

# Applying for Modern Math 2014: List of questions

**Be careful!**

This application form will be used to select participants in the summer school. Please take your time to give carefully thought-out answers to the questions.

## 11 questions

**Question 1 (Cover Letter)** *Explain us in a few words who you are and what are your motivations to attend Modern Math.*

**Question 2 (3 problems)** *Describe two or three mathematical problems that you find the most interesting. Please explain clearly what these problem are, and why they do interest you. (We expect to read here about problems that you can fully or almost fully understand, and not about famous conjectures)*

**Question 3 (A proof)** *Is there a mathematical proof that you fully understand and impressed you because it is beautiful or unexpected? Which one, and why?*

**Question 4 (Courses)** *Describe one or two courses you have taken recently. What were the main theorems (at most three)?*

**Question 5 (Books, videos and websites)** *Which mathematical books you have read/studied recently in some depth? Specify title, authors, and topic. By your own estimate: how well have you understood the material?*

*In 2014, books are certainly not the only source of learning math! Do you follow any mathematical website or blog, have you been watching mathematical videos recently? If yes, please describe it to us.*

**Question 6 (Topics)** *Describe a few mathematical topics that you understand well. Which of them would you like to investigate further?*

**Question 7 (Topics to learn)** *Specify a few mathematical topics about which you do not know much, but which you would like to learn. Do you have any plans to do so?*

**Question 8 (Scientific activities)** *During the last two years, did you participate in any scientific activities, summer schools, math camps, etc.? If yes, please describe the experience you had: what were the courses you attended? How well did you understand the subject?*

*Do you organize running seminars to learn new subjects? Have you ever given a "public" talk to other students like you? If the answer is yes, what were the talks about?*

**Question 9 (Mathematical events)** *Did you participate in any mathematical events (national or international)? If yes: which were your favorites? What are the results you have obtained during the last two years (in case of competitions)? This is not required, just in order to know more about you.*

**Question 10 (Publications)** *We are aware that at your age, very few of you have already made a publication. Just in case, if you have any mathematics-related publications, please, give exact internet references or attach electronic copies. (not required)*

**Question 11 (You and the world of research)** *Is there a recent theorem or open conjecture that you have heard of and that you find particularly exciting? Please explain. (not required)*