

Nowy Sącz, POLAND 2005  
The 17-th International  
Olympiad in Informatics

# NEWSLETTER

of the 17th International Olympiad in Informatics, Poland 2005

## Happened on this day

**79:** the volcano on Mt. Vesuvius (Italy) erupts, destroying Pompeii and Herculaneum  
**1891:** motion picture camera patented by Thomas Edison  
**1960:** the lowest temperature in history measured in Antarctica: -88°C (-127°F)

## Water below, water above



*Race condition*

When the participants of the excursion to the Pieniny mountains were leaving the rafts they were all content. Some because they enjoyed the views. Most because they could finally hide in some dry and warm place.

As the rafts took off there was no escape. We had to spend over two hours in the

falling rain. Even those who had raincoats quickly came to the conclusion that they are no long-term help. Upon descending in Szczawnica all the participants behaved in the same way: shivering of cold, completely wet.

‘If the weather was better, then...’ — this is how the raftsmen began almost every sentence they said. The views they later described in many cases we could only imagine. The Three Crowns were visible, but Sokolica, another high peak, was hidden deep in a cloud. The landscape of the Dunajec Gorge could not be fully admired, but some of the nearby mountains looked very picturesque with the clouds hovering around them.



*What a pity there is no roof*

A duck followed our raft for a while. A black stork is said to have appeared on the bank, but was it really there? A white heron was sitting high on a tree. ‘I’m rafting in the rain’ — we sang, rephrasing the words of a well known song. Together it was easier to bear the cold. We hope that you changed your clothes quickly enough not to catch a cold, and that the closing ceremony will not be a spectacle of coughs and sniffs.

## AWARDS CEREMONY

### CONTESTANTS

7.00 - 8.30	breakfast
8.30 - 12.30	sci & rec activities
12.30 - 14.00	lunch
14.45 - 17.30	closing events
18.00 -	banquet & disco

### LEADERS




8.00 - 9.30	breakfast
10.00 - 12.00	GA Meeting 8
12.30 - 14.00	lunch
14.45 - 17.30	closing events
18.00 -	banquet

### GUESTS

7.00 - 8.30	breakfast
8.30 - 12.30	excursion to Krynica
12.30 - 14.00	lunch
14.45 - 17.30	closing events
18.00 -	banquet

## WEATHER FORECAST

### More rain

morning		16°C / 61°F
afternoon		16°C / 61°F
evening		14°C / 57°F

Lectures today: Andrzej Gašienica-Samek at 9.00, Wojciech Jaśkowski at 10.00. Both in room 21, building B.

If you plan to leave before Thursday morning, this is the last issue of the newsletter you are reading printed. In this case **remember to download Issue 8** from [www.ioi2005.pl](http://www.ioi2005.pl) when you get home.

# Nap time

Today's photo gallery features those of us who were too tired to stay awake. Both the preparation and participation in the Olympiad are quite exhausting.

The sleepers must be dreaming about the IOI. Are all of their dreams sweet?



*It's been a hard day's night... — technical staff after the first session of the contest*



*Oh, these problems are so boring... — during the first day of the competition*



*I hope they don't start cheating while I have a short nap — in the Gym.*

## Who is who



**Tadeusz Kuran**  
Chief of the IOI'2005  
Organizing Committee



**Francisco Javier  
Zaragoza Martinez,**  
the leader of Mexico,  
host of the IOI'2006

## A survey — You about us

Some of the IOI'2005 participants knew well what to expect upon their arrival to Poland. Others had some expectations but were not certain what they would find here. What were your first thoughts when you learned you were coming to our country?

‘Among our nation you are considered friendly people, but often in a hurry’ — says a contestant from Mongolia. Are we really in a rush? Or is it just a general impression about Europeans? ‘Anyway, we liked the place more than we had expected’ — concludes our speaker.

Teams coming from far away often had little clues. This was the case with the Singapore team. None of them could recall anyone who had been here before. Neither did the contestants from Brazil, but they are not very surprised: ‘It is like other countries in Europe’, they say.

Some of you gave us more precise details. This was the case with Kuwait: ‘The climate here is so different than ours! We like the temperatures, it is not like our 50°C’. Believe us, in January many Poles would like to visit the hot Kuwait. Another unusual comment was that by Thailand: ‘We have not expected to be photographed so frequently’. Try to understand — we need to keep our jobs.

For some of the participants Poland is much more familiar. Pär Söderhjelm, the leader of Sweden, had already met a few Poles before. ‘I consider you friendly and talkative’. ‘Talkative, are we?’. ‘Well, surely more than us. And you are very optimistic’. We are glad to hear this. Similar opinions are shared by Israel: ‘We have fellow countrymen who have their roots in Poland. That is why we were happy to come here.’

Try to remind yourselves your expectations towards this visit that you had just a few days ago. How did they meet the reality?

# INTERVIEW

## with *the leaders of the team from Mexico, the hosts of the IOI'2006* *See you in Merida*

- *When have you learned that the IOI would visit Mexico?*

- It was in 2002, at the IOI in Korea. There was a choice between us and Great Britain and our option won.

- *Tell us more details concerning the location of the IOI'2006.*

- The competition will be held in Merida, a town in the south-east of the country, on the Yucatan peninsula. It is definitely bigger than Nowy Sącz, but not extremely large. It is a university town, but the Olympiad will be held in a convention center.

- *What about the tourist attractions?*

- The area around is extremely nice and lots of sightseeing can be done there. We have planned two trips. The first one will be to the beaches of the Caribbean Sea. The second will take the participants to Chichen Itza — a mysterious temple and pyramid site of the Maya hidden deep in the forests.

- *We see you have already been preparing quite a lot.*

- Since 2002 we have known where the event would take place, we also receive appropriate support from the local authorities. We try to keep things under control.

(editors note: the Mexican team is already advertising the IOI'2006 with their T-shirts and jackets).

- *How about a one-year-ahead weather forecast for Merida?*

- You should expect about 33°C (91°F). It can be humid, which in fact makes you feel as if it was even hotter. Curiously it is not July or August that is the hottest month, in May it is often worse.

- *Are you planning anything special? Or maybe you have picked up some new ideas here that you would like to continue?*

- There are some standards of the IOIs, the elements that are being repeated at the Olympiads year by year and need to be followed. We observe that the guides here are doing their job very well. Introducing the logic puzzle column in the newsletter was another idea we liked. (ed. note: thank you).

- *This Olympiad comes to its end, we turn our thoughts towards the next one.*

- We invite all the teams to Merida in August 2006. We will be very happy to host you there and hope you will have a good time with us. See you there!

## How do they work? - part 2

### Kitchen

Most of the kitchen staff is there from 6a.m. till 10p.m., but preparing food for the next day, cleaning up the canteen and washing the dishes goes on all night as well. About 20 people are hired to do all this. How much food do they have to prepare daily? Think of how much you eat and multiply it by 700 or consult these numbers: we consume 200 kg of bread, 150 kg of meat, 80 kg of cheese and lots of vegetables. All this is being processed in the kitchen 24 hours a day. By the way, the bigger room of the canteen used to be a boxing ring long ago and now is normally used as a discotheque.

### Newsletter

Our editorial board is just 3 people. We are here to deliver information about what is going on — both the official stuff and some funnies. It is not easy to hide news from us, though we often wish we could be in more places at a time. We are not professional journalists and probably that is why we make some mistakes (all of which you had surely already found). Each issue must be completed until evening. During the last hour before the deadline we are often more in hurry than you during the last 15 minutes of the contest. The issue is corrected and sent to print so that you can pick it up next morning.



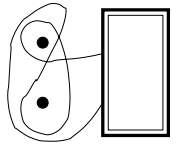
## Logic puzzle: The meeting of logicians

There are 31 logicians gathered at a meeting. They are playing a game. Each of them has a dot on the forehead. The dots come in many colors, but we do not know how many colors there are, what are these colors or how many dots of each color are used. Each logician can see the remaining 30 dots, but cannot see his/her own dot.

Every minute a bell rings. At the sound of the bell every logician who knows the color of his/her own dot leaves the room. When the last person leaves, the game ends. We assume that the logicians deserve to be called that name, which means they will decide when to leave correctly. We also assume that the person who invented the game is also a logician, which means that it is constructed in such a way that every player has a chance to figure out his/her dot's color (if he/she thinks in a logical way, of course).

Here is what happened: at the first bell 4 people left the room. At the second bell all the logicians with red dots left, and only them. At the third bell nobody moved. At the fourth bell at least one person left. Two brothers, with dots of different colors, left some time later, but none of them at the last bell.

How many times did the bell ring before everybody left?



**Two days ago puzzle's solution: Hanging a picture:** check the image.  
**Extra question:** what if there are more than two nails? Is the task still solvable?

## Paper & Pencil game: 4 colors

This is a difficult and time-consuming game. A round typically takes at least an hour. The number of players is not limited, although for more players more time is needed.

Each player has an 8x8 board (like a chessboard). Before the game each of the players colors the board with 4 colors with respect to the following rules:

- 1) exactly 16 fields are colored with each color
- 2) for each color the fields of that color form a connected area (side-connected, not only vertex-connected)

The boards are secret. The task is to reveal the exact board contents of one of the other players. In order to achieve this, players take turns. In each turn a player asks any of the opponents to reveal what colors can be found on a given 2x2 subset of that player's board. It is comfortable to specify these subsets using the coordinates of their corners. The player that answers does not need to specify exactly the colors of each of the 4 fields in the 2x2 square. It is enough to name all the colors in any order (so 1, 2, 3 or 4 colors are named). The questions and answers are public — everyone can hear them.

When a player claims to know the contents of somebody else's board, he/she can attempt to describe it just before his/her turn comes. If the description is correct, the player scores a point and the one whose board was revealed quits the game. If not, the player loses the turn. The game ends when there is only one player left.

	A	B	C	D	E	F	G	H
1		Yellow	Yellow	Red	Red	Red	Red	Red
2		Red	Yellow	Yellow	Yellow	Yellow	Green	Red
3		Red	Red	Red	Yellow	Red	Green	Green
4		Yellow	Blue	Red	Red	Red	Red	Green
5	Yellow	Blue	Blue	Blue	Blue	Blue	Blue	Green
6	Yellow	Yellow	Yellow	Blue	Green	Green	Green	Green
7	Blue	Yellow	Blue	Blue	Blue	Blue	Green	Green
8	Blue	Blue	Blue	Green	Green	Green	Green	Green

**Sample.** For this sample board the questions and answers concerning it could be:

**Q:** B3 - C4?

**A:** Red, yellow and blue.

**Q:** D5 - E6?

**A:** Green and blue.

**Q:** G7 - H8?

**A:** Green.

## Rush hour

After the previous editions you probably know what to do with this one. Enjoy!

*Today's puzzle comes from  
[www.g5.dk/bilspil/cargame.asp](http://www.g5.dk/bilspil/cargame.asp)*



## Polish your Polish

coffee - **kawa**  
 a joke - **kawał**  
 a piece of sth. - **kawałek**  
 a bachelor - **kawaler**  
 caviar - **kawior**