

2005 MSRI Summer School on Mathematical Graphics

Student Comments

**Comment form on the MSRI Summer School on Mathematical Graphics
Reed College, June 2005**

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Answer each question as fully as you can.

1. How useful for your future work do you think this school will have been?
Quite helpful, not only for illustrating my work, but also as a teaching tool for the courses that I will be teaching.
2. Would you recommend Reed College as a site for future summer schools? Likes and dislikes?
Yes, I loved this location. Possibly a summer school in Australia??
3. Why did you decide to attend this school?
I wanted to learn how to use the programming tools that I've used (somewhat) before to show things visually (something I hadn't seen before).
4. How did you learn about this school?
Via a department-wide email about several MSRI events.
5. Overall thoughts about how successful the school was?
I felt that this was a very successful program. I came here not knowing how much I would learn about math and expecting to just learn some interesting techniques with graphics. It turns out that not only did I learn tons about graphical techniques, I also learned great programming skills and also some really cool math! Another thing I really liked were the group activities, such as the hikes, BBQ and meals together. I feel like I was able to connect on a deeper level with people because of this frequent interaction. Nice job, organizers!

Comment on and suggest changes in ...

6. ... the principal courses of lectures?
I'd love more PS code examples, maybe 3-D ex?? It was effective to see lectures and examples then quickly try them out myself in the lab. It was very good to help the ideas settle & digest.
7. ... the projects?
Great. A good way to show off the creative minds among us.
8. ... the evening (public) lectures?
These were very accessible, mathematically speaking, but also were quite informative to some really cool things. The last talk was a little warm in that room though.
9. ... the level of effort required?
A lot of work at times, but no more than we are used to as math grads. :)
10. ... the topics chosen for lectures?
Again, very informative.

Answer each question as fully as you can.

1. How useful for your future work do you think this school will have been?
Quite.
2. Would you recommend Reed College as a site for future summer schools? Likes and dislikes?
Absolutely. Beautiful campus & great food.
3. Why did you decide to attend this school?
To learn more about Java, PS, graphics and math
4. How did you learn about this school?
MSRI web page, email from dean of my university
5. Overall thoughts about how successful the school was?
Quite. Although, initially there were admin/logistical problems with communication lines & getting info about what to expect/schedule/"Welcome. Here is a first email to let you know that we will be expecting you" from the organizers.

Comment on and suggest changes in ...

6. ... the principal courses of lectures?
7. ... the projects?
8. ... the evening (public) lectures?
9. ... the level of effort required?
10. ... the topics chosen for lectures?

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It was all great.

Answer each question as fully as you can.

1. How useful for your future work do you think this school will have been?
I think that the school will be very useful for my future work. I've always felt that while I know a lot of pure math, I don't possess any skills to demonstrate my knowledge.
2. Would you recommend Reed College as a site for future summer schools? Likes and dislikes?
Yes. Portland is a wonderful and friendly city, especially in the summer. The 24-hour access to the lab was also very convenient.
3. Why did you decide to attend this school?
I wanted to learn C++ or Java w/o having to take an intro class that spends a lot of time on basic mathematical principles like recursion, etc.
4. How did you learn about this school?
I learned about the school from my graduate institution.
5. Overall thoughts about how successful the school was?
I thought that the school was fairly successful in providing me with the tools to write nontrivial programs. However, I still don't think I really "understand" Java.

Comment on and suggest changes in ...

6. ... the principal courses of lectures?
I think that the courses were appropriate and helpful for the projects.
7. ... the projects?
I'm happy that we were able to pick our own projects and really appreciate the instructors staying late in the lab to help us.
8. ... the evening (public) lectures?
The public lectures were very enjoyable and informative, a nice break from programming in the labs. I found all the topics of the lectures interesting, too.
9. ... the level of effort required?
The summer school involved a lot more work than I expected, but in the end, it was worth it.
10. ... the topics chosen for lectures?
I think that the courses were appropriate and helpful for the projects.

Answer each question as fully as you can.

1. How useful for your future work do you think this school will have been?
Very useful for math exposition to the general public and for conveying general excitement about math. While here I was also introduced to a lot of mathematics (less abstract, more computational) which I think will definitely be useful for general background.
2. Would you recommend Reed College as a site for future summer schools? Likes and dislikes?
Yes, nice and relaxing atmosphere, easy 24h access to important buildings on campus. Friendly, helpful staff.
3. Why did you decide to attend this school?
I have wanted to learn some graphics for a while (1-2 years) but the difficulty at learning a language on my own (in particular, choosing the best place to start) has kept me from making any significant progress.
4. How did you learn about this school?
From an email sent to the PhD students in my department (about all the summer schools organized by MSRI)
5. Overall thoughts about how successful the school was?
Great, I learnt/achieved much more than anticipated.
 - 1) *I feel confident about going home and writing my own graphics programs and interacting w/ the unix (e.g. emacs) environment.*
 - 2) *The public lectures were great examples at good talks. I was amazed at the number of questions from the audience.*
 - 3) *The student presentations introduced me to various recreational mathematics.*
 - 4) *I saw some really beautiful mathematics AND how to produce it.*

Comment on and suggest changes in ...

6. ... the principal courses of lectures?
The choice was good (i.e. teach Java, postscript, and a bit about general algorithms).
7. ... the projects?
Great opportunity to practice skills and get help. Crucial for remembering the material in the long term. I also really enjoyed seeing others' talks.
8. ... the evening (public) lectures?
Great examples of good talks; I feel like I learnt a lot (got many ideas) about how to handle a general audience.
9. ... the level of effort required?
Good, intense but appropriate for a crash course in graphics.
10. ... the topics chosen for lectures?
Good, but postscript 3D explanation should be shorter (or more exercises on it).

Answer each question as fully as you can.

1. How useful for your future work do you think this school will have been?
Extremely. I expect to use postscript on a nearly daily basis now.
2. Would you recommend Reed College as a site for future summer schools? Likes and dislikes?
Yes, extremely.
Likes: – *Excellent atmosphere*
– *Beautiful grounds*
– *Nice, compact facilities*
3. Why did you decide to attend this school?
I expect to draw a lot of figures, and was having trouble drawing good figures.
4. How did you learn about this school?
It was advertised around the UNSW maths dept.
5. Overall thoughts about how successful the school was?
It was excellent. I'm highly satisfied.

Comment on and suggest changes in ...

6. ... the principal courses of lectures?
The Java lectures could be better? → They would be better over a longer period, but time is limited.
7. ... the projects?
They were intense, but worthwhile. I learnt many more emacs commands.
8. ... the evening (public) lectures?
Very interesting. A worthwhile practical demonstration!
9. ... the level of effort required?
Pretty high, but I think that helped to "burn in" some lessons & expose weaknesses to remedy.
10. ... the topics chosen for lectures?

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In short, I think the school could productively go for another week. Superlative!

Answer each question as fully as you can.

1. How useful for your future work do you think this school will have been?
Very!! I think the techniques & available technologies for doing math graphics will come in very handy, since it is one of the best ways mathematicians can express their ideas to others.
2. Would you recommend Reed College as a site for future summer schools? Likes and dislikes?
YES!!
Likes: Beautiful, clean campus, friendly people, great city, good cafeteria food, beautiful lake, good support (campus safety & the RA), great computer labs.
Dislikes: Stiff, rough sheets & pillowcases & blankets & towels; no towel rack in dorm bathroom.
3. Why did you decide to attend this school?
Interested in math & graphics!
Eager to travel & learn.
4. How did you learn about this school?
Email from MSRI through contact professor at University of CA, Riverside.
5. Overall thoughts about how successful the school was?
A smashing success!

Comment on and suggest changes in ...

6. ... the principal courses of lectures?
Great! Very useful.
7. ... the projects?
Get us thinking earlier about projects, maybe more early guidance?
8. ... the evening (public) lectures?
Awesome, really great models for a good math talk to non-math
9. ... the level of effort required?
A little steep, but rewarding
10. ... the topics chosen for lectures?
Very good!
Wished we could have learned other programs/methods as well.

Answer each question as fully as you can.

1. How useful for your future work do you think this school will have been?
Actually very useful. It inspired me a lot in all directions.
2. Would you recommend Reed College as a site for future summer schools? Likes and dislikes?
Oh yes. Great climate, nice & quiet, wonderful people and beautiful college.
3. Why did you decide to attend this school?
My advisor thought it would be useful.
4. How did you learn about this school?
Jerry Bona, UIC
5. Overall thoughts about how successful the school was?
Overall expectations and I had high expectations (and hopes).

Comment on and suggest changes in ...

6. ... the principal courses of lectures?
Great
7. ... the projects?
So diverse and interesting
8. ... the evening (public) lectures?
OK
9. ... the level of effort required?
Just right
10. ... the topics chosen for lectures?
Interesting really

Answer each question as fully as you can.

1. How useful for your future work do you think this school will have been?
I will use this knowledge much in my future – both in teaching and presentation of research.
2. Would you recommend Reed College as a site for future summer schools? Likes and dislikes?
YES! Beautiful campus – peaceful environment. Excellent food – healthy.
3. Why did you decide to attend this school?
I was interested to see what kind of work was being done in mathematical graphics and wanted to learn programs to make graphics.
4. How did you learn about this school?
The Graduate Adviser emailed us the various MSRI programs – this one looked most interesting.
5. Overall thoughts about how successful the school was?
Very successful – it was a friendly, cooperative group. I learned much more than I thought I could and the campus was beautiful.

Comment on and suggest changes in ...

6. ... the principal courses of lectures?
7. ... the projects?
8. ... the evening (public) lectures?
Wonderful
9. ... the level of effort required?
10. ... the topics chosen for lectures?
Maybe some on html and 3D Java

Answer each question as fully as you can.

1. How useful for your future work do you think this school will have been?
I need programming skills for some of the things I do. The graphics portion of the programming was a great theme and got me thinking about using graphics & applets in the classroom & in presentations.
2. Would you recommend Reed College as a site for future summer schools? Likes and dislikes?
Reed was wonderful. The weather was great, the accommodations were great, the food was good, Portland was fun. The computer lab was perfect for what we needed.
3. Why did you decide to attend this school?
I kept finding that I needed programming skills for my research & this program seemed like an ideal way to get my feet wet.
4. How did you learn about this school?
Email was sent out to the grad students in my department about the program.
5. Overall thoughts about how successful the school was?
*This was an amazing program. Grad students need to have computer programming skills and MSRI should offer more programs on computer programming aimed towards math grad students.
This program is invaluable and should be highly recommended to any grad student who needs computer graphics for their talks, presentations, research, teaching, etc.*

Comment on and suggest changes in ...

6. ... the principal courses of lectures?
*More on the basics of Java for people with no programming experience
More on 3D postscript
Classes would be better if everyone had the computer there & could follow along with the prof. Maybe hold class in computer lab.*
7. ... the projects?
Excellent! So much fun to do & see. Everyone did an amazing job.
8. ... the evening (public) lectures?
All of them were amazing. David Austin, Yvan Saint-Aubin & David Wright are great and it was a pleasure to get to work with them.
9. ... the level of effort required?
I did A LOT of work these past two weeks but it was never painful. I was driven to complete my project & do it well so the long hours in the lab were kinda fun!
10. ... the topics chosen for lectures?
More on Java & algorithms would be useful.

* * * * *

We need reference books that we can keep in the labs so that we don't need to bug the profs for simple things.

Answer each question as fully as you can.

1. How useful for your future work do you think this school will have been?
Very helpful in my research
2. Would you recommend Reed College as a site for future summer schools? Likes and dislikes?
Perfect place !!! I like very much that Reed College has many huge trees and the lake in the middle of the campus.
3. Why did you decide to attend this school?
My scientific interests are image processing & math graphics.
4. How did you learn about this school?
From the director of graduate studies of my university
5. Overall thoughts about how successful the school was?
Very successful. The atmosphere is nice & friendly. It is nice that we were working hard and in addition, we had wonderful trips to the park! In Reed College, we had a great summer school! Thanks!

Comment on and suggest changes in ...

6. ... the principal courses of lectures?
Include how to deal with 3D objects in Java. Very nice lectures!
7. ... the projects?
Great
8. ... the evening (public) lectures?
Perfect
9. ... the level of effort required?
Great
10. ... the topics chosen for lectures?
Very good & interesting! I learnt a lot on math graphics in this school & I now know how to build beautiful math objects, which can illustrate functions & math laws & math theorems!

* * * * *

I would like to say "thank you" to all the organizers! We had great lectures in a great place such as Reed College! Thanks!

Answer each question as fully as you can.

1. How useful for your future work do you think this school will have been?
Really a lot. Most of the time when you have to give a talk about your research, it is not only what it says, but too how it looks; now I can make it look great.
2. Would you recommend Reed College as a site for future summer schools? Likes and dislikes?
Of course I would recommend it. The place (campus) is beautiful, the city is really nice, people on campus are really nice. Dislike: I WANT MY LINUX!!!
3. Why did you decide to attend this school?
Because I thought it would be a nice opportunity, and my advisor suggested it.
4. How did you learn about this school?
Email sent by the grad coordinator back home
5. Overall thoughts about how successful the school was?
A lot, but a little too painful (workload a little overwhelming)

Comment on and suggest changes in ...

6. ... the principal courses of lectures?
Good. Even though I still don't like postscript.
7. ... the projects?
Start with them the first Tuesday! and allow simpler things
8. ... the evening (public) lectures?
Great! Things to change, none. (Well, Yvan looked kind of nervous, but he did it great anyway.) Great talks by great speakers!
9. ... the level of effort required?
A little excessive. I understand that the idea is to learn doing it, but having to spend the night awake, and not to sleep more than two or three hours a day for a week is not healthy.
10. ... the topics chosen for lectures?
Reasonable

Answer each question as fully as you can.

1. How useful for your future work do you think this school will have been?
Extremely useful. I'm hoping to learn some more Java on my own.
2. Would you recommend Reed College as a site for future summer schools? Likes and dislikes?
*Yes – The dorms were adequate.
– The food was good.
– And the computing access was excellent.*
3. Why did you decide to attend this school?
Because I wanted a basics in graphics that I could build on later.
4. How did you learn about this school?
From my professor
5. Overall thoughts about how successful the school was?
Very successful. The lectures were great. I especially enjoyed the atmosphere, and the coordination between everyone.

Comment on and suggest changes in ...

6. ... the principal courses of lectures?
*I would have loved a gentler introduction to Java, but I'm not complaining.
Some more of the graphical algorithms will be awesome.
The homeworks were very helpful.*
7. ... the projects?
Great idea. I don't know if there's any way to hand out projects earlier.
8. ... the evening (public) lectures?
Enjoyed all three. It was nice having the school community over for the talks.
9. ... the level of effort required?
*Understandable.
The projects required a lot of effort but it was "sweet pain." Enjoyed it.*
10. ... the topics chosen for lectures?
Some more of Jim's graphical algorithms will be nice. Maybe have them earlier on in the course as well. By the time we had Jim's lectures, I was too focused on PS and Java to devote any time to going through his exercises. But I liked the introduction he gave, and I intend to take a Computer Science class in data structures and algorithms later.

Answer each question as fully as you can.

1. How useful for your future work do you think this school will have been?
It was a nice crash course in Java and PS, which is something I had to learn sooner or later, so it is very useful.
2. Would you recommend Reed College as a site for future summer schools? Likes and dislikes?
*Likes: very nice environment, good classrooms, campus, etc.
Dislikes: no phones, no blankets (initially)*
3. Why did you decide to attend this school?
See 1.
4. How did you learn about this school?
Multi-distribution email from Prof. Hugo Rossi.
5. Overall thoughts about how successful the school was?
9/10

Comment on and suggest changes in ...

6. ... the principal courses of lectures?
Relation between Java & C++, e.g. data compiled from C++, then how would I illustrate in Java
7. ... the projects?
They were nice, they made me learn a lot of Java, and html programming.
8. ... the evening (public) lectures?
They were interesting to listen to.
9. ... the level of effort required?
Reasonable.
10. ... the topics chosen for lectures?
See 6.

Answer each question as fully as you can.

1. How useful for your future work do you think this school will have been?
2. Would you recommend Reed College as a site for future summer schools? Likes and dislikes?
Portland and the NW in general are great. More mathematical resources (books) would be better.
3. Why did you decide to attend this school?
Convergence of mathematics and computing.
4. How did you learn about this school?
5. Overall thoughts about how successful the school was?

Comment on and suggest changes in ...

6. ... the principal courses of lectures?
7. ... the projects?
It would be good to have more on good software writing/engineering practices
8. ... the evening (public) lectures?
9. ... the level of effort required?
Longer time might be good. 3 weeks?
10. ... the topics chosen for lectures?
Perhaps a demo of POV-Ray

Answer each question as fully as you can.

1. How useful for your future work do you think this school will have been?
The pictures I have created using both Java and PC – but particularly Java – will be enormously helpful for my research.
2. Would you recommend Reed College as a site for future summer schools? Likes and dislikes?
I honestly can't fault the place. The campus is idyllic, the hosts are very generous and the computing facilities are topnotch. (Okay ... maybe the coffee wasn't too flash....)
3. Why did you decide to attend this school?
My involvement in dynamics has led me to work very visually. This course promised to skill me up with the basic tools and "philosophies" to take my visual communication of maths further.
4. How did you learn about this school?
Email from UNSW maths school secretary c/o Bill
5. Overall thoughts about how successful the school was?
Extraordinarily successful! Even those whose work and presentations were at times strained/ill-prepared/intense (e.g. mine!) had the chance to give it a go among a whole assembly of interested and sympathetic students/teachers.

Comment on and suggest changes in ...

6. ... the principal courses of lectures?
Very solid, practical grounding in Java/PS, full of examples to make the programming seem more accessible (and "do-able"). (More live programming. David A! That was great.)
7. ... the projects?
Hard work, involving intense but, ultimately, very rewarding application of mental endurance! Fantastic to not only see other talks but to get involved in their preparation too.
8. ... the evening (public) lectures?
Can't fault them. Loved every minute – esp. the more mathematical "shadow" lectures.
9. ... the level of effort required?
S. loads (pardon the abbreviated French)
10. ... the topics chosen for lectures?
Working by example (e.g. grabbing sample code off the web) was great, esp. when supported by detailed lectures/online notes/teacher-mentors, but maybe the programming dummies (like me) could have had a few more "baby step" lessons....

Answer each question as fully as you can.

1. How useful for your future work do you think this school will have been?
Extremely useful. I've learned a lot about not only creating graphical images, but also object-oriented programming, which I've been wanting to do for a long time.
2. Would you recommend Reed College as a site for future summer schools? Likes and dislikes?
Reed College is the perfect place – very beautiful campus, quiet in the summer, good food. And, of course, great weather in Portland.
3. Why did you decide to attend this school?
The idea of broadening my programming skills and learning how to use graphical tools was very appealing.
4. How did you learn about this school?
From my advisor
5. Overall thoughts about how successful the school was?
Very successful. I wouldn't have learned so much on my own. But another thing that I consider as important is how great everybody was!!! David, Jim, Bill – you've done a superb job and brought so many interesting people together! This was way more fun than I expected it to be!

Comment on and suggest changes in ...

6. ... the principal courses of lectures?
Everything was good.
7. ... the projects?
It seemed to be hard for people to choose their themes and to understand what exactly was expected.
8. ... the evening (public) lectures?
Great lectures.
9. ... the level of effort required?
The projects might need another day or so.
10. ... the topics chosen for lectures?
Were new to me but very useful. I've never really done math graphics before, so it was good to concentrate on just that.

Answer each question as fully as you can.

1. How useful for your future work do you think this school will have been?
The graphic method will be interesting and helpful for my research, and Java is a new powerful and useful tool for my work.
2. Would you recommend Reed College as a site for future summer schools? Likes and dislikes?
Yes, Reed is a good place with perfect weather for summer school, and there are good food, good dorm and lab to study and rest.
3. Why did you decide to attend this school?
I want to learn something about Java, and I am interested in mathematic graph. Also, I want to go to a place with cool weather in summer.
4. How did you learn about this school?
I learned many idea about mathematic graph, and I will start using Java in my work.
5. Overall thoughts about how successful the school was?
*It bring many new and interesting ideas of graphic methods from different areas in math and show some useful tools like PS and Java.
Provide a cool place in the hot summer.*

Comment on and suggest changes in ...

6. ... the principal courses of lectures?
*Very good.
Adding some lectures of 3D mathematic graphic methods.*
7. ... the projects?
Everyone's projects are good, giving me many new ideas and information.
8. ... the evening (public) lectures?
Good.
9. ... the level of effort required?
Not easy, and not very hard.
10. ... the topics chosen for lectures?
*Good.
MSRI can add some topics about applications of graphic methods based on more different mathematic areas.*

**Comment form on the MSRI Summer School on Mathematical Graphics
Reed College, June 2005**

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Answer each question as fully as you can.

1. How useful for your future work do you think this school will have been?
2. Would you recommend Reed College as a site for future summer schools? Likes and dislikes?
3. Why did you decide to attend this school?
4. How did you learn about this school?
5. Overall thoughts about how successful the school was?

Comment on and suggest changes in ...

6. ... the principal courses of lectures?
7. ... the projects?
8. ... the evening (public) lectures?
9. ... the level of effort required?
10. ... the topics chosen for lectures?