

Ideas for future IYPTs

Insights on the
tournament structure
and grading procedure
by a former participant


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Overview

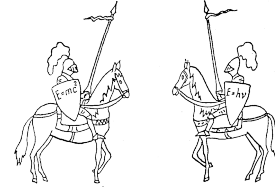
- | Personal introduction
- | Participant's view of the tournament
- | Thoughts on tournament structure
- | Thoughts on grading schemes
- | Organizational structures of the IYPT
- | Concluding remarks


Georg Hofferek - CV



- | Born in October 1982 in Leoben (Austria)
- | High school graduation in June 2001
- | Currently student of Telematics at
Graz University of Technology (TUG)  TUG

Affiliation with IYPT



- | Participant for Austria in 1999 (Vienna), 2000 (Budapest), 2001 (Espoo)
- | 2000-2001: Captain of the Austrian Team
- | Since 2002: Member of the Executive Committee of the Austrian YPT 
- | 2004, Brisbane: Austrian Team Leader
- | 2005, Winterthur: LOC, Fight Administrator (IYPT Manager software)

Personal experiences as a participant

Obvious advantages of IYPT:

- | Physics knowledge
- | English skills
- | Rhetorical training

Teamwork

- | High level of teamwork is needed during preparation *and* tournament
- | Student – Student *and* Student – Teacher
- | Development of organization structures
- | New understanding of deadlines
- | Social skills (“soft skills”)

Scientific research

- | No “by the book”-solutions
- | No standard pattern for how to work
- | Understanding of real scientific research processes
- | New relationship between teacher and student
- | New view point for “the unknown”

Rhetorical skills

- | Selling oneself best
- | Becoming spontaneous and adroit
- | Decreasing fear of oral exams
- | Higher self-confidence

Further aspects

- | Tactical thinking
- | Visiting other countries
- | Getting to know people from all over the world
- | Opportunity to talk to experts in science
- | Being proud of representing one's country

è IYPT experiences are very useful!

Tournament structure

“Old structure”

(3 Selective PFs, Semi-finale, Finale)

versus

“New structure”

(5 Selective PFs, Finale)

... or something completely new?

Selective PFs vs. knock-out-systems

- | Number of fights – inactive teams
- | Tactics and strategy
- | Second chance

Selective PF system seems to be more appropriate concerning the IYPT tradition.

The Reviewer

- | Allowing more question time was a step in the right direction
- | The role of the Reviewer should be strengthened
- | Evaluation of the discussion
- | Not like a little Opponent but like a little jury
- | Reviewer has no influence on challenge-rejection-procedure so the review cannot be prepared in advance
- | Fights with only 2 teams tend to polarization

Questions of the Jury

- | Very important
 - to clarify misunderstandings
 - to check whether something has really been understood correctly
- | Some jurors abuse question time
 - Present their own knowledge
 - Try to make teams look bad
 - Exam-like questioning
 - One juror uses up all the allocated time
 - Irrelevant questions
 - Formulate the questions in a hardly comprehensible way
- | Needs to be regulated better

Questions of the Jury - Suggestions

- | Limit time per each juror?
- | Limit number of questions per juror instead of time?
- | Only allow “simple” questions (yes-no-questions)?

Discussions between jurors and students

- | One of the most important things about IYPT
- | Allocate time for it in time table? Hardly possible
- | Should not be formalized, informal discussion in breaks is just fine

That's what makes IYPT unique!

The Grading

“Old system”
(3- to 5+)

versus

“New system”
(1-10)

... or something completely new?

Comparison of systems

Old system:

- | 9 different marks
- | at least 6-7 used frequently
- | More complicated to calculate
- | a non-linear scale could be applied

New system:

- | 10 different marks
- | only 5-6 used frequently
- | Easier to calculate
- | Linear scale

Psychological effects

- | It's easier to give a **3-** than to give a **1**, even if both are the lowest possible grades
- | The old system is less transparent è concentration on the mark itself and not on its effects

Points for winning a fight

- | Would favour better teams → Increase of points differences between teams
- | Puts more weight to direct competition → makes the tournament more interesting

Points for winning a fight

Many ways for doing so:

- | Adding a fixed number of points
- | Increasing points by a fixed factor
- | Let jury rank teams and combine rankings with points in some mathematical way
- | ...

Use data from the past to evaluate effects of new system before using it in reality!

Fairness of grading

“Errare humanum est.”

- | Grading by humans will never be 100% fair, no matter what system is used
- | Guidelines are ok but should leave freedom
- | Formalized Grading leads to formalized Reports

The Different Jury Problem

- | Performances of teams in different groups are incomparable
- | IYPT05:
 - approx. 50 jurors
 - None of them met the same team more than twice during Selective PFs
 - balanced composition of jury

Jury preparatory seminar

- | Open discussion of jury members and Team leaders about the problems
- | No presentation of solutions
- | Time to think about basic phenomena going on

Thoughts about Grading

- | Current grading system:
 - not that bad
 - but improvements are possible
 - think carefully about changes
- | Students should realize that grading is not the “non plus ultra”
- | Luck is always involved

Organizational structures of the IYPT

- | Too large organizational bodies tend to stagnation
- | Comparison with governmental bodies:
 - Parliament (IOC)
 - Cabinet (Executive Committee)
 - | split into Departments (sub-committees)

Organizational structures of the IYPT

- | Everyone presents new ideas to ECO
- | ECO works out best alternatives
 - if necessary with help of sub-committee
 - splitting responsibilities
- | ECO presents alternatives to IOC
- | Discussion and voting
- | **IYPT Constitution**


Example: Public Relations

- | Sub-Committee of ECO
- | Defining responsibilities
- | Homepage

SFZ in Bad Saulgau - Mozilla Firefox

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IYPT


International Young Physicists' Tournament

-

The Physics World Cup

19th IYPT 2005 in Bratislava/Slovakia

5 of July - 12 of July 2006



general information	not implemented
official regulations (July 2005)	The Regulations of the International Young Physicists' Tournament - rtf file The Regulations of the International Young Physicists' Tournament - pdf file

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Conclusion

- | Preserve the uniqueness IYPT
- | Take participants views into account
- | Careful changes
 - Reviewer
 - Grading
 - Tournament structure
- | Structural changes to avoid stagnation

Thanks for your attention!

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Austrian Young Physicists' Tournament



Association Austrian Young Physicists' Tournament
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