

***SIG3 - Special Interest Group on Aperiodic Crystals***

***Reported Period: 2015-2016***

***Report Date: 31 July 2016***

***Reported by: Artem Abakumov (Chair) and Michal Dusek (Secretary)***

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**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 web site:**

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. Number of ECA individual members registered with the SIG according to (<http://www.xray.cz/eca/im-payment.htm>)**

87

**4. Existence of a SIG mailing list: Yes**

Address of the mailing list: none

Number of members in the SIG mailing list : 29

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

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

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

**6. List of MS, plenary and keynote lectures organized by the SIG at the last ECM**

ECM29, Rovinj, Croatia

- Keynote lecture: Ron Lifshitz - Quasicrystals in soft condensed matter
- MS 24. Short range order and diffuse scattering  
<<http://ecm29.ecanews.org/programme/microsymposia/#collapse24>>
- MS 25. Magnetic structures  
<<http://ecm29.ecanews.org/programme/microsymposia/#collapse25>>
- MS 26. Modulated, modular and composite materials  
<<http://ecm29.ecanews.org/programme/microsymposia/#collapse26>>
- MS 29. Quasi crystals and aperiodic materials  
<<http://ecm29.ecanews.org/programme/microsymposia/#collapse29>>

**7. Prizes sponsored/coordinated**

None

**8. Past Activities other than Microsymposia at IUCr congress**

**Title: 8th Conference on Aperiodic Crystals - Aperiodic 2015 (30 August - 4 September Prague, Czech Republic)**

Number of Participants: 134

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: CAC, Czech and Slovak Crystallographic Association , IUCr, European C-MAC, ICDD, Rigaku, Bruker, HPST, NanoMEGAS

Short Description: The eighth of the triannual conferences Aperiodic devoted to all aspects of aperiodic crystals was held at Brevnov Monastery in Prague, Czech Republic. The conference was attended by 134 delegates from 25 different countries, 22 young scientists were supported from IUCr funding thank to the support of the Calendar Committee. Aperiodic 2015 was organized under the auspices of the Commission on Aperiodic Crystals of the International Union of Crystallography, the local organizer was the Czech and Slovak Crystallographic Association. Five days of the conference covered classical modulated structures, quasicrystals and magnetic structures, symmetry aspects, mathematical aspects, tiling theory, high pressure crystallography, diffuse scattering, lattice dynamics, physical properties, and commercial presentations. Honorary lecture “Usefulness and unusefulness of the superspace approach to aperiodic crystals” was held by the 2014 Ewald prize winner Ted Janssen.

**Title: The 3rd International School on Aperiodic Crystals (3- 8 July 2016, Antwerp, Belgium)**

Number of Participants: ~50

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

Sponsored by ECA? Yes

Other Sponsors/Organizers: University of Antwerp, C-MAC Euroschool, IUCr, CNRS

Short Description: Five-day school about aperiodic structures, covering basics of the theory and experimental approaches. In this school the basics of the analysis of aperiodic crystals were explained for a non-specialist target audience, i.e. Phd students or experienced scientists working in the field of crystallography, chemistry, material science or solid state physic and willing to have a basic understanding of aperiodic crystals.

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

Four workshops (26-29) listed in <http://jana.fzu.cz>

Number of Participants: 53

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

## **9. Future/Programmed Activities.**

**Title: The 30<sup>th</sup> Meeting of the European Crystallographic Association (Basel, Switzerland)**

Number of Participants: ~800

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 will participate in lectures and organization of microsymbiosia

**Title: 9th Workshop on Structural Analysis of Aperiodic Crystals (Bayreuth, 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
- endorsed (SIG logo on the web page/leaflets)

Sponsored by ECA? No

Other Sponsors/Organizers: German Association for Crystallography, university of Bayreuth  
Short Description: Four-day workshop about aperiodic structures

**Title: Jana Ad Hoc Workshops (Prague, Czech Republic)** (~ five workshops during the next year)

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
- 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

**Title: 13th International Conference on Quasicrystals (ICQ13), (Kathmandu, Nepal)**

Number of Participants: ~50

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

Sponsored by ECA? Yes

Other Sponsors/Organizers: University of Antwerp, C-MAC Euroschool

Short Description: Five-day conference bringing together specialists in quasicrystals

## **10. Other matters. (50 words max.)**

On January 27th 2016 passed away one of the founders of aperiodic crystallography, Aloysio Janner. Obituary is available at [http://www-xray.fzu.cz/sgip/doc/Aloysio\\_Janner.pdf](http://www-xray.fzu.cz/sgip/doc/Aloysio_Janner.pdf). The quasicrystal community lost Chris Henley: [http://www-xray.fzu.cz/sgip/doc/Chris\\_Henley.pdf](http://www-xray.fzu.cz/sgip/doc/Chris_Henley.pdf)

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

Activities of SIG#3 were focused on workshops and conferences and WEB activities. Most notable events in the field of aperiodic crystallography were the Aperiodic2015 conference in Prague and The 3rd International School on Aperiodic Crystals in Antwerp.

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

|                           |                              |           |
|---------------------------|------------------------------|-----------|
| A. Abakumov (Antwerp)     | artem.abakumov@ua.ac.be      | chair     |
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**Supplementary Materials.**

None