



EXPANDING FRONTIERS IN CROP GENETICS

FIRST ANNOUNCEMENT

The Board of the Italian Society of Agricultural Genetics (SIGA) informs Members and researchers operating in the fields of agricultural genetics, breeding and biotechnology, that the LXVII Annual SIGA Congress will take place in Bologna from Tuesday 10 to Friday 13 September 2024. The venue will be 'Plesso Belmeloro', Università degli Studi di Bologna, via Beniamino Andreatta 8, 40126 Bologna. The venue is located in the city center of Bologna.

The Congress will include seven oral sessions and one workshop, as shown in the attached programme. Each session will include invited talks by Italian or international researchers, and offered oral and poster presentations. Session 6 "Breeders' toolbox for plant improvement", scheduled for the afternoon of Thursday 12, will be organized by the "Next Generation SIGA" group. Contributions whose first author is no more than 35 years old are invited for this session. The workshop "Social impact of plant biotechnologies: challenges and opportunities" is scheduled for the afternoon of Thursday 12 September.

The official language of the Congress is English.

The Annual Members' Assembly will be held at the Congress venue on Wednesday 11 September from 18:30 to 20:00.

The social event will be held on Thursday 12 September at 20:30 at The Sidney Hotel (Via Michelino 73, 40127 Bologna). On this occasion the "SIGA 2024 Congress" awards will be assigned to the best posters, as selected by the SIGA Board.

SCIENTIFIC CONTRIBUTIONS AND SUBMISSION RULES

The SIGA Board, as Scientific Committee of the Congress, invites scientific contributions in the form of oral or poster presentations for the following sessions:

- Session 1 - Single cell -omics, innovative interactomics and beyond
- Session 2 - Plant developmental genetics to improve our crops
- Session 3 - Understanding and improving nutrition and health-related traits of crops
- Session 4 - Coping with environmental challenges: from genetics to phenomics
- Session 5 - Plant genetics strategies against biotic challenges for agroinnovations
- Session 6 - Breeders' toolbox for plant improvement
- Session 7 - Getting to the field: plant genetics for the seed and nursery sectors

The description of the contents of each session can be found below. The Scientific Committee will make a selection among the offered oral presentations and will communicate its decision to the authors by the end of July. Contributions not selected for oral presentation will all be accepted as posters.

The posters will be available for viewing by the participants in the dedicated rooms throughout the congress. Authors will be asked to be present at their poster at the times that will be reported in the final programme.

The abstracts, in English, must be sent exclusively online through the Congress website (<http://www.sigaannualcongress.it>). The Abstract submission is open and the deadline is June 14th.

Each communication, oral or poster, must be associated with a single corresponding Author registered at the Congress. The corresponding Author may or may not be the first Author. The corresponding Author of a communication can be co-Author in other communications but not with the qualification of corresponding Author.

The corresponding Author must indicate:

- (a) the identification number of the session to which the scientific contribution belongs
- (b) the preferred form of presentation of the work to the Congress, oral or poster

The Scientific Committee will evaluate the request and will inform the corresponding Author of the chosen presentation form by the end of July.

Only the abstracts of the papers actually presented at the Congress, both oral and poster, will be published in the proceedings, which will be available on the SIGA website under an ISBN identifier.

Oral communications and the text of the slides and posters must be in English. Poster format should be 70 cm wide x 100 cm high.

The Scientific Committee reserves the right to make any changes to the program that may be necessary for scientific and/or organizational reasons.

REGISTRATION AND FEES

Registration will be received, **by August 27th**, only online through the Congress website: <http://www.sigaannualcongress.it>.

The participation fee can be paid by bank transfer or directly at the Congress venue **as full fee**.

Participants' status	Early bird fee (before June 14)	Full fee (from June 15 to August 27)
Tenured – SIGA Member	€ 340	€ 380
Tenured – not SIGA Member	€ 390	€ 430
Non tenured – SIGA Member	€ 150	€ 190
Non tenured – not SIGA Member	€ 200	€ 240

The registration fee includes access to the congress venue, the congress kit, coffee breaks and lunches. The welcome cocktail and the social event will be offered by SIGA.

To take advantage of the fee reserved for Members, the participant must be up-to-date with the payment of the membership fee for the year 2024. For any question concerning your membership please contact the SIGA Secretariat.

To take advantage of the early bird fee, payment should be made by 14 June, 2024.

To encourage participation of young, non-tenured researchers, a reduced registration fee will be applied. The **non-tenured** status applies to **students, including PhD students, Post-docs and scholarship holders**. The certification of the non-tenured status should be issued in writing by the PI of the applicant or by the Director of the Department or Research Institution, and submitted online at registration.

CANCELLATION OF REGISTRATION

In the event of cancellation of registration, the refund of the fee must be requested within 10 days from the closing of the Congress. The refund, minus any applicable bank charges, will be made within a month following the closing of the Congress.

SIGA AWARDS 2024 FOR THE BEST PRESENTATION IN AN INTERNATIONAL SCIENTIFIC JOURNAL

The three winner papers of the SIGA 2024 Award for the best publication in international scientific journals on agricultural genetics, breeding and biotechnology will be presented by the awarded Authors on Wednesday 11 September at 17:15.

SIGA CONGRESS AWARDS 2024

Poster communications by non-tenured participants (as first Author) will be eligible for **SIGA Congress 2024 prizes**. The candidates should apply when submitting the abstract and should be registered by 31 July 2024. The posters will be evaluated by the SIGA Board. The prizes (of 200 Euro each) will be awarded during the social event and exclusively to the first Author, if he/she is present at the event.

HOTEL BOOKING

Congress participants will have to make their own hotel reservations by contacting the hotels directly. In order to take advantage of the discounted rates reserved for Congress participants, the Local Organizing Committee recommends to book accommodation as soon as possible.

In the immediate vicinity of the congress venue, hotels, bed & breakfasts, residences and restaurant services are available. The list of facilities with special rates is published on the Congress website (<http://www.sigaannualcongress.it>). To take advantage of special rates, at booking, it is necessary to mention the participation in the SIGA Congress.

The Local Organizing Committee may update the list of hotels offering discounts to Congress participants; therefore, it is advisable to check the Congress website just before making your reservation.

Il Segretario
Daniele Rosellini

Il Presidente
Silvio Salvi

IMPORTANT DEADLINES

14 JUNE 2024

a) last date for early bird registration fee

b) last date for abstract submission

31 JULY 2024

Last date for registration (at full fee) for candidates to
“SIGA Congress awards 2024” (non-tenured participants)

27 AUGUST 2024

Last date for registration

LXVII ANNUAL CONGRESS OF THE ITALIAN SOCIETY OF AGRICULTURAL GENETICS

EXPANDING FRONTIERS IN CROP GENETICS

BOLOGNA, 10 - 13 SEPTEMBER, 2024

CALL FOR ABSTRACTS

Session 1 - Single cell -omics, innovative interactomics and beyond

This session focuses on breakthroughs in single cell -omics, interactomics and other innovative approaches that can have transformative effects on the study of plant genetics, development and response to environmental factors. The session also aims to showcase how these technologies integrate with computational biology, propelling forward the field of plant genetics, breeding and agricultural innovation.

Session 2 - Plant developmental genetics to improve our crops

Basic studies in plant development allow us to understand how plant growth is regulated under optimal and stressful conditions. Such information is important to modulate the plants' response to changing conditions like flooding, salinity, heat stress and soil impoverishment. Depending on their growing conditions, different crops cope with a range of difficulties that can affect their productivity. Also, comparing developmental mechanisms in modern crops with landraces and wild relatives can be an important tool to design new crops via *de novo* domestication. This session deals with the molecular bases of plant development, the perception of environmental stimuli and the strategies of adaptation, also from evolutionary and comparative perspectives, that provide important tools to improve our crops.

Session 3 - Understanding and improving nutrition and health-related traits of crops

The correlation between food and health is well known and consumers are paying growing attention to this aspect. A dialogue between physicians and plant breeders is necessary to develop new crops capable of meeting the needs of consumers and decreasing the so-called hidden hunger. Genetic diversity and plant breeding, including NGTs, are key elements in this regard, also for the development of plants that serve as a tool for identifying the factors triggering food-related pathologies or, on the contrary, having positive effects on health. This session welcomes presentations dealing with the study/development of crops aimed at improving and understanding health-related issues.

Session 4 - Coping with environmental challenges: from genetics to phenomics

Environmental challenges require novel strategies to ensure food security in a context of population growth, uncertainty of climate changes and ever-growing competition for water and land resources in agriculture. Bridging genetic variation to the complex plant phenome is therefore necessary for the improvement of crop productivity and resilience. This session calls for presentations focused on the integration of genomics and innovative phenomics approaches to support selection of resilient crops. Studies deciphering the genetic architecture of abiotic stress-related traits via linkage and genome-wide association mapping are welcome.

Session 5 - Plant genetics strategies against biotic challenges for agroinnovations

Biotic stresses, such as bacteria, fungi, viruses, nematodes and parasitic plants, pose a significant threat in agriculture, resulting in reduced yields, economic losses, and, in most cases, an increased reliance on pesticides. This session encourages presentations that address this

issue by using effective genetics approaches to enhance plant resistance. Innovative solutions, including genetic engineering and breeding programs, are particularly welcome.

Session 6 – Breeders’ toolbox for plant improvement

This session is devoted to techniques and technologies used in plant breeding. The presentations will be focused on genetic characterization and breeding for traits of interest by using innovative methods (e.g. marker-assisted selection, genomic selection, genome editing, genomic and phenomic prediction). This session is organized by the Next Generation SIGA (NGS), which encourages young participants to share novel research insights and strategies.

Session 7 - Getting to the field: plant genetics for the seed and nursery sector

Mutual communication between basic or applied research and industry is the basis for innovative ideas and products that can reach farmers' fields and, ultimately, civil society. In many cases, public-private partnerships are the only ones capable of addressing important social challenges. In this session we welcome research works that present, or are based on, public-private collaborative projects (whether bilateral or in larger consortia of any kind) in any field of activity related to plant breeding.

LXVII SIGA ANNUAL CONGRESS

"Expanding frontiers in crop genetics"

BOLOGNA, 10 - 13 SEPTEMBER, 2024

PRELIMINARY PROGRAMME

TUESDAY, SEPTEMBER 10

- 13:00 – 14:30** **Registration**
- 14:30 – 15:00** **Opening ceremony**
Chairpersons: Silvio Salvi, Roberto Tuberosa
Welcome address by institutional and local Authorities, University of Bologna, CREA
- 15:00 – 17:00** **Session 1 - Single cell -omics, innovative interactomics and beyond**
Chairpersons: Riccardo Aiese Cigliano, Giorgia Batelli
- 15:00 – 15:30 **Invited Lecture**
Stefania Giacomello - KTH Royal Institute of Technology (SE)
A journey in plant spatial transcriptomics and beyond
- 15:30 – 17:00 Oral communications
- 17:00 – 17:30** **Keynote talk**
Edward Buckler - Cornell University (USA)
From climate change to AI: Improving agriculture by learning from global biological diversity
- 17:30 – 19:15** **Poster viewing**
- 19:15 – 20:30** **Welcome cocktail**

WEDNESDAY, SEPTEMBER 11

- 09:00 – 10:30** **Session 2 - Plant developmental genetics to improve our crops**
Chairpersons: Vittoria Brambilla, Lucio Conti
- 09:00 – 09:30 **Invited Lecture**
Keisuke Nagai - Nagoya University (JP)
Elucidation of the flooding tolerance mechanism through internode elongation in rice
- 09:30 – 10:30 Oral communications
- 10:45 – 11:15** **Coffee break and poster viewing**

- 11:15 – 13:15** **Session 3 - Understanding and improving nutrition and health-related traits of crops**
Chairpersons: Stefania Masci, Angelo Santino
- 11:15 – 11:45 **Invited Lecture**
Fred Brouns - Maastricht University (NL)
Nutrition and health-related traits of crops: is developing "safe and healthy wheat for all" an opportunity or utopia
- 11:45 – 13:15 Oral communications
- 13:30 – 15:00** **Lunch break**
- 15:00 – 17:00** **Session 4 - Coping with environmental challenges: from genetics to phenomics**
Chairpersons: Pasquale Tripodi, Michela Janni
- 15:00 – 15:30 **Invited Lecture**
Fabio Fiorani - Forschungszentrum Jülich GmbH (G)
Phenotyping applications for shoot and root traits
- 15:30 – 17:00 Oral communications
- 17:15 – 17:55** **SIGA Young Research Award 2024**
Dedicated to Alessandro Bozzini, Luigi Monti, Mirella Sari Gorla
Chairpersons: Silvio Salvi, Daniele Rosellini
- 18:00 – 18:30** **Coffee break and poster viewing**
- 18:30 – 20:00** **SIGA General Assembly**

THURSDAY, SEPTEMBER 12

- 09:00 – 10:30** **Session 5 – Plant genetics strategies against biotic challenges for agroinnovations**
Chairpersons: Clizia Villano, Luca Nerva
- 09:00 – 09:30 **Invited Lecture**
Sebastian Schornack - Cambridge University (UK)
Exploiting conserved development regulators to achieve oomycete pathogen resistance in monocots and dicots
- 09:30 – 10:30 Oral Communications
- 10:45 – 11:45** **Coffee break and poster viewing**
- 11:45 – 12:45** **Session 5 – (cont.)**
- 11:45 – 12:45 Oral communications
- 13:00 – 14:30** **Lunch break**

- 14:30 – 16:15** **Session 6 – Breeders' toolbox for plant improvement**
organized by Next Generation SIGA
Chairpersons: Chiara Delvento, Antonio Lippolis
- 14:30 – 15:00 **Invited Lecture**
Julia Engelhorn - Max Planck Institute for Plant Breeding Research (G)
Towards a cis-code: Identification of functional cis-regulatory variants at unprecedented scale
- 15:00 – 16:15 Oral communications
- 16:30 – 17:00** **Coffee break and poster viewing**
- 17:00 – 19:00** **Workshop – Social Impact of plant biotechnologies: challenges and opportunities**
Chairpersons: Domenica Nigro, Nicola Pecchioni
- 17:00 – 17:30 *Agnès Ricroch - Paris-Saclay University (F)*
The impact of regulation of new genomic technologies on agricultural research and development
- 17:30 – 18:00 *Inez Hortense Slamet-Loedin - IRRI (F)*
Title to be defined
- 18:00 – 19:00 Round table
Discussant: Anna Meldolesi
- 20:30** **Social event** (*The Sidney Hotel*)

FRIDAY, SEPTEMBER 13

- 09:30 – 11:45** **Session 7 – Getting to the field: plant genetics for the seed and nursery sector**
Chairpersons: Silvia Giuliani, Roberto Tuberosa
- 09:30 – 10:00 **Invited Lecture**
Dirk Inzè - Ghent University (BE)
Multiplex gene editing for tackling complex traits in crops
- 10:00 – 11:45 Oral communications
- 11:45 – 12:00** **Closing ceremony**
Chairpersons: Silvio Salvi, Stefania Masci