

# Preface

From 10 to 22 July 2009 Germany hosted the 50<sup>th</sup> International Mathematical Olympiad (IMO). This jubilee anniversary event took place on the campus of Jacobs University Bremen. For the first time the number of participating countries exceeded 100, with 104 countries from all continents sending a delegation consisting of six students, a leader and a deputy leader.

Celebrating the 50<sup>th</sup> anniversary of the IMO provides an ideal opportunity to look back over the past five decades and to review its development from modest beginnings to become a worldwide event. This book is aimed at students in the IMO age group and seeks to demonstrate that mathematics is an active and lively subject, thousands of years old and yet young and fresh as ever. We have invited several IMO pioneers to tell us about the development of IMO since it first began: they reveal that initially nobody thought it would develop into an annual event, let alone grow as big as it is today.

We include three accounts from IMO pioneers: Mircea Becheanu from Romania, speaking on behalf of the country that created the IMO and hosted the initial Olympiad event; István Reiman from Hungary who personally experienced the early years; and Wolfgang Engel from (then East) Germany who witnessed the impact the Olympiads have had from the outset on mathematical activities for students, particularly in Germany. These reports give a vivid and personal description of what gradually became an international success story.

Also included is data about the 50 annual Olympiads which illustrates the development of the competition from just seven countries in 1959 to 104 countries, with 565 participants, in 2009. We list the most successful contestants, the results of the 50 Olympiads and the names of all 112 countries that have ever taken part.

In mathematics, talent is often developed and demonstrated at an early age. Thus it is impressive to see that many of the world's leading research mathematicians were among the most successful IMO participants in their youth. To illustrate this we include a list showing winners of prestigious research awards who participated in the IMO when they were young.

In addition to the mathematics competition an important aspect of the Olympiads is that students from all over the world meet and exchange ideas. It is both a personal

highlight of their lives that they treasure for a long time and a place where international friendships develop. Some of the personal or amusing anecdotes of previous IMOs are included in the last chapter of the book.

The outstanding event of the 2009 Olympiad was the celebration of the IMO's 50th anniversary. Six of the world's leading mathematicians, all of them highly successful former IMO participants, were invited as guests of honour to give presentations: Béla Bollobás, Timothy Gowers, László Lovász, Stanislav Smirnov, Terence Tao and Jean-Christophe Yoccoz. Their contributions are also included in this book.

We would like to express our sincere gratitude to all those who supported the organisation of the 50<sup>th</sup> IMO, making it a memorable and unique event for all participants.

Finally, we wish to thank the Springer Verlag for publishing this book. We are indebted to Clemens Heine for his support and collaboration.

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