

SIG3 - Special Interest Group on Aperiodic Crystals

Reported Period: July 2023 - June 2024

Report Date: 19.8.2024

Reported by: Emilie Gaudry, Sander van Smaalen, Michal Dusek

1. Introduction.

The activities of SIG#3 concentrate on spreading the knowledge about aperiodic crystallography in conferences and workshops as well as through the WEB site on Aperiodic Crystals.

2. SIG website:

SIG3 has a website common with IUCr Commission on Aperiodic Crystals (CAC). The following links refer to the same website:

<http://sig3.ecanews.org>

<http://aperiodic.iucr.org>

3. Existence of a SIG mailing list: Yes

Address of the mailing list: none

Number of members in the SIG mailing list : 31

Currently, we maintain only a distribution list for making various announcements. People interested in this mailing list can subscribe through the SIG#3 web page.

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

120 (estimate based on the attendance of MS organized by SIG#3, the interest in giving lectures in those MS, attendance of the Aperiodic conferences, and the number of individual members.)

5. List of MS, plenary and keynote lectures with the SIG participation at the last ECM Meeting

ECM34 offers one microsymbosia on “Aperiodic order and Complex structures” with two invited talks (L. Bindi and M. Diaz-Lopez) and 3 contributed talks (Sander van Smaalen, Leila Noohinejad, Anna Gağor)

6. Prizes related to Aperiodic Order

The *IUCr Commission on Aperiodic Crystals* endorse the Janssen-AnPang Tsai prize which recognizes outstanding contributions to the field of Aperiodic Crystals, from theory to applications (nominees must be under 45 years of age by the submission deadline). The first session awarded two exceptional researchers who have significantly enhanced our understanding of aperiodic order : Stefan Förster is recognized for his groundbreaking discovery and study of ultra-thin films of decagonal quasicrystals with the chemical formula BaTiO_3 and Tsunetomo Yamada is honored for his pioneering work on determining the atomic structure of icosahedral quasicrystals in superspace and investigating the diffuse scattering of phasons. Their contributions, each within their specialized fields, have opened new perspectives and provided valuable insights into the properties and applications of aperiodic crystalline phases. Congratulations to the winners for their outstanding contributions to science.

7. Past Activities other than Microsymbosia at ECM meeting

Title: Aperiodic Caen, 11th International Conference on Aperiodic Crystals (24-28 June 2024, Caen, France)

Number of Participants: around 80

Level of involvement of SIG in the activity:

- ECA Individual members registered with the SIG involved in the organizing committee
- ECA Individual members registered with the SIG involved as lecturers

Short Description: Members of SIG3 participated in lectures and organization

Title: ICCOM International conference on complex orders in condensed matter (24-29 Sept 2023, Evian, France)

<https://complex-orders.grenoble.cnrs.fr/>

Number of Participants: ~100

Level of involvement of SIG in the activity:

- ECA Individual members registered with the SIG involved in the organizing committee
- ECA Individual members registered with the SIG involved as lecturers

Short Description: Members of SIG3 were involved in lectures and organization

Title: Twenty-Sixth Congress and General Assembly of the International Union of Crystallography (22-29 August 2023, Sydney, Australia)

Number of Participants: ~2000 (hybrid meeting)

Level of involvement of SIG in the activity:

- ECA Individual members registered with the SIG involved in the organizing committee
- ECA Individual members registered with the SIG involved as lecturers

Other Sponsors/Organizers: IUCr

Short Description: Members of SIG3 have participated in lectures and organization

Title: Jana Ad Hoc Workshops (Prague, Czech Republic)

Number of Participants: ~20

Level of involvement of SIG in the activity:

- ECA Individual members registered with the SIG involved in the organizing committee
- ECA Individual members registered with the SIG involved as lecturers
- endorsed (SIG logo on the web page/leaflets)

Sponsored by ECA? No

Other Sponsors/Organizers: Institute of Physics, Prague

Short Description: Small workshop on various topics connected with software Jana2006. Members of SIG3 are the main organisers of the event.

Title: JANA2020 Workshop @ MLZ (18-20 October 2023, Garching, Germany)

Number of Participants: ~30

Level of involvement of SIG in the activity:

- ECA Individual members registered with the SIG involved in the organizing committee
- ECA Individual members registered with the SIG involved as lecturers

Other Sponsors/Organizers:

Short Description: Members of SIG3 have participated in lectures and organization

9. Future/Programmed Activities (July 2024 – July 2025)

Title : EcmecAC Euroschool (3-8 November 2024, Jülich, Germany)

The Euroschool will focus on intermetallic compounds, advanced synthesis and characterisation techniques. More information at <https://er-c.org/index.php/conferences/euroschool/>

One member of SIG3 is involved in lectures.

Title : International Conference on Quasicrystals (June 2025, Nancy, France)

Members of SIG3 are involved in lectures and organization of microsymbosia

Title : European Crystallographic Meeting (ECM-35, Poznań, Poland and Lviv, Ukraine, August 2025)

Members of SIG3 are involved in lectures and organization of microsymbosia

Title : Conference Modern Trends in Inorganic Chemistry (December 14-17, 2024, IIT Kharagpur, India)

Members of SIG3 are involved in lectures and organization of microsymbosia

Title: Jana Ad Hoc Workshops (Prague, Czech Republic)

Expected Number of Participants: ~20

Level of involvement of SIG in the activity:

- ECA Individual members registered with the SIG involved in the organizing committee
- ECA Individual members registered with the SIG involved as lecturers
- endorsed (SIG logo on the web page/leaflets)

Short Description: Small workshop on various topics connected with software Jana2006. Members of SIG3 will be the main organisers of the event.

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

Activities of SIG#3 were focused on workshops and conferences. The most notable event in the field of aperiodic crystallography was the Aperiodic Conference in Caen, France

12. List SIG officers, name and e-mail, and specify their main function in the SIG:

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Supplementary Materials.

None