

**INTERNATIONAL CONFERENCES
ON ABELIAN GROUP THEORY:
THE FIRST FORTY YEARS**

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Dedicated to Jim Reid

A total of 23 international conferences on abelian group theory and related topics have been held periodically for the past 40 years in eight different countries. These conferences were held sporadically during the 1960's and 70's but, beginning in 1980 they have occurred at least every two years. While there could well be some difference of opinion about which conferences should actually be included in such a list, those conferences listed below included participants from several countries, had a number of talks related to abelian group theory and were attended by some of the major contributors to the subject. Notable omissions from this list include conferences held in the USSR and eastern Europe. Although there was a lot of research activity in abelian group theory in these countries, as outlined in historical articles by Fomin, Fuchs, Salce and Simson in this issue, opportunities for participation in joint conferences with western mathematicians were limited for many years.

There seems to be a general consensus that the first international conference devoted largely to abelian group theory was held in Oberwolfach, Germany, in 1961. This conference was attended primarily by European mathematicians. It is interesting to observe that at this conference, there were only two talks a day and a total of two talks in English. By way of contrast, recent conferences have had as many as eight to ten talks per day with all presentations in English.

The 1962 New Mexico State University Conference, occasioned by the visit of Laszlo Fuchs to the United States, marked the beginning of active participation of U.S. mathematicians in abelian group theory conferences. Subsequent conferences had a truly international flavor. For example, the 1963 Tihany, Hungary, conference had participants

Received by the editors on September 13, 2001.

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from twelve different countries. It should come as no surprise to practitioners in the field that Laszlo Fuchs is the only researcher to have attended and spoken at each and every one of these 23 conferences.

Conference proceedings were published for all but four of these conferences. For the most part, papers published in these proceedings are reports on original research. The first biographical article, devoted to Reinhold Baer and his work on abelian groups, appeared in the proceedings of the 1981 Oberwolfach conference. Subsequent conference proceedings included biographical articles on Friedrich Levi, Helmut Ulm, Heinz Prüfer, R.S. Pierce, Adalberto Orsatti and R.A. Beaumont. The first occurrence of solicited survey articles is in the proceedings of the 1981 Curaçao conference.

Conferences are specified by location and date. References are given for published conference proceedings, and speakers and titles for the others.

1. Mathematisches Forschungsinstitut, Oberwolfach, Germany, March 5–10, 1961

No published conference proceedings. Speakers and titles:

- B. Charles (Montpelier), *Une extension de la théorie d'Ulm*
 G. Roch (Münster), *Über ein Klasse höhenendlicher p -Gruppen*
 P. Gourily (Montpelier), *Sur les intersections de sous groupes pures*
 Laszlo Fuchs (Budapest), *Über die Struktur der Gruppe der Erweiterungen*
 F. Loonstra, *Erweiterungen von exakten Folgen*
 H. Leptin, *Über höhenendliche p -Gruppen*
 R. Baer, *Partitionen abelscher Gruppen*
 Latt (Berlin), *Über die Galoisgruppen der maximalen absolut-abelschen Körper*
 E. Krull, *Endliche Gruppen und mehrdimensionale Grössensysteme*
 A.L.S. Corner (Cambridge), *Torsion-free groups with many direct decompositions*
 A.D. Sands (Dundee), *Hajo's factorizations of infinite abelian groups in which one factor is finite*
 O. Endler (Bonn), *Über Hüllen und multiplikative Strukturen von archimedischen totalgeordneten Gruppen*
 A. Kerten (Debrecen), *Über Multimoduln*

2. New Mexico State University, Las Cruces, New Mexico, USA June 4–8, 1962

Proceedings: *Topics in Abelian Groups*, Scott, Foresman, Chicago, 1963.

3. Tihany, Hungary, September 2–7, 1963

Proceedings: *Colloquium on Abelian Groups*, North Holland, Budapest, 1964.

4. Montpellier University, Montpellier, France, June 5–10, 1967

Proceedings: *Studies on Abelian Groups*, Springer-Verlag, Dunod, Paris, 1968.

5. Istituto Nazionale di Alta Matematica, Rome, Italy, November 20–23, 1972

Proceedings: *Abelian Groups and Group Representations*, Symposia Mathematica XIII, Academic Press, New York, 1974.

6. New Mexico State University, Las Cruces, New Mexico, USA, December 9–12, 1976

Proceedings: *Abelian Group Theory*, Lecture Notes in Mathematics 616, Springer, New York, 1977.

7. Istituto Nazionale di Alta Matematica, Rome, Italy, December 12–16, 1977

Proceedings: *Abelian Groups and Relations with Module Theory*, Symposia Mathematica XXIII, Academic Press, New York, 1979.

8. Séminaire de Mathématiques Supérieures, Université de Montréal, June 11–July 6, 1979

Each main speaker gave 8 one-hour lectures. These lectures were published in volumes 69–74 of the series SMS, Les Presses de l'Université de Montréal (now published by Kluwer Academic Publishers under the

name “NATO Advanced Science Institutes Series”). Main speakers:

- K. Benabdallah, *Groupes abéliens sans torsion* (Vol. 74)
- V. Dlab, *Representations of valued graphs* (Vol. 73)
- P. Eklof, *Set theoretic methods in homological algebra and abelian groups* (Vol. 69)
- L. Fuchs, *Abelian p -groups and mixed groups* (Vol. 70)
- Klauss Roggenkamp, *Integral representations and structure of finite group rings* (Vol. 71)
- Paul Roberts, *Homological invariants of modules over commutative rings* (Vol. 72)

9. Villa Madruzzo, CIRM, Povo (Trento), Italy, May 19–24, 1980

No published conference proceedings. Main speakers:

- L. Fuchs, *Torsion-free groups*
- A. Orsatti, *Buone dualità e moduli fortemente quasi-iniettivi*
- F. Richman, *The structure of mixed groups*
- C.M. Ringel, *Introduction to the representation theory of finite dimensional algebras*
- L. Salce, *Moduli di torsione su domini di valutazione*
- P. Vámos, *Decomposing finitely generated modules*

10. Mathematisches Forschungsinstitut, Oberwolfach, Germany, January 12–17, 1981

Proceedings: *Abelian Group Theory*, Lecture Notes in Mathematics 874, Springer, New York, 1981.

11. University of Hawaii, Honolulu, Hawaii, USA, December 28, 1982–January 4, 1983

Proceedings: *Abelian Group Theory*, Lecture Notes in Mathematics 1006, Springer, New York, 1983.

12. Università di Udine, Udine, Italy, April 9–14, 1984

Proceedings: *Abelian Groups and Modules*, CISM Courses and

Lectures **287**, Springer, New York, 1984.

13. Mathematisches Forschungsinstitut, Oberwolfach, Germany, August 11–17, 1985

Proceedings: *Abelian Group Theory*, Gordon and Breach, New York, 1987.

14. University of Western Australia, Perth, Australia, August 9–14, 1987

Proceedings: *Abelian Group Theory*, Contemporary Mathematics, AMS, Providence, Rhode Island, 1987.

15. Mathematisches Forschungsinstitut, Oberwolfach, Germany, June 25–30, 1989

No conference proceedings. Speakers and titles:

- D.M. Arnold, *Representations of partially ordered sets and abelian groups*
 C. Vinsonhaler, *Numerical invariants for Butler groups*
 A.J. Giovannitti, *Cobalanced subgroups of vector groups*
 R.S. Pierce, *Carriers of E-rings*
 C. Sengelhoff, *Representations of posets*
 J. Hausen, *The quasi-summand intersection property*
 J.M. Reid, *Irreducible groups*
 R. Göbel, *Applications of abelian group theory I*
 M. Dugas, *Applications of abelian group theory II*
 M. Droste, *Universal structure and homogeneous groups*
 K. Eda, *Applications of set theory to abelian groups and abelian groups to algebraic topology*
 W. May, *Endomorphisms over complete discrete valuation rings*
 B. Zimmermann-Huisgen, *Finitistic dimension algebras and groups of integer-valued matrices*
 T.G. Faticoni, *Torsion-free abelian groups of finite rank as modules over their endomorphism rings*
 A.W. Hales, *Group rings of locally finite groups*
 K. Kowalski, *The exchange properties from the endomorphism ring point of view*

- U. Albrecht, *Quasi-decompositions and endomorphism rings*
 T.H. Fay, *Compact locally nilpotent groups*
 L. Fuchs, *Infinite rank Butler groups I*
 K.M. Rangaswamy, *Infinite rank Butler groups II*
 C. Metelli, *On a class of Butler groups*
 H.P. Goeters, *Torsion-free abelian groups*
 P.C. Eklof, *Almost free modules I*
 A. Mekler, *Almost free modules II*
 A. Blass, *Abelian groups that arise in set theory*
 W. Hodges, *Model theoretic interpretation in abelian groups*
 O. Mutzbauer, *Mixed modules over discrete valuation rings*
 J. Irwin, *On pure subgroups of the countable product of copies of the integers*
 J.D. O'Neill, *Decompositions of modules*
 A. Mader, *Extensions of order p*
 W.J. Wickless, *An equivalence relation for torsion-free finite rank groups*
 B. Goldsmith, *Endomorphism rings of modules over a complete discrete valuation ring*
 R. Dimitric, *Characteristic and type in module categories*
 C. Megibben, *Mixed groups*
 F. Richman, *General p -valuations*
 W. Liebert, *Isomorphic automorphism groups of primary abelian groups*
 G. Viljoen, *The extensions of Butler groups*
 L. Bican, *Butler groups and modules*
 P. Keef, *Some isomorphisms of abelian p -groups involving the Tor functor*
 K. Honda, *Existence problem of abelian p -groups involving the Tor functor*
 K. Benabdallah, *Minimal pure subgroups in primary abelian groups*
 R. Behler, *Realizing rings*
 D. Cutler, *A problem in the structure theory of abelian p -groups*
 P. Schultz, *Automorphism groups of abelian p -groups*

16. Caribbean Mathematics Foundation, Curaçao, Netherlands, Antilles, August 15–23, 1991

Proceedings: *Abelian Groups*, Lecture Notes in Pure and Applied Mathematics **146**, Marcel Dekker, New York, 1993.

17. Mathematisches Forschungsinstitut, Oberwolfach, Germany, August 1–7, 1993

Proceedings: *Abelian Group Theory and Related Topics*, Contemporary Mathematics **171**, AMS, Providence, Rhode Island, 1994.

18. Università di Padova, Padova, Italy, June 23–July 1, 1994

Proceedings: *Abelian Groups and Modules*, Mathematics and Its Applications, Kluwer, Boston, 1995.

19. University of Colorado at Colorado Springs, Colorado Springs, Colorado, USA, August 7–12, 1995

Proceedings: *Abelian Groups and Modules*, Lecture Notes in Pure and Applied Mathematics, Marcel Dekker, New York, 1996.

20. Università di Padova, Padova, Italy, 1997

Proceedings: *Abelian Groups, Module Theory, and Topology*, Lecture Notes in Pure and Applied Mathematics **201**, Marcel Dekker, New York, 1998.

21. Dublin Institute of Technology, Dublin, Ireland, August 10–14, 1998

Proceedings: *Abelian Groups and Modules*, Trends in Mathematics, Birkhäuser, Boston, 1999.

22. University of Western Australia, Perth, Australia, July 10–14, 2000

Proceedings: *Abelian Groups, Rings, and Modules*, Contemporary Mathematics, AMS, Providence, Rhode Island, 2000.

23. University of Hawaii, Honolulu, Hawaii, USA, July 25–August 1, 2001

Proceedings: *Abelian Groups and Modules*, Rocky Mountain Journal of Mathematics **32**, 2002.

Acknowledgments. Thanks to Khalid Benabdallah, Laszlo Fuchs, Rüdiger Göbel, Adolf Mader and Luigi Salce for their contributions to this article. Any errors or omissions remain the responsibility of the author.

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