



**SIG No: 3**

**Reported Period: 2011-2012**

**Report Date: 15 May 2012**

**Reported by: Sander van Smaalen (Chair) and Michal Dusek (Secretary)**

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**1. Introduction.**

The activities of SIG#3 concentrate on conferences and workshops as well as on the maintenance of a WEB site on Aperiodic Crystals.

**2. SIG web site:**

SIG 3 url: <http://sig3.ecanews.org>

**3. Number of ECA individual members registered with the SIG according to**

<http://www.xray.cz/eca/im-payment.htm>

SIG3 Aperiodic Crystals: 39

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

**Address of the mailing list: none**

**Number of members in the SIG mailing list : 24**

Currently we maintain only a distribution list for making various announcements. People interested in this mailing list can subscribe through SIG3 web page.

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

50 (estimate based on the attendance of MS organized by SIG3, the interest in giving lectures in those MS and similar measures.)

**6. List of MS organized by the SIG at the last ECM**

No ECM in 2011

**7. Prizes sponsored/coordinated**

**8. Past Activities other than Microsymposia at ECM**

**Title: Aperiodic crystals for beginners, Alcalá de Henares 2011, IUCr satellite meeting**

Number of Participants: 40

Level of involvement of SIG in the activity:

ECA Individual Members registered with the SIG are involved in the organizing committee

ECA Individual Members registered with the SIG are involved as lecturers

Sponsored by ECA? No

Other Sponsors/Organizers: University of Alcalá; IUCr; Agilent technologies; Simap; Xenocs

Short Description: This two-day satellite meeting of IUCr congress offered a basic and tutorial introduction to structural analysis of aperiodic crystals. The general concepts of the higher-dimensional crystallography were introduced step-by-step and they were applied to a few organic and inorganic materials. A hands-on exercise was organized for simple examples.

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Report of SIG 3 (cont.)

**Title: XXII IUCr Congress**

Number of Participants: ~2500

Level of involvement of SIG in the activity:

ECA Individual members registered with the SIG are involved in the organizing committee

ECA Individual members registered with the SIG are involved as lecturers

Sponsored by ECA? No

Other Sponsors/Organizers:

Short Description: M. de Boissieu was a member of the international program committee. Keynote lecture **KN32** (Structure of quasicrystalline surfaces ) was given by Ronan McGrath. Two other keynote lectures were closely related with topics of SIG3: KN20 (Emil Makovicky: From plane groups to quasilattices: Hispano-Islamic art of the Alhambra, Cordoba and Sevilla) and KN33 (Anatoly M. Balagurov: Magnetic neutron crystallography - commensurate and incommensurate structures). Members of SIG3 participated as lecturers, chairs or co-chairs in the following microsymbosia: MS20 (Beyond Space-Group Symmetry in Periodic Structures); MS63 (Quasicrystals and Their Approximants: Structure and Physical Properties); MS69 (Crystallographic Methods and Software for Periodic and Aperiodic Crystals); MS79 (Electron Diffraction and Crystallography); MS88 (Crystal Chemistry and Physics of Modulated and Composite Crystals); MS96 (Complementary Use of Neutrons and Photons in Magnetism); MS98 (Complex Structure and Frustrated Systems: Simulation and Experiments)

**Title: Ad hoc Workshops on Jana2006, No 9,10,11,12**

Number of Participants: 54 (together)

Level of involvement of SIG in the activity:

ECA Individual Members registered with the SIG are involved in the organizing committee

ECA Individual Members registered with the SIG are 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 workshops organized on various topics about Jana2006. Participants select the topics through the web page [jana.fzu.cz](http://jana.fzu.cz) and workshops are organized continuously.

**Title: 3<sup>rd</sup> Shanghai Workshop of X-Ray Crystallography**

Number of Participants: 60

Level of involvement of SIG in the activity:

ECA Individual Members registered with the SIG are involved as lecturers

Sponsored by ECA? No

Other Sponsors/Organizers: IUCr

Short Description: Workshop on various topics of crystallography, including software Jana2006.

**9. Future/Programmed Activities.**

**Title:** ECM 27, August 2012

Number of Participants: unknown

Level of involvement of SIG in the activity:

ECA Individual members registered with the SIG are involved in the organizing committee

ECA Individual members registered with the SIG are involved as lecturers

Sponsored by ECA? Yes

Other Sponsors/Organizers: unknown

## Report of SIG 3 (cont.)

Short Description: Members of SIG3 will participate in lectures and organization of microsymbosia. A keynote lecture will be presented by nobel laureate D. Shechtman; a special MS on quasicrystals will take place in relation to this keynote lecture (Chairs: M. de Boissieu and S. Hovmöller).

**Title:** Aperiodic 2012, September 2012

Number of Participants: ~100

Level of involvement of SIG in the activity:

ECA Individual members registered with the SIG are involved in the organizing committee

ECA Individual members registered with the SIG are involved as lecturers

Sponsored by ECA? No

Other Sponsors/Organizers: The Australian National University; Rigaku; IUCr and other sponsors

Short Description: Aperiodic materials: crystallography, chemistry, physics and theory

**Title:** Jana Ad Hoc Workshops (max five workshops during the next year)

Number of Participants: 30-60

Level of involvement of SIG in the activity:

ECA Individual members registered with the SIG are involved in the organizing committee

ECA Individual members registered with the SIG are 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

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

The web page of SIG 3 at <http://sig3.ecanews.org/> is maintained by Michal Dusek. It contains information on conferences, computer programs, research groups on aperiodic crystals and publications dealing with aperiodic crystals with weekly updates. From the year 2011 the web page reports also on activities of the Commission on aperiodic crystals (IUCr). The integration of WEB sites is still in progress.

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

Activities of SIG#3 were focused on workshops and conferences. Most notable event of 2011 is the award of the 2011 Nobel prize in chemistry to D. Shechtman for his discovery of quasicrystals. This event will be celebrated at the next ECM (ECM27, August 2012 in Bergen, Norway) with a keynote lecture by D. Shechtman and a special microsymbosium on quasicrystals. The ad hoc workshops on Jana continue to be useful and widely visited.



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Report of SIG 3 (cont.)

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

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**Supplementary Materials.**

(List of all supplementary materials, if any, related to the SIG report)

- Addendum 1 to n (to be sent in separate files)