENING & WELCOME COCKTAIL** (SZN DaDoM Museum)

Monday, 9 September 2024

Palazzo Pacanowski - University of Napoli Parthenope, Via Generale Parisi, 13

- 8:30-9:00 Registration
9:00-9:15 Welcome
9:15-10:00 **Congress Opening Lecture: Dario Riccardo Valenzano**
Evolution and Ecology of Aging

Symposium 1:

“Species adaptive response against climate changes”

Chairs: Gabriele Procaccini, Salvatore Cozzolino

- 10:00-10:30 **Invited lecture: Lázaro Marín Guirao**
Assisting seagrass forests to evolve from victims to allies against climate change
- 10:30-11:00 **Coffee break with poster session**
- 11:00-11:15 Ocean Acidification will improve the response capacity of *Posidonia oceanica* against sea warming
JESSICA PAZZAGLIA, João Silva, Luca Ambrosino, Isabel Barrote, Katia Pes, Lázaro Marín-Guirao, Gabriele Procaccini
- 11:15-11:30 MicroRNA-mediated responses to environmental stress in marine microalgae
GABRIELE DE FALCO, Luca Ambrosino, Marco Miralto, Chiara Lauritano, Maria Luisa Chiusano, Sabrina Carrella
- 11:30-11:45 Genomics of Lessepsian fish invaders: investigating the evolutionary dynamics behind the successful colonisation of the Mediterranean Sea
FRANCESCO GIANNELLI, Samuele Broccardo, Ernesto Azzurro, Antonis Petrou,

Marina Chiappi, Grigorios Skouradakis, Josephine Paris, Flávia A. Nitta Fernandes, Lorena Ancona, Tilman Alpermann, Mark Dimech, Emanuela Fanelli, Emiliano Trucchi

- 11:45-12:00 Heavy metal pollution reduces resilience to climate change in mangrove crabs: a case study from Hong Kong
STEFANO CANNICCI, Lyle D. Vorsatz, Rebeka J. Butler, Sara Fratini
- 12:00-12:15 Facing climate warming: life history traits and transcriptomic response in a pan-Antarctic tardigrade species
JOEL VINCENZI, Ilaria Giovannini, Chiara Manfrin, Tiziana Altiero, Samuele Greco, Roberto Guidetti, Piero Giulianini, Lorena Rebecchi
- 12:15-12:30 Living beyond the edge: impacts of climate change on rock lizards at the niche margin
Pierluigi Bombi, FABRIZIO CALO', Daniele Salvi
- 12:30-12:45 A multidisciplinary research approach reveals a significant biological impact of global warming on the Italian freshwater crab *Potamon fluviatile* (Brachyura: Potamidae)
ELEONORA BELLO, Davide Nespoli, Sara Fratini, Stefano Cannicci
- 12:45-13:00 Translating ecological models into genomic simulations: a spatially-explicit reconstruction of muskox genomic data responding to climate change and human hunting
Aleksandra L. Pach, Martin Petr, Fernando Racimo, ELISABETTA CANTERI
- 13:00-14:00 **Lunch Break**

Symposium 2:

“Development and evolution: an ecological perspective”

Chairs: Maria Ina Arnone, Salvatore D'Aniello, Gabriele Andreatta

- 14:00-14:45 ***** THE EMBO KEYNOTE LECTURE***: Kristin Tessmar-Raible**
All light, everywhere? A glimpse on the many roles of non-visual photoreceptors
- 14:45-15:00 Adapting to a rotating world: the molecular regulation of circadian clock in echinoderm larvae
TANYA ALESSANDRO, Rossella Annunziata
- 15:00-15:15 Loss-of-function of a photoreceptor extends animal growth and lifespan
GABRIELE ANDREATTA, Federico Scaramuzza, Aida Ćorić, Birgit Poehn, Lukas Orel, Kristin Tessmar-Raible

- 15:15-15:30 Responses to light pollution: investigations on the physiology and behaviour of zebrafish at different developmental stages
Gaia De Russi, Elena Frigato, Giuditta Codogno, Chiara Uccello, Elia Gatto, Chiara Vergata, Alessio Iannucci, Stefano Cannicci, Elena Maggi, Sara Fratini, Tyrone Lucon-Xiccato, CRISTIANO BERTOLUCCI
- 15:30-15:45 Sensory control of sea urchin larva development and growth: interplay between light and food availability
MARIA COCURULLO, Periklis Paganos, Giovanna Benvenuto, John D Kirwan, Maria Ina Arnone
- 15:45-16:00 Conservation of cis-regulatory syntax underlying deuterostome gastrulation
LORENA BUONO, Giovanni Annona, Marta Silvia Magri, Santiago Negueruela, Rosa Maria Sepe, Filomena Caccavale, Ignacio Maeso, Maria Ina Arnone, Salvatore D'Aniello
- 16:00-16:30 **Coffee break with poster session**
- 16:30-16:45 Pleiotropy drives the cryptic persistence of male reproduction in asexual stick insects
GIOBBE FORNI, Barbara Mantovani, Sasha Mikheyev, Andrea Luchetti
- 16:45-17:00 Unraveling the genome of *Congerina kusceri*: evolutionary insights into subterranean adaptations in a unique cave-dwelling bivalve
MARCO GERDOL, Magdalena Grgić, Samuele Greco, Kyle E McElroy, Annalisa Scapolatiello, Edward S Rice, Wesley C. Warren, Nicolas Rohner, Jeanne M. Serb, Helena Bilandžija
- 17:00-17:15 The mechanisms of bivalve Doubly Uniparental Inheritance of mitochondria: from comparative molecular evolution to early embryo transcriptomic data
GIOVANNI PICCININI, Mariangela Iannello, Federica Salatiello, Giobbe Forni, Filippo Nicolini, Umberto Valdrè, Fabrizio Ghiselli, Enrico D'Aniello, Liliana Milani
- 17:15-17:30 Rhythmic contractions of the yolk of goldfish, domesticated ornamental fish with diverse dorsoventral patterning traits
PAUL GERALD LAYAGUE SANCHEZ, Chen-Yi Wang, Ing-Jia Li, Kinya G. Ota
- 17:30-17:45 Thyroid hormones trigger stomach differentiation during metamorphosis of the common clownfish (*Amphiprion ocellaris*)
STEFANO VIANELLO, Fiona Lee, SiKai Wutacha Roux, Vincent Laudet
- 17:45-18:00 Cell Diversity in Sponges
Clifton Lewis, Eleonora Rossi, Matthew Goulty, Carlos Rivera-Rivera, Vengamanaidu Modepalli, Davide Pisani, ROBERTO FEUDA
- 20:30-22:30 **Outreach Event: SKETCH YOUR EVO** (SZN DaDoM Museum, detailed info below)

Tuesday, 10 September 2024

Palazzo Pacanowski - University of Napoli Parthenope, Via Generale Parisi, 13

Symposium 3:

“Modern systematics: improving the way biodiversity is captured, explored and understood”

Chairs: Carmelo Fruciano, Andrea Luchetti

- 8:30-9:00 **Invited lecture: Daniele Silvestro**
New models to measure biodiversity using artificial intelligence
- 9:00-9:15 The evolution of corallivory in the Coralliophilinae (Gastropoda: Muricidae)
ELISA NOCELLA, Giulia Fassio, Dario Zuccon, Nicolas Puillandre, Maria Vittoria Modica, Marco Oliverio
- 9:15-9:30 Opsin diversity in TARA
GIACINTO DE VIVO, Eric Pelletier, Roberto Feuda, Salvatore D'Aniello
- 9:30-9:45 Using Environmental DNA to characterize deep-sea benthic annelid communities: a case study in the western Mediterranean Sea
SARA VERNI, Gabriele Cananzi, Joachim Langeneck, Sergio Stefanni, Luigi Musco, Alberto Castelli
- 9:45-10:00 FAIRy tales of microendemism: disclosing dung beetle diversity and evolution in the Eastern Arc Mountains biodiversity hotspot (Tanzania) using integrative taxonomy and semantic technologies
GIULIO MONTANARO, Vasily V. Grebennikov, Michele Rossini, Alessandro Grapputo, Enrico Ruzzier, Gimo M. Daniel, Werner P. Strümpher, James P. Balhoff, Jennifer C. Girón, Max Söderholm, Sergei Tarasov
- 10:00-10:15 Hidden lineages in well-studied butterflies: the case of *Erebia euryale* and *E. ligea* in the South-Eastern Alps
LUCA GREGNANIN, Enrico Carta, Alessandro Grapputo, Roberto Magnolini, Lucio Bonato
- 10:15-10:30 The phylogeny of 3000 *Saccharomyces cerevisiae* strains inferred by metagenomic approach
ALESSIA TATTI, Niccolò Carlino, Aitor Blanco-Míguez, Samuel Breselge, Andrea Silverj, Paul D. Cotter, Edoardo Pasolli, Nicola Segata, Omar Rota Stabelli
- 10:30-11:00 **Coffee break with poster session**

- 11:00-11:15 *T. panzhihuanense* long reads genome assembly and genome-scale divergence time estimation reveal Cenozoic diversification of truffles followed by lineage-specific expansion of Gypsy LTRs
JACOPO VUJOVIC, Jacopo Martelossi, Yue Huang, Alessia Tatti, Omar Rota Stabelli, Fabrizio Ghiselli, Alessandra Zambonelli
- 11:15-11:30 Unveiling pseudo-cryptic speciation in storm petrels: insights from genomics, morphometrics, and bioacoustics
JOAN FERRER OBIOL, Federico De Pascalis, Nilo Merino Recalde, Josephine R. Paris, Tycho Anker-Nielssen, Yuri Albores-Barajas, Anne N. M. A. Ausems, Martin Austad, Luis Betanzos-Lejarraga, Bernard Cadiou, Santi Catchot, Claudio Ciofi, Miren Ioar de Guzmán, Angelos Evangelidis, Vicki Friesen, Rafael Garaitia, Alejandro García Herrera, Marcel Gil-Velasco, Elena Gómez-Díaz, Jacob González-Solís, Epur S. Hansen, Alessio Ianucci, Jens-Kjeld Jensen, Mark Jessopp, Panagiotis Latsoudis, Bruno Massa, Ben Metzger, Juan Navedo, Danae Portolou, Petra Quillfeldt, Raúl Ramos, Beneharo Rodriguez, Ángel Sallent, Andreu Rotger, Ana Sanz-Aguilar, Cecilia Soldatini, Jogvan Thomsen, Jacopo G. Cecere, Diego Rubolini
- 11:30-11:45 Heterogeneous relationship between rates of speciation and rates of phenotypic evolution in a hyperdiverse fish clade
Gabriele Sansalone, CARMELO FRUCIANO

Symposium 4:

“An evolutionary approach to the biology and ecology of behaviour”

Chairs: Donato Grasso, Danilo Russo

- 11:45-12:15 **Invited lecture: Mirjam Knörnschild**
A comparative perspective on vocal communication and cognition in bats
- 12:15-12:30 Not all neighbours stink. Responses to conspecific odours in species with different social structures
SOFIA RIZZI, Franziska Schäfer, Jakob Skwara, Saskia Schirmer, Gerald Kerth
- 12:30-12:45 Fight or flight? Alternative mating strategies and the iconic male polymorphism of the European stag beetle
DANIELE GIANNETTI, Enrico Schifani, Emanuele Fior, Alessandro Campanaro, Donato A. Grasso
- 12:45-13:00 Female reproductive fluids: current insights, new approaches, and future perspectives
LIVIA PINZONI, Clelia Gasparini, Lisa Locatello, Maria Berica Rasotto

- 13:00-14:00 **Lunch break / Meeting "Gruppo Italiano di Genetica e Genomica della Conservazione"**
(detailed info below)
- 14:00-14:15 Diet comparison between two dwarf elephant species from the Pleistocene of Sicily thorough dental mesowear analysis
MANUELA GIALANELLA, Gilberto Artioli, Gregorio Dal Sasso, Maraigabriella Fornasiero, Giuseppe Fusco, Marzia Breda
- 14:15-14:30 Interspecific differences in behavioural responses of wild ungulates and mesocarnivores towards recolonising wolves
FRANCESCO FERRETTI, Irene Belardi, Lorenzo Lazzeri
- 14:30-14:45 The role of dietary omega-3 long chain poly-unsaturated fatty acids on cognition development and ecological performance in brown trout
STEFANO MARI, Libor Závorka
- 14:45-15:00 Swimmers or climbers? Eels' individual migratory strategies are explained by complex syndromes
GAIA DE RUSSI, Cristiano Bertolucci, Mattia Lanzoni, Angelo Bisazza, Paolo Domenici, Giuseppe Castaldelli, Tyrone Lucon-Xiccato

Symposium 5:

"Phylogeography and conservation genomics"

Chairs: Alessio Iannucci, Andrea Chiochio

- 15:00-15:30 **Invited lecture: Angelica Crottini**
Capitalizing on genetics and genomics to inform conservation in a biodiversity hotspot
- 15:30-15:45 Disentangling the Genetic Variation in the Hybridization Process Among Marmoset Monkeys of the Genus *Callithrix* (Primates: Platyrrhini) in Rio de Janeiro, Brazil
Adrielle Cezar, João Alves de Oliveira, Luana Maroja, ALESSANDRO GRAPPUTO, Marcelo Weksler
- 15:45-16:00 The end of the American dream; how the barn swallow (*Hirundo rustica*) returned to Europe
GIANLUCA LOMBARDO, Marta Cavallini, Andrea De Benedictis, Giorgio Binelli

- 16:00-16:30 **Coffee break with poster session**
- 16:30-16:45 From Wild to Tamed and Back: demographic reconstruction of Sardinian sheep from whole-genome sequences
VIVIANA FLORIDIA, Marianne Dehasque, Miranda Pedro Morell, Paolo Mereu, Monica Pirastru, Nicolò Columbano, Salvatore Naitana, Giovanni Giuseppe Leoni, Torsten Günther, Mario Barbato
- 16:45-17:00 Disentangling the global phylogeography of *Caretta caretta* by whole mitochondrial DNA analysis
LIVIA TOLVE, Alessia Cherin, Alberto Abreu-Grobois, David J. Duffy, Luisa Garofalo, Abdulmaula Hamza, Alessio Iannucci, Elizabeth Labastida-Estrada, César P. Ley-Quiñónez, Raúl Llera-Herrera, Astrid Luna-Ortiz, M`Rabet Salima Machkour, Adolfo Marco, Dimitris Margaritoulis, Giovanni Parise, Oguz Turkozan, Salvatore Urso, Alan Zavala-Norzagaray, Cinta Pegueroles, Marta Pascual, Claudio Ciofi, Carlos Carreras
- 17:00-17:15 Infer the past to understand the future: past demographic history and environmental niche in tortoises and terrapins
MARCELLA SOZZONI, Alessio Iannucci, Giulio Formenti, Massimo Bellavita, Sara Fratini, Guido Chelazzi, Erich Jarvis, Chiari Natali, Vladimir Trifonov, Anna Brüniche-Olsen, Claudio Ciofi
- 17:15-17:30 The Geological-Ecological Molecular Clock Calibration: when ecological vicariance aids tree dating. A treefrog case study
Michael J. Jowers, Jesús Muñoz Pajares, John Weber, Jeanette Arkle, Salvador Arenas-Castro, Simon Y. W. Ho, Gilson A. Rivas, John C. Murphy, Amaël Borzée, Alexander R. Pyron, Marcos Perez-Losada, Mayke De Freitas, Roger J. Downie, Gregorio Moreno-Rueda, GIOVANNI FORCINA, Santiago Sánchez-Ramírez
- 17:30-17:45 *Esox flaviae* population genomics revealed entangled origin and differentiation of the Italian populations
NICOLA ZADRA, Diego Micheletti, Heidi Hauffe, Andrea Gandolfi
- 17:45-18:00 Genome-wide diversity and population structure in the African buffalo (*Syncerus caffer*) in Mozambique
SIMONE SABATELLI, Marika Di Civita, Carlos C.M. Bento, Paolo Franchini, Gabriele Senczuk, Paolo Colangelo
- 20:00 **SOCIAL DINNER – SZN**

Wednesday, 11 September 2024

Palazzo Pacanowski - University of Napoli Parthenope, Via Generale Parisi, 13

8:30-9:15 **Cavalli-Sforza award lecture: Tanja Stadler**
Public health in the light of evolution

Symposium 6:

“The wild side of population genomics”

Chairs: Francesca Raffini, Roberto Biello

- 9:15-9:45 **Invited lecture: Joana Isabel Meier**
The roles of hybridisation and chromosomal rearrangements in rapid adaptive radiation
- 9:45-10:00 Dissecting the structural and regulatory genomic basis of hypertrophied lip adaptations in Neotropical cichlid fishes
PAOLO FRANCHINI, Ming Li, Bai Wei Lo, Hulseley C. Darrin, Axel Meyer
- 10:00-10:15 Genomics of plant adaptation to the harsh Arctic-alpine environment
Tjeng Bastiaan, Sharma Mehak, Grindeland Helene, ANDREA FULGIONE
- 10:15-10:30 Genomic variation along replicate environmental gradients reveals parallel patterns of local adaptation in wall lizards
STEPHANIE SHERPA, Viola Di Canio, Martina Muraro, Benedetta Barzaghi, Andrea Dalpasso, Mattia Falaschi, Benedetta Gambioli, Raoul Manenti, Silvio Marta, Paolo Momigliano, Emanuele Berilli, Elia Lo Parrino, Stefano Scali, Federico Storniolo, Leonardo Vignoli, Marco A. L. Zuffi, Roberto Sacchi, Daniele Salvi, Gentile Francesco Ficetola
- 10:30-11:00 **Coffee break with poster session**
- 11:00-11:15 Methylation and ageing in King penguins
FLAVIA NITTA FERNANDES, Mikaela Hukkanen, Simon Jarman, Leyla Davis, Maria Elena Figueroa, Céline Le Bohec, Miina Ollikainen, Robin Cristofari
- 11:15-11:30 Phenotypic Evolution in the Apennine Brown Bears: How Much Does Epigenetics Matter?
PAOLO COLANGELO, Ian Marc Bonapace, Paolo Ciucci, Paolo Franchini, Laura Gramolini, Emanuela Solano, Anna Loy
- 11:30-11:45 Human-bear coexistence: genomic and behavioral consequences in a small Italian population

GIULIA FABBRI, Roberto Biello, Maëva Gabrielli, Sibelle Vilaça, Patricia Santos, Beatrice Sammarco, Silvia Fuselli, Alessio Iannucci, Claudio Ciofi, Emiliano Trucchi, Andrea Benazzo, Giorgio Bertorelle

11:45-12:00 Is domestic introgression affecting the Italian wolf behavior and potential interactions with human-dominated environments?

DANIELE BATTILANI, Madrigal Jazmin Ramos, Shyam Gopalakrishnan, Tom Gilbert, Cristiano Vernesi, Elena Fabbri, Edoardo Velli, Federica Mattucci, Paolo Ciucci, Romolo Caniglia

12:00-12:15 High within- and between- individual structural variability is related to transposable elements insertions and deletions in bivalves

JACOPO MARTELOSSI, Andrea Luchetti, Alexander Suh, Fabrizio Ghiselli, Valentina Peona

12:15-12:30 The evolutionary history of Italy from Mesolithic to the Middle Ages: lessons from ancient genomes

RAJIV BOSCOLO AGOSTINI, Stefania Vai, Maria Teresa Vizzari, Silvia Perretti, Federico De Pizzol, Alissa Mittnik, Donata Luiselli, Olga Rickards, Luca Sineo, Nicoletta Volante, David Emil Reich, Silvia Ghirotto, David Caramelli

12:30-12:45 Pompeii: exploring the genomics of a city frozen in time

DEBORA FERRARESI, Costanza Cannariato, Maria Teresa Vizzari, Silvia Perretti, Stefania Vai, Alessandra Modi, Martina Lari, Elena Pilli, Valeria Amoretti, Silvia Ghirotto, Gabriel Zuchtriegel, David Caramelli, Guido Barbujani

12:45-13:45 **Lunch break**

Symposium 7:

“Miscellaneous”

Chair: Maria Vittoria Modica

13:45-14:00 Independent evolution of intracellularity in a host-associated bacterial lineage
MICHELE CASTELLI, Tiago Nardi, Giulio Petroni, Davide Sasserà

14:00-14:15 The Evolution and Characterization of the RNA Interference Pathways in Lophotrochozoa

ALESSANDRO FORMAGGIONI, Gianmarco Cavalli, Mayuko Hamada, Tatsuya Sakamoto, Federico Plazzi, Marco Passamonti

14:15-14:30 Exploring selective pressures acting on genes involved in immunity in Malagasy mantellid frogs

GIADA MASCOTTO, Roberto Del Amparo, Angelica Crottini

- 14:30-14:45 Conservation of the oscillatory genes among the marine angiosperm *Zostera marina* and land plants: a comparative approach
ALESSIA RICCARDI, Luca Ambrosino, Marco Miralto, Miriam Ruocco, Marlene Jahnke, Gabriele Procaccini, Maria Luisa Chiusano, Emanuela Dattolo
- 14:45-15:00 Unraveling the Function and Evolution of Retinoic Acid Signaling with the Mollusk *Mytilus galloprovincialis*
FEDERICA SALATIELLO, Angelica Miglioli, Valeria Tarallo, Giovanna Benvenuto, Rosa Maria Vitale, Samuele Greco, João E. Carvalho, Alberto Pallavicini, Rémi Dumollard, Michael Schubert, Marco Gerdol, Enrico D'Aniello
- 15:00-15:15 Evolution of West Nile virus between Europe and Africa
ANDREA SILVERJ, Giulia Mencattelli, Marie Henriette Ndione, Moussa Moise Diagne, Valentina Curini, Liana Teodori, Marco Di Domenico, Rassoul Mbaye, Alessandra Leone, Maurilia Marcacci, Alioune Gaye, ElHadji Ndiaye, Diawo Diallo, Massimo Ancora, Barbara Secondini, Valeria Di Lollo, Iolanda Mangone, Andrea Bucciaccchio, Andrea Polci, Giovanni Marini, Roberto Rosà, Nicola Segata, Gamou Fall, Cesare Cammà, Federica Monaco, Mawlouth Diallo, Omar Rota Stabelli, Oumar Faye, Annapaola Rizzoli, Giovanni Savini
- 15:15-15:30 The cellular mechanism of aging from hypothesis to scientific evidence
GIACINTO LIBERTINI
- 15:30-15:45 **Short coffee break**
- 15:45-17:15 **Society meeting and new board election**
- 17:15-17:45 Awards: Dr. Darwin Prize (best 2023-2024 paper on Evolutionary Medicine, short talk by the winner), SIBE prize, best poster, best talk
- 17:45 Concluding remarks