

GIG-01 Young Crystallographers

Reported Period: September 2023 – August 2024

Report Date: 14th August 2024

Reported by: Mateja Pisačić (co-chair), Marta Morana (co-chair), Helena Butkiewicz (secretary)

1. Introduction (50 words max.)

During the previous period, GIG-01 has continued with its usual activities related to meeting the interests and needs of Young Crystallographers' throughout the ECA community, but also participated in variable activities of promotion the crystallography and ECA in general.

2. GIG website:

<https://ecanews.org/groups/gig-01-young-crystallographers/>

3. Number of ECA individual members registered with the GIG according to <https://ecanews.org/groups/gig-01-young-crystallographers/> GIG-01 Young Crystallographers (2024) – 61

4. Existence of a GIG mailing list: Yes

Address of the mailing list: no public address available (mails of registered ECA members)

Number of members in the GIG mailing list: ~70

The GIG maintains communication with its members through regular updates on the group's Facebook page, X and per direct mail, that proved as a good way in fast and efficient dissemination of relevant information amongst members. The Facebook group and X account (@EYCryst) is maintained by our webmaster, the chairs and the secretary, and a link to the page is available on the GIG-01 website.

5. Approximate total number of researchers involved in the GIG (please indicate the basis for the estimate).

668, taken from the Facebook group (<https://www.facebook.com/groups/223680720994589/>).

6. List of MS organised by the GIG at the last ECM

GIG-01 did not organize any MS during the ECM33 in Versailles, however GIG-01 supported MS45: "What is inside the black box?" and Philipp Hans (GIG-01) co-chaired this session.

During the current ECM34 in Padova, GIG-01 successfully organized one MS, "How to address questions, doubts and struggles of a young crystallographer" with Bill Clegg (GIG-02) and Mateja Pisačić (GIG-01) as chairs.

GIG-01 also supports microsymbosia proposed by GIG-02 ("Things we no longer need to know – or do we?" and "Common mistakes and problems in using black boxes"), and GIG-03 ("Approaches and tools for learning crystallography efficiently and avoiding misconceptions" and "What I gained from Erice") to be held during the ECM34.

7. Prizes sponsored/coordinated

GIG-01 again participated as organizer and coordinator of the "Science Slam" competition that will be held during the ECM34 (on August 27th at 18:00) where three prizes, sponsored by STOE, will be ensured.

8. Past Activities

- Organization of the “**ECA lunch webinars**” - a successful series of online talks that are organised once per month by steering committee composed of GIG-01 members and advisory board composed of Udo Heinemann and Arie van der Lee. ECA Lunch webinars include all SIGs and GIGs and are intended to promote every interest group in the European Crystallographic Association, but also to strengthen and vitalize the European crystallographic community.

List of webinars organized in a period of September 2023 – August 2024 (with a pause in December and May due to the unforeseen circumstances):

5th October 2023

Dr. Catherine Dejoie: *High-resolution X-ray powder diffraction – Application to the study of CO₂ trapping in microporous materials*

23rd November 2023

Dr. Tatjana Barthel: *Crystallographic Fragment Screening at the HZB – Workflow, Tools and Procedures*

25th January 2024

Prof. Bill Clegg: *Why do so many crystal structures remain unpublished?*

15th February 2024

Dr. Sergi Plana Ruiz: *Liquid phase electron crystallography: the path to electron diffraction from protein crystals at room temperature*

14th March 2024

Prof. Martin U. Schmidt: *Nanocrystalline organic compounds: Crystal structure determination from XRPD and PDF data – What is possible today?*

11th April 2024

Dr. Ross John Angel: *How to evaluate published high-pressure experiments?*

6th June 2024

Dr. Gianluca Iori: *BEATS: synchrotron computed microtomography for the Middle East*

Webpage for more information: <https://ecanews.org/education/eca-webinars-stay-tuned/>

- Regular correspondence amongst GIG-01 members in planning and executing interest group activities.
- Frequent interaction with GIG-02 and GIG-03 officers via email or online meetings in discussing mutual interests of general interest groups in general and related to organization of activities during the European Crystallographic Meetings.

9. Future/Programmed Activities

(1) Activities programmed during the 34th European Crystallography Meeting (ECM34), Padua, Italy (26th–30th August 2024)

- **“European Young Crystallographers Satellite Meeting”** at ECM34, Padova, Italy

date and time of the event: August 26th, 2022, 9:00 – 15:00

venue: University of Padova – DIBIO, Fiore di Botta (Room OF)

organizers: Marta Morana (GIG-01), Mateja PISAČIĆ (GIG-01)

number of participants: 38 (25 active + 13 passive)

contributions: **12 oral** presentations (15 minutes)

13 posters together with 5-minute **flash presentations**

short description:

During the meeting, young colleagues had the opportunity to present their research in a friendly environment. The contributions covered a wide span of different crystallographic topics, which initiated fruitful discussions and exchange of ideas.

webpage for more information:

<https://www.ecm34.org/satellites/europeanyoungcrystallographerssatellitemeeting>

- **“Science Slam” contest**

date and time of the event: August 27th, 2024, 18:00–19:00

venue: conference venue, Aula Mantegna

organizers: Helena Butkiewicz (GIG-01), Mateja PISAČIĆ (GIG-01), STOE (sponsor of the prizes)

number of participants: min. 4 – max. 8

contributions: short 5-minute presentations

short description:

During the contest, each contestant will have 5 minutes to present crystallographic topic (of their choice) to the audience in a fun, innovative and attractive way. After the presentations, audience will decide on the winners (the three best) by the volume of the applause.

webpage for more information: <https://www.ecm34.org/social-program>

- **Keynote lecture by Helena Butkiewicz (GIG-01 secretary):** *Detecting the unseen: living with neurological disorder*

date and time of the event: August 29th, 2024, 17:00–18:00

venue: conference venue, Mantegna 2

- **GIG-01 meeting**

- **Microsymposium “How to address questions, doubts and struggles of a young crystallographer” (MS37)** proposed by GIG-01, and supported by GIG-02 and GIG-03

date and time of the event: August 27th, 2024, 10:00–12:00

venue: conference venue, ANTENORE

chairs: Bill Clegg (GIG-02), Mateja PISAČIĆ (GIG-01)

invited speakers: **Arianna Minelli, Hans-Beat Bürgi**

session speakers: **Joachim Breternitz, Alexandr Virovets, Gary Nichol**

short description:

This microsymposium aims to address different aspects of the challenges that young crystallographers face on a daily basis and should therefore welcome contributions that are related to tackling

challenges associated with problematic structures (e.g., dealing with twinning, disordered structures, structural defects, etc.), but also those related to questions about the quality of the solved structures. We would also like to include other problematic issues such as coping with stress (i.e., mental health) during PhD and postdoctoral periods and also advice on career development.

- **“Young Crystallographers Mixer”** (August 28th, 22:00 h, PARCO MILCOVICH / ARCELLA BELLA, Padova) in cooperation with ECM34 organizers

(2) Activities planned during the 35th European Crystallography Meeting (ECM35), Poznań, Poland and Lviv, Ukraine, (August, 2025):

- Organization of the **“European Young Crystallographers Satellite Meeting”**.
- Organization of the **“Young Crystallographers Mixer”**.
- Organization of the **“Science Slam”** contest.
- Microsymposia planned to be proposed to ECM35 Programme committee GIG-01 (supported by GIG-02 and GIG-03):

1. How to... navigate research funding programmes?

2. Crystal(lographers) under pressure: mental health during your career.

GIG-01 also supports microsymposia and keynote proposed by GIG-02 (*“Publishing crystallography”*, *“Optimising structure refinement: fundamentals and tips”* and *“Exploiting crystallographic databases in solving, refining, and validating crystal structures”*) and GIG-03.

(3) Other activities.

- Continuation of the organization of **“ECA Lunch webinars”**.

10. Other Matters

GIG-01 actively works on gaining more visibility and members, but also on a cooperation with other interest groups, especially GIG-02 and GIG-03, to establish firm ground for supporting young crystallographers in different aspects of their work, but also to discover what young crystallographers have to offer to the European crystallographic community.

11. Brief annual activity report (100 words max.)

GIG-01 has continued with its previous activities to promote crystallography (especially through organization of ECA Lunch webinars), but also interests and needs of young crystallographers through organization of Satellite meetings before ECMs, Science Slams and Young Crystallographer’s mixers to encourage networking and possible cooperations, even beyond scientific events through our webpage and social media group pages. Moreover, we push forward to revive and enlarge the number of National Member Representatives. GIG-01 actively participated in organization of the events during ECM34, and will continue for the upcoming ECM35. We are intensifying the interaction with GIG-02 and GIG-03 to establish a firm collaboration among GIGs.

12. List GIG officers, names and emails, and their main functions in the GIG:

Co-chairs	Marta Morana , University of Florence, Italy marta.morana@unifi.it
	Mateja Pisačić , University of Zagreb, Croatia mpisacic@chem.pmf.hr , mateja.pisacic@gmail.com

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