

Crystallography courses in Latin America

Diego Germán Lamas¹

¹CONICET / Escuela De Ciencia Y Tecnología - Universidad Nacional De San Martín, San Martín, Argentina
E-mail: diegoglamlas@gmail.com

The history of Crystallography in Latin America is very rich, probably starting with the pioneering work of Prof. Ernesto Galloni in Buenos Aires, Argentina, during the years 1930s and 1940s. He organized the first groups of Crystallography in the University of Buenos Aires and in the Institute of Experimental Medicine [1]. The first Crystallography courses were probably given in those years, but unfortunately no documentation can be found. The first regular course on Crystallography in Latin America was probably the one given by Prof. Nahum Joel in the University of Chile (in Santiago, Chile) since 1951 [2]. During the 1950s and 1960s regular courses on Crystallography were also given in Argentina, Brazil and Mexico.

The first international Crystallography course in Latin America was probably the "Latin American course on Pure and Applied Crystallography" held in Santiago, Chile, in 1959, which was the birth of the Ibero American Crystallographic Group [3]. This group organized several meetings and courses during 35 years. Unfortunately, due to economic problems and the long distances between the countries involved, this group was finally dissolved.

At present, there are an important number of regular local, national or international courses in Latin America, covering all kind of topics: single crystal X-ray diffraction, powder diffraction, fundamental crystallography, protein crystallography, crystallization methods, synchrotron radiation techniques, neutronic techniques, small-angle X-ray scattering, X-absorption spectroscopies, etc. Many of them are organized by national crystallographic associations, while others are due to the effort of research groups (sometimes these courses involve the cooperation of two or more groups).

In the last years, the number of Crystallography courses in Latin America has grown very fast. The figure shows the cities where courses or schools on Crystallography and associated techniques have been organized in the last five years. About 100 courses or schools were given in 60 different cities during this period. The International Year of Crystallography 2014 (IYCr2014) had a very important role in the promotion of this intense activity. In particular, four IUCr-UNESCO OpenLabs were carried out in Latin America during 2014, held in Argentina, Colombia, Mexico and Uruguay. The OpenLabs continued after 2014 in the context of the "Legacy of the IYCr2014" initiative and therefore three further OpenLabs were organized in Mexico (2015), Uruguay (2016) and Bolivia (2016). These advanced courses are very important to the region for many reasons: they promote cooperation among Latin American countries, strengthened national associations (especially those founded more recently) and promoted Crystallography in countries where further development is still needed.

Nowadays, new courses, schools and OpenLabs are being planned, including the First School of the LACA, which be held in Montevideo, Uruguay, in February 2018. In addition, the LACA is trying to organize the activity related to the formation of human resources in Crystallography by creating a special commission on Teaching of Crystallography, which will promote and plan basic or advance schools and courses in the region.

Acknowledgement: The information related to Crystallography courses and schools sent by many Latin American colleagues is greatly acknowledged.

[1] Ewald, P. P. (1962). Fifty Years of X-ray Diffraction. IUCr, Ch. 25, p. 499.

[2] <http://www.cec.uchile.cl/cinetica/pcordero/recordando/Relatos/CreacionLab2.html#ftn.id4>

[3] Torriani, I. L. (2003). IUCr Newsletter 11, issue 3.



Keywords: [Latin America](#), [LACA](#), [Teaching of Crystallography](#)