

MSRI Summer School on Mathematical Graphics
Students' comments

1.

1. *How useful for your future work do you think this school will have been?*

This will be a great help for when I publish papers and prepare talks and lectures.

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

Definitely. I loved this place.

3. *Why did you decide to attend this school?*

I felt as though graphics were an important part of mathematics, but I had not had the opportunity to learn what could be done.

4. *Overall thoughts about how successful the school was?*

Smashing.

5. *Comment on and suggest changes in the principal courses of lectures?*

Very good - well prepared, covered enough material to get us well into both PostScript and Java.

6. ... *the exercises?*

—

7. ... *the projects?*

Vital - but very stressful.

8. ... *the guest lectures?*

Great topic choices - they really fit in with what we were learning. All speakers were excellent.

9. ... *the level of effort required?*

This was very high, but mostly from personal motivation. Hence, I learned a lot.

10. ... *the amount of time allotted for the material?*

—

11. ... *the topics chosen for lectures?*

—

2.

1. *How useful for your future work do you think this school will have been?*

Exceedingly so, the techniques we learned have already become useful.

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

Yes. Nice campus, good layout, perfect ambience. Just close enough to the city to allow travel, but far enough away to not distract.

3. *Why did you decide to attend this school?*

Interest in the subject.

4. *Overall thoughts about how successful the school was?*

One of the most informative and enjoyable sessions that I've attended.

5. *Comment on and suggest changes in the principal courses of lectures?*

Something on open GL.

6. ... *the exercises?*

perfect.

7. ... *the projects?*

A few samples to give direction.

8. ... *the guest lectures?*

perfect.

9. ... *the level of effort required?*

hard but appreciated.

10. ... *the amount of time allotted for the material?*

A little short.

11. ... *the topics chosen for lectures?*

Very nice.

Further comments. The web page was confusing. It was nonintuitive and made it difficult to locate desired content (try finding the lectures from the home page – pay close attention to the path you must follow now ... did you get it right the first time?) Once found, the information was great. Lest I give the wrong impression, I'd like to end by saying how useful, entertaining and informative I found the session. Thanks.

3.

1. *How useful for your future work do you think this school will have been?*

Very. I will definitely make use of this again.

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

Yes. Food = disgusting, Bed = hard, Sheets = stiff, other than that – great!

3. *Why did you decide to attend this school?*

Because this is something I had been wanting to learn and it sounded like a great opportunity.

4. *Overall thoughts about how successful the school was?*

This definitely got me started along my way. More learning is needed, but this is a great start.

5. *Comment on and suggest changes in the principal courses of lectures?*

Good.

6. ... *the exercises?*

At first they were too ambitious (length), but by the end were great.

7. ... *the projects?*

Didn't like the idea until I got started on it and then it became a high point. It's something I can bring back and show off!!

8. ... *the guest lectures?*

Excellent in every way!

9. ... *the level of effort required?*

Higher than expected, but worthwhile use of time.

10. ... *the amount of time allotted for the material?*

Rough at first, better by the end!

11. ... *the topics chosen for lectures?*

Java → right on! PS → Started out great, but got a little less useful as time went on.

4.

1. *How useful for your future work do you think this school will have been?*

Very, I hope to use it in classes and papers.

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

Yes, it is a very nice school. It is a little ways from Portland but not too far. I like that the dining hall has vegetarian options but dislike the prepackaged condiments. The campus is beautiful but I think they waste a lot of water with the sprinklers.

3. *Why did you decide to attend this school?*

I really like computers and math. I am thrilled to be able to combine my skills.

4. *Overall thoughts about how successful the school was?*

I think the school was great. I learned a lot.

5. *Comment on and suggest changes in the principal courses of lectures?*

They were very good. I liked that we got to see lots of examples.

6. ... *the exercises?*

The exercises were great but I was overwhelmed by the number of homework problems.

7. ... *the projects?*

We need more input on what is expected. I don't really know how to feel about my project/performance.

8. ... *the guest lectures?*

Never have I seen such super lectures! I loved them!

9. ... *the level of effort required?*

Required or implied, I felt guilty leaving evening workshops at 9 p.m., but I was tired.

10. ... *the amount of time allotted for the material?*

It was definitely a 2-week crash course but I think that was the best way.

11. ... *the topics chosen for lectures?*

Good.

5.

1. *How useful for your future work do you think this school will have been?*

I think it will be very useful.

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

Absolutely!

3. *Why did you decide to attend this school?*

Location and topics.

4. *Overall thoughts about how successful the school was?*

The learning curve on the tools was steep, but the effort was fruitful. A second course assuming tool knowledge that is more focused on style of presentations may be a nice addition.

5. *Comment on and suggest changes in the principal courses of lectures?*

—

6. *... the exercises?*

Excellent – they nicely demonstrated specific features of the tools and techniques we need to use.

7. *... the projects?*

Perhaps a list of project ideas would help those of us who did not come up with a project in the first couple of days.

8. *... the guest lectures?*

Great!

9. *... the level of effort required?*

Sweat and tears.

10. *... the amount of time allotted for the material?*

—

11. *... the topics chosen for lectures?*

—

6.

1. *How useful for your future work do you think this school will have been?*

Very.

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

Reed was excellent.

3. *Why did you decide to attend this school?*

To learn a new programming language in a math-centric context.

4. *Overall thoughts about how successful the school was?*

I think I attained my goal. I made lots of mistakes that pointed out what a “good” object should act like.

5. *Comment on and suggest changes in the principal courses of lectures?*

Good. Having Jim fix on data structures a plus.

6. ... *the exercises?*

Fine.

7. ... *the projects?*

My suggestion for projects: Given the short time frame, perhaps people should proceed in steps (more structure): 1) select topic 2) design (Andy from computer) 3) work on some smaller aspect, with a view to expansion. A week is short, and as a result, some “bad” code should be redone.

8. ... *the guest lectures?*

Good.

9. ... *the level of effort required?*

Despite 7, and although I wish I slept more, the pressure was positive.

10. ... *the amount of time allotted for the material?*

Of course, 12 days is short. I still got things done.

11. ... *the topics chosen for lectures?*

Fine.

7.

1. *How useful for your future work do you think this school will have been?*

Very, I will definitely be using PS/Java for presentations/papers in the future.

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

Yes! It's a beautiful campus, great location.

3. *Why did you decide to attend this school?*

Saw an e-mail about it on dept. web site.

4. *Overall thoughts about how successful the school was?*

Very!

5. *Comment on and suggest changes in the principal courses of lectures?*

Was great, jumped right into deep water.

6. ... *the exercises?*

Good, almost too many.

7. ... *the projects?*

Good but focused on almost too much.

8. ... *the guest lectures?*

Great! Lots of fun.

9. ... *the level of effort required?*

It was hard – in the lab all day but had fun doing it (no harder).

10. ... *the amount of time allotted for the material?*

Okay, more time and would have probably been burned out.

11. ... *the topics chosen for lectures?*

Fine.

8.

1. *How useful for your future work do you think this school will have been?*

I think this will be very useful.

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

Yes. likes.

3. *Why did you decide to attend this school?*

I am very interested in the courses.

4. *Overall thoughts about how successful the school was?*

It was very successful. I have learned a great deal from it.

5. *Comment on and suggest changes in the principal courses of lectures?*

—

6. *... the exercises?*

Sometimes. I need more time to finish all exercises.

7. *... the projects?*

—

8. *... the guest lectures?*

—

9. *... the level of effort required?*

It is much.

10. *... the amount of time allotted for the material?*

—

11. *... the topics chosen for lectures?*

—

9.

1. *How useful for your future work do you think this school will have been?*

I will probably use it some how. Can't really think of something concrete on top of my head.

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

Neutral. Likes: size. Dislikes: location.

3. *Why did you decide to attend this school?*

Out of curiosity.

4. *Overall thoughts about how successful the school was?*

I think I have learned quite a bit of interesting things even though I may not use them all.

5. *Comment on and suggest changes in the principal courses of lectures?*

Good.

6. ... *the exercises?*

A little bit too much.

7. ... *the projects?*

OK.

8. ... *the guest lectures?*

Good.

9. ... *the level of effort required?*

It really depends on what kind of background one has before hand. With some form of background in graphics, it wouldn't be so bad but without any background, it was somewhat overwhelming.

10. ... *the amount of time allotted for the material?*

A little bit short.

11. ... *the topics chosen for lectures?*

Good.

10.

1. *How useful for your future work do you think this school will have been?*

Very useful. I plan on using and expanding the skills I acquired at this program.

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

Yes. The campus size was great for this type of program. The facilities were very nice as well.

3. *Why did you decide to attend this school?*

I was very interested in learning how to create graphics in Java.

4. *Overall thoughts about how successful the school was?*

Very successful.

5. *Comment on and suggest changes in the principal courses of lectures?*

During the first week, the lectures were better at the beginning and then it seemed the lecturers were starting to slack.

6. *... the exercises?*

Helpful!

7. *... the projects?*

I enjoyed watching other people's projects. The project also gave me a sense of purpose. I may have gotten bored during week 2 without.

8. *... the guest lectures?*

Great!

9. *... the level of effort required?*

Just right.

10. *... the amount of time allotted for the material?*

Check marked.

11. *... the topics chosen for lectures?*

Check marked.

11.

1. *How useful for your future work do you think this school will have been?*

Pictures are always a great way to express ideas. Not only can you keep the audience's attention, but also with pictures you can teach better.

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

Absolutely! Much better than MSRI. Likes: Campus, people, area. Dislikes: One bitter man at cafeteria.

3. *Why did you decide to attend this school?*

Math is more interesting with good pictures.

4. *Overall thoughts about how successful the school was?*

Very. We learned a lot in a short time period.

5. *Comment on and suggest changes in the principal courses of lectures?*

Sometimes it is easier to learn by exercise than looking at code in lecture.

6. ... *the exercises?*

At first, too many. But this turned out to be good because we could choose.

7. ... *the projects?*

Great. Stressful at first but forced us to accomplish something.

8. ... *the guest lectures?*

Bart was great. Need more modern work presented.

9. ... *the level of effort required?*

More effort required than expected, but that is the way to learn.

10. ... *the amount of time allotted for the material?*

Not enough.

11. ... *the topics chosen for lectures?*

Good flow.

12.

1. *How useful for your future work do you think this school will have been?*

Very. I actually just finished a paper where the knowledge of PostScript would have made our figures trivial (or at least much more so).

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

I liked it a lot. It's a nice campus, you can easily walk everywhere, the only complaint I have is that it's a bit hot, but that's atypical. The labs were good and easy to use (besides, I like Macs) and it was all-out pleasant to be here.

3. *Why did you decide to attend this school?*

I like math and I like computer graphics and it looked both interesting and useful.

4. *Overall thoughts about how successful the school was?*

I learned a lot, mostly PostScript (started from nothing) but even in Java. It was good to intermingle with such a wide variety of math students too. I think the lessons of the first week were more useful, but that could be because I used the stuff for my project. (Not that the 2nd week lectures weren't interesting.)

5. *Comment on and suggest changes in the principal courses of lectures?*

Maybe it would have been interesting to have more interaction between the Java and PostScript portions. Overall, though, I thought it was very good, especially David's summary of Java in two days that didn't omit details.

6. ... *the exercises?*

There was a lot, but in retrospect I found it very useful.

7. ... *the projects?*

It was hard to come up with an idea. Some examples would have been helpful to see what you were looking for.

8. ... *the guest lectures?*

Interesting. Especially the Escher one. Could have been more spread out across the 2 weeks. (Also, my wife (as an outsider) enjoyed them too, though some were more accessible than others.)

9. ... *the level of effort required?*

Intense but good.

10. ... *the amount of time allotted for the material?*

Could have been a little faster in some areas, but there was a big variance in people's background.

11. ... *the topics chosen for lectures?*

Good. I enjoyed them and I guess you choose the people as much as the topic. Thanks for a great two weeks!

13.

1. *How useful for your future work do you think this school will have been?*

I expect it to be highly useful. I think the JAVA applets could be very useful in teaching courses (with the experience, they wouldn't take that long to make for simple concepts). The PostScript skills might help – although any images for a thesis, etc. would probably be done in some more sophisticated way.

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

I would highly recommend Reed. The dorms were top notch, the food was good, everything was close together, and it's in a city with plenty to do. Transportation is easy and cheap. If the choice were Berkeley or Reed, I'd absolutely pick Reed.

3. *Why did you decide to attend this school?*

I'm going to study differential geometry and my advisor is a very visual person, so it's highly likely that I'll need to produce graphics in the future.

Also, I intend for my professional focus to be mostly on teaching, so it is important to me to be able to explain concepts clearly.

4. *Overall thoughts about how successful the school was?*

I think it was very successful. In two (short) weeks, I managed to create some pretty cool stuff. I think it's an appropriate introduction so that I can learn some more on my own and do what I want to create.

5. *Comment on and suggest changes in the principal courses of lectures?*

They were good. The references on the web site were probably the most helpful thing. David's presentations being on the web was great!

6. *... the exercises?*

I thought that they were of the appropriate difficulty. Towards the end of the first week, they started to bunch up and I couldn't get them done.

The supplementary (second week) topics just didn't sink in AT ALL without doing exercises. Unfortunately the only remedy contradicts with the project, so I think the second week topics are just going to have to lose out.

7. *... the projects?*

I thought the projects were OUTSTANDING. The requirement drives all of us perfection minded people to really work hard; I think without a project we would have a strong tendency to goof off (too much). One thing that could make the project easier to swallow would be a more clear description of what you want.

8. *... the guest lectures?*

Very nice. More, more. Bring Yvan back!

9. *... the level of effort required?*

Hmmm. On the one hand, I didn't have other plans, so I might as well work on this. On the other hand, it was a whole lot of work. Except for the first Wednesday and the Sat/Sun weekend, I worked all day often until very late at night.

But I think it was probably OK.

10. *... the amount of time allotted for the material?*

OK.

11. ... *the topics chosen for lectures?*

Very good. I would have liked to have seen some of your guys' personal work and other examples of some really good graphics that explain math. Other: David and Bill were both great; they were extremely helpful and patient and really seemed to enjoy working with us. The TA's were very helpful, especially David Maxwell, who has capacity N for answering many, many questions at late hours, where N is large. Thanks very much!

14.

1. *How useful for your future work do you think this school will have been?*

Java will be really useful for interactively presenting our ideas to others. I learned it in the MSRI summer school. Mathematical Graphics is really interesting.

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

Yes. I would. The campus is beautiful. The foods are really good. The computers are good and in the state-of-art.

3. *Why did you decide to attend this school?*

I like mathematical graphics.

4. *Overall thoughts about how successful the school was?*

We learned so many things from the school. We made so many friends from students all over the world.

5. *Comment on and suggest changes in the principal courses of lectures?*

I like first-week courses very much. The second-week courses are interesting. But we don't understand quite well.

6. ... *the exercises?*

It's a good way to have exercises.

7. ... *the projects?*

I like project.

8. ... *the guest lectures?*

Wonderful lectures!

9. ... *the level of effort required?*

High.

10. ... *the amount of time allotted for the material?*

Medium.

11. ... *the topics chosen for lectures?*

Very good.

15.

1. *How useful for your future work do you think this school will have been?*

I already have ideas on how to incorporate the applets we built into the classes I TA., and ideas on new simple applets that I could build now. Also, I can envision using both Java for graphical simulation and PostScript for figures in my research.

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

Yes – what a great setting for a two-week program. I particularly liked the comfortable, modern classrooms and labs, and the sightseeing opportunities. Air conditioning would have been appreciated in the dorms, but eh.

3. *Why did you decide to attend this school?*

I have an undergraduate background in scientific computing but never knew “good” ways of visualizing mathematical concepts. Besides, I hadn’t done any programming for a year and felt empty inside because of it.

4. *Overall thoughts about how successful the school was?*

Quite successful – the variety of techniques and ideas illustrated in the project we did showed how useful this program was to all sorts of disciplines within pure and applied math.

5. *Comment on and suggest changes in the principal courses of lectures?*

They’re fast, but they have to be. I was glad I’d had a good programming background.

6. ... *the exercises?*

Too many to finish on any given day. But the rest made good gedanken experiments, and I may revisit them someday.

7. ... *the projects?*

More ambitious than I thought they would be – which made them tough at times, but good.

8. ... *the guest lectures?*

Awesome. Bart, John, Yvan and Jim Blinn were very engaging and informative. I almost wish there had been nine, but I needed the time to work on my project.

9. ... *the level of effort required?*

It was a lot more than I had expected.

10. ... *the amount of time allotted for the material?*

Almost should have been a 2 1/2-or 3-week course – the projects felt rushed.

11. ... *the topics chosen for lectures?*

The first week was invaluable, but after my project got going I tended to lose interest. More time spent on aesthetics (like Yvan’s last lecture) would be nice.

16.

1. *How useful for your future work do you think this school will have been?*

I think it is useful for the animation part for making a web site about my academic work.

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

It's a nice and quiet place. It is nice for a summer school. However, food is not so good. If you can find better food at another school, I think it would be better.

3. *Why did you decide to attend this school?*

I would like to learn how to create nice pictures and animations.

4. *Overall thoughts about how successful the school was?*

I think it is very successful. All of us learned a lot within 2 weeks.

5. *Comment on and suggest changes in the principal courses of lectures?*

Both of them (Java and PostScript) are good but I'm more interested in Java for making applets for web browsers.

6. ... *the exercises?*

I think it's good since people get help.

7. ... *the projects?*

We got a bit confused about what the professors wanted. We knew more when they came to talk with each person seriously on Friday.

8. ... *the guest lectures?*

Public talks are excellent. It's good for people outside the program. Also we can see how they explained to non-math people.

9. ... *the level of effort required?*

I think is good even though I am really tired to work from 9 a.m. - 11 p.m. almost every day.

10. ... *the amount of time allotted for the material?*

I think it is better to have time to digest or read the subjects.

11. ... *the topics chosen for lectures?*

They are great!

17.

1. *How useful for your future work do you think this school will have been?*

Nice insight into PostScript, which before just looked like junk to me. And nice to combine PostScript with Tex labels. Helpful for papers! Java: a lot of new and helpful info to create applets easily!

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

Nice rooms, quiet environment. Food was nice, but always the same:-1 Good computer equipment. Local contact person was hard to find out or not often available.

3. *Why did you decide to attend this school?*

Interest in Mathematical Graphics, in particular animations. Java is very helpful for that.

4. *Overall thoughts about how successful the school was?*

I definitely believe everybody could learn something here.

5. *Comment on and suggest changes in the principal courses of lectures?*

Good.

6. *... the exercises?*

Very suitable and covering/using the material presented in class, very good assistance always.

7. *... the projects?*

Nice idea! Hard work, but very nice results.

8. *... the guest lectures?*

Very entertaining and interesting!

9. *... the level of effort required?*

Appropriate.

10. *... the amount of time allotted for the material?*

Appropriate.

11. *... the topics chosen for lectures?*

Very helpful.

18.

1. *How useful for your future work do you think this school will have been?*

I am sure it will be useful for me. I also would like to keep this way of living: lecture, eat, study, eat, study, eat, study and sleep, then repeat.

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

I think Reed College is nice, but I would prefer some other school with more restaurants and shops around.

3. *Why did you decide to attend this school?*

I wanted to learn how to program.

4. *Overall thoughts about how successful the school was?*

I think it has been a great experience for me. I made a lot of friends, and I was able to make a project from scratch.

5. *Comment on and suggest changes in the principal courses of lectures?*

The lectures during the second week were not so appealing to me, and I would prefer more time for my project.

6. *... the exercises?*

The exercises were a bit long though very useful.

7. *... the projects?*

I like them all!

8. *... the guest lectures?*

They were awesome!

9. *... the level of effort required?*

120%!

10. *... the amount of time allotted for the material?*

The 2 whole weeks, day and night and more!

11. *... the topics chosen for lectures?*

The Droste effect one was cool! Jim Blin's movies were so fun!

19.

1. *How useful for your future work do you think this school will have been?*

I remember how hard it was to convey my mathematical illustrations to the students while teaching basic Math class. Those days, I didn't know about PostScript. Now that I know about it and basically can do simple illustrations without much thought, I think it will affect my work, mathematical teaching technique tremendously to depict my ideas clearly. Like they say, a picture a thousand words, PostScript was a manna from the heaven.

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

Absolutely, great place. Can make a quick run to the lab. Likes: small and beautiful place. Dislikes: stupid food limitations, hot rooms.

3. *Why did you decide to attend this school?*

Honestly, I had actually nothing to do this summer. So I decided what better way to spend the summer by learning mathematical graphics (that I can usually use) than carousing on the beach.

4. *Overall thoughts about how successful the school was?*

I think, overall, I find the experience very beneficial. Great lectures, especially David Austin's Java lectures. Yup, I really liked your lectures. Also Bill's excellent exposition. Enter the guest speakers, it was icing on the cake. Something that other mathematical students really need to participate this kind of seminar if you guys offer it again next summer.

5. *Comment on and suggest changes in the principal courses of lectures?*

PostScript lectures were great, but they were more like survey. Sometimes it was too much material, kinda overwhelming at times, but the contents that were discussed were great.

6. ... *the exercises?*

Ahh! don't even get me started. I could not finish all the exercises. They were good problems, but I would need more time to do them all.

7. ... *the projects?*

I ended up doing something that I realized later on that it was too simple. I could have done some other problems if I were offered more guidance. I realized that the project that I did was way below my level.

8. ... *the guest lectures?*

Call me an idiot, for some reasons, I didn't get much from the Microsoft guy, others were great. Learned good stuff from other people.

9. ... *the level of effort required?*

I didn't mind at all.

10. ... *the amount of time allotted for the material?*

Oh well, let us be honest, it was too much material and less time, but hey, we are graduate students!

11. ... *the topics chosen for lectures?*

Extremely relevant. Lectures on 3D Java stuff could have been better, but hey, what you gonna do? Life goes on ...

20.

1. *How useful for your future work do you think this school will have been?*

It was very useful to get information about the field related to the subject I will do. Generally, I came to know Java, and many new graphic tools.

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

Yes. Very good place to study, not noisy. Strongly recommend.

3. *Why did you decide to attend this school?*

By the introduction by my supervisor.

4. *Overall thoughts about how successful the school was?*

Somewhat not successful. 1st: I had no preparation for this school and Java is the first time to me. 2nd: It was not my research field, and no information for it.

5. *Comment on and suggest changes in the principal courses of lectures?*

1st week – for lecture, 2nd week – only for project, will be better.

6. ... *the exercises?*

Good, and pertinent.

7. ... *the projects?*

Somewhat hard. Especially if one is not so familiar with computer projects, why don't you display some topics to choose.

8. ... *the guest lectures?*

Good thru.

9. ... *the level of effort required?*

It was too much for me.

10. ... *the amount of time allotted for the material?*

Enough.

11. ... *the topics chosen for lectures?*

If "Mathematical Graphics" should choose? VC++ Graphic Tools, Illustrator.

21.

1. *How useful for your future work do you think this school will have been?*

Probably not all that useful. But it was very fun and interesting.

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

Absolutely. Great campus, food, etc.

3. *Why did you decide to attend this school?*

on a whim.

4. *Overall thoughts about how successful the school was?*

I thought it quite successful, though I would have preferred a higher-level program, esp. w.r.t. Java.

5. *Comment on and suggest changes in the principal courses of lectures?*

Eh, Java isn't for me; but that's me.

6. ... *the exercises?*

Good, but too many – more free time to think!

7. ... *the projects?*

Very fun.

8. ... *the guest lectures?*

Great ... maybe too off-topic, though.

9. ... *the level of effort required?*

Too much busy work, not enough deep thought.

10. ... *the amount of time allotted for the material?*

Good.

11. ... *the topics chosen for lectures?*

Good at the start, too diffuse late in the week.

22.

1. *How useful for your future work do you think this school will have been?*

Very, as a geometer I will need to be able to illustrate mathematics.

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

Yes – it's small, and in an interesting area of the country and more capable of supporting this class's specific needs than most other campuses.

3. *Why did you decide to attend this school?*

Because I like computer graphics and geometry and don't get the opportunity to work on those things often.

4. *Overall thoughts about how successful the school was?*

I think it was very successful, though often it seemed to suffer due to the atmosphere of unreasonable expectation.

5. *Comment on and suggest changes in the principal courses of lectures?*

The first week's lectures were very good, Java 3D should have been eliminated, but I enjoyed the geometric algorithms.

6. *... the exercises?*

Too many?

7. *... the projects?*

Very successful.

8. *... the guest lectures?*

Very good – I appreciated these the most.

9. *... the level of effort required?*

High, but this might be necessary to achieve the amount of learning we achieved in such a short time.

10. *... the amount of time allotted for the material?*

A little more free evenings would be nice. And perhaps restricting lectures to only material relevant to projects.

11. *... the topics chosen for lectures?*

It was difficult to get a handle on the appropriate choice given the limited time allotted for completion of the projects.

23.

1. *How useful for your future work do you think this school will have been?*

Very useful: 1. I will be able to draw animated and 3-dimensional pictures and applets for my research talks.

2. I will show my project to my students when I teach relevant classes.

3. I will draw some other cool stu to put on my web page (just to entertain my students).

4. I don't have any precise plan yet, but it's possible that the stuff I learned here may be used for Webwork (web-based homework system). In this system all students have essentially the same problems, but each student has his/her own coefficients. So pictures are slightly different for different students. The developers have a way of making pictures depend on the input for each particular student, but there is no interactivity and no animation there. Very importantly, the system can not accept graphs. So it is not possible to ask students to sketch graphs. Using Java, we could ask to sketch the graph using a mouse. Of course, we then have to decide what is close enough and what is not ... So this looks like a very difficult project, but I hope it will be done some time in future.

2. *Would you recommend Reed College as a site for future summer schools? Likes and dislikes?*

Likes: nice area, quiet, easy access to computers, internet in the dorms, personal dorm rooms, food was very good.

Dislikes: none.

3. *Why did you decide to attend this school?*

Because of all the reasons mentioned above in the section "how it will be useful for my future work".

4. *Overall thoughts about how successful the school was?*

GREAT SCHOOL !!! Thanks to all of you. Very special thanks to David Austin, for all his help and patience. I have looked at a book on Java before, and was immediately lost with all the classes, methods, public, void, extends, implements, exceptions ... So I was a bit skeptical about Java when I came to this school. But David's infinite patience and very clear explanations changed my attitude completely. Thank you so much, David!

5. *Comment on and suggest changes in the principal courses of lectures?*

Absolutely brilliant. I liked the fact that all the lectures used projectors, and were available on the web. I liked that postscript codes were written live: I found postscript not so easy to read, so his coding live gave us enough time to understand what was going on. A Java code, on the contrary, is, first, easier to read (once you understand what's going on), and second, longer, so it was nice that it was written before the lecture.

6. ... *the exercises?*

Very good, very helpful! One suggestion: if you do not mind that a student modifies exercises a little bit according to his/her own interest and taste, make it clear. Because I feel I will learn more and better if I try to do something I like. E.g. all the exercises that asked to draw something in blue, green, or red, were excellent, but I wanted to try other colors too, just for the sake of learning how to do it. But I was kind of shy to modify the exercises. After I saw other people doing it, I started too. Maybe it's just me. Maybe I'm too shy.

7. ... *the projects?*

Good idea. I really liked it. Only we had too little time.

One comment: I personally found it a bit hard to understand some presentations, because I did not know that area of math, and people made their talks quite technical. I am tempted to suggest to ask people to make their projects more understandable for general audience, but on the other hand, as I said, one learns

more and better if they do what they want to, so having freedom is a good thing. I certainly enjoyed the freedom to choose my own project.

8. ... *the guest lectures?*

Excellent! Showing movies was a good idea too.

9. ... *the level of effort required?*

Appropriate, I think. Actually, I did not feel that much effort was required, rather we were given an excellent opportunity to learn as much as we possibly could learn in two weeks. I personally spent much time in the lab, which I consider a good thing.

10. ... *the amount of time allotted for the material?*

We had enough time to learn something to get us started. It's up to us now to learn more on our own. It would be nice to have 3 weeks rather than 2, but if the school was 3 weeks long, then my answer to this question would have been "it would be nice to have 4 weeks rather than 3", so don't listen to me :-)) I definitely would not make the school shorter though.

11. ... *the topics chosen for lectures?*

Excellent. The Java 3D sequence was too short though. It would be nice to have an extra week to do exercises (and even projects) in Java 3D. But as I already said, it is always possible to add more topics and make the school longer.