



# undergrad

undergraduate architecture  
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PinUP is back, and this time, we brought some content.

This issue is dedicated to the MIT undergraduate department of architecture. We understand that all of this just barely scratches the surface of the issues that need to be discussed amongst everyone in the entire MIT architecture community. We just hope that it sheds a little light on this fabulously talented and intelligent group of students.

We interviewed some people around the school that might be able to shed some light on the undergraduate program. The interviews were done separately with each individual (no, we weren't cool enough to put together one of those heavy-weight discussion panels), with the idea that the questions posed would become the beginning of a much longer, productive dialogue. We have tried to assemble portions of each interview into a cohesive topic heading - We hope that the context in which the opinions were expressed is maintained.

It had become a consistent comment amongst many of the grad students that they simply didn't know what was going on in the undergraduate department, and I would have to say that I agreed. These people are shelved over in the dirty building, and the smoke signals sent by them as communication are often obscured by the radiation from the nuclear reactor, and the candy smog from what was once the Necco factory...

It is time for us to look towards the North, towards the light... towards the *future*.

**Eliabeth Marzloff**

**B. Alex Miller**

**Editors**

**On a much more serious note, we would like to thank this issue's contributors:**

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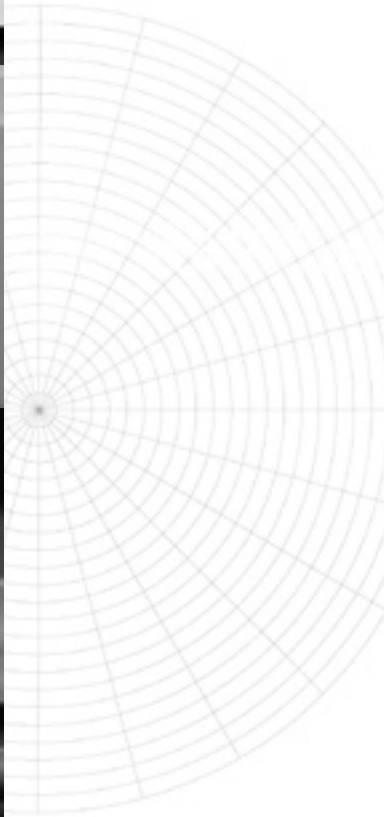
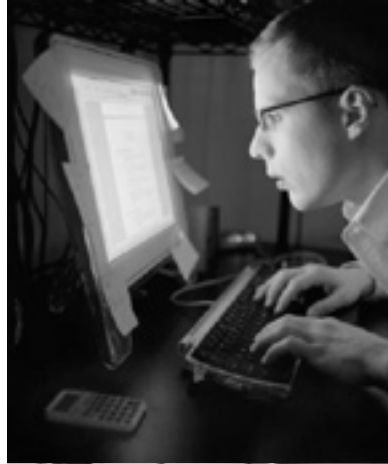
**Milena Tsvetkova**

The next issue of Pinup will be called "Dolly": You'll understand when you see it...

Thursday, 21 October 2003 12:49:55

# überstudent

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## Some statistics and advice from the undergraduate admissions website:

- **They [undergrads] are smarter than we [grads] are.** The 20-75% midrange of SAT scores for students admitted in 2003 was 690-770 for Verbal and 740-800 for Math. We would like to mention that *800 is included in the midrange* - the top 25% scored at or near 800. We're guessing the same isn't true for the graduate population.
- **You had better be as smart as you say you are.** The following is a hypothetical question / answer session put forward by MIT for their incoming students that may have questions on being admitted to the institute:

Q: "Is it better to take an advanced class and get a B, or take a regular course and get an A?"

A: "We encourage you to take the most challenging courses available. Most of our applicants are able to take difficult courses and receive A grades."
- **They are as young as they look.** A high school diploma is not necessary for admission to MIT.
- **We're not so popular.** 57% of MIT's undergrads major in engineering, 27% in science, 4% in humanities and social sciences, 2% in architecture and planning, and 9% in management.

BILL: They need to know that they are being involved in some important enterprise. When it's just us in this shitty building, which is very difficult to pull off. If 100 other architecture students surround you, your work just matters more in some way. It's the New York effect. Everything you say and do in New York is important.

You can also say that there are mixed signals being sent to the students.

**They are supposed to be doing something important, but you have them sequestered in this building?** Does that make sense from the point of view of the students? Where is the outlet for their work?

Never discount the power of feeling sexy – of being part of that environment that allows you to show your work. Nobody has more energy than me, but it is still difficult to create that type of environment over here.

They also don't get to see examples of your work (graduate students): You know, no example of work that's going on in the 'big leagues'. **They need to learn to get excited by the possibilities- to see what they are moving towards. The grad students need to be seen.** I mean, they (undergrads) need to learn taste; what works visually... they need to learn the language, the in-jokes, how to dress, how to act – there is a matter of standards: You don't put loopy text under your section and you don't put stick figures in your drawings.

JAN: While we're an outpost here at N51-N52, there isn't anybody around. They need to be exposed to the thesis studios to see the intensity level. That would really help the studio culture for these guys.

We need more interaction, more common events. Look at the tables in the dome, and what a change they made. It's a lot easier to run into people in some situations, and this is always a good thing. There just needs to be a way to bring the undergrads together with the grads socially.

There are a few ways... We can have the thesis students act as buddies for some of the undergrads. Have a continuous dialogue through the studio, and when the thesis people need help, the undergrads can aid in their work for a little while. **It's the best way to learn, working alongside someone.** Again, have some kind of department-wide building exercise that everyone is involved in. That would help. There is also a way to start using the visual arts classes as places for more overlap between grads and undergrads.

PAUL: It would be ideal if the undergraduate and graduate students could be in the same building space. But that is more of an institute level issue. I try to hold our reviews on the fourth floor in building 7 in order to expose their work to the graduates. In general, they could be more aware of events that are happening and see more of the graduate work if they were located in the same space. There are some efforts underway to improve the quality of the space in N52.

PHIL: It was ok over there, but way too much separation. **The space itself isn't bad- It's just that we had no idea what was going on up the road.**



fig. 2

**BILL:** It's the New York effect. Everything you say and do in New York is important (fig. 2).

Never discount the power of feeling sexy – of being part of that environment that allows you to show your work. Nobody has more energy than me, but it is still difficult to create that type of environment over here.

BILL: The MIT presumption is that the undergraduate education is kind of like a liberal arts education in the age of science. It is a worthy goal – it's worth holding on to. It's just that a liberal arts based education is more flexible- it's easier to 'cross-register' from courses being taken in the architecture department. Remember, MIT admits without 'major', which means that each department has a huge shopping list for students to choose from. There just happens to be a lot of science-based coursework on those shopping lists.

JAN: We are re-evaluating it [the curriculum] for the first time since 1949. The education was just very narrow then. Things are so much more complex now. MIT was the center for defense research. It was entirely scientifically oriented, towards creating a very rational, logical student. Of course, being logical is a good thing, but there was still an element of thinking within the box.

There are simply different ways of thinking. There is a mathematical way, which is deductive, and there is a visual and physical way of thinking – Hands and Mind, right? Not just mind. I would love to see a loosening of the rigid requirements. How much physics and calculus do these kids need or want?

**I believe that there should be a 9 unit design course that is required of all MIT undergraduate students. Everyone should be involved. Everybody should try to learn at these different levels, with more courses generally related to design.**

PAUL: It's a lot of work, but the G.I.R.s [general institute requirements] allow them greater depth when they can choose electives [later on in their studies at MIT]. Lab assignments and problem sets are a different model than studio, however, and so in the end I've paced their assignments weekly to help fit that schedule.

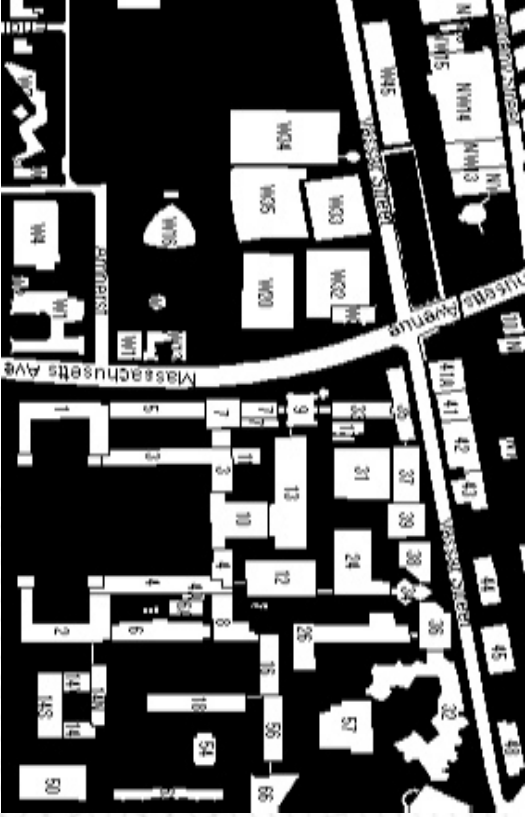
MILENA: I feel I've gotten a very solid education, especially due to the General Institute Requirements. I think after I work for a year, I will have a good chance to study architecture at the school of my choice.

PHIL: You know, I had to take 802 (a physics course on electricity and magnetism) twice. That is hard to do when you are trying to get credits taken care of. **I just wish that we had some classes to help with some of the skill sets. It seems that I have to spend all of my own time to 'catch up' with everyone else. That's outside of studio, outside of MIT. I would like to have gotten that guidance while here at school.**

The extra MIT courses are just such a time sink. I appreciate the fact that they want us to know the basics, I guess I just wish there was some more flexibility in the whole situation. 801 was useful, chemistry and biology were ok, but the theoretical calculus is kind of useless in the long run. If it useful in some way, can't we integrate it with some kind of architecture-specific course work?

**BILL: It's our mission. We believe we should open up to the rest of the world. 20 years from now, we would love it if some biotech god that graduated from MIT would be able to remember the introductory architecture design course that he took in undergrad.**





**PINUP:** How do you feel about the studios being open to non-majors?

**PAUL:** I think it's very helpful to the class. It brings in other perspectives that permeate the discussion. It also brings students into the major who were considering other areas of interest.

**PINUP:** What do you like most about MIT?

**MILENA:** The G.I.R. [general institute requirements]

**PAUL:** What would you change about MIT?

**MILENA:** The G.I.R. Four years isn't enough time to make full use of everything at MIT. I would like to see more of the architecture program courses fall within the G.I.R., similar to many of the other majors at MIT, so that I could take more architecture classes.

**PINUP:** Now that you're in the graduate level I studio, do you think the undergraduate studios are less intense than the graduate level studios?

**MILENA:** Yes, but I think that's because not every student in the undergraduate studios will continue to major in Architecture. Also, the undergraduate studios recognize that we have to fulfill the General Institute Requirements (G.I.R.), which are quite intensive. I definitely spent most of my hours on my studio work rather than other classes, including a lot of all-nighters. Level I is more serious however, more of a time commitment, and a much more architectural environment.



BILL: There are a couple of factors. First, the undergrads are encouraged to have a varied life with sports and clubs. They have the highest participation in IM (intramural) activities in the nation. It just isn't possible to have the monofocus that you might have been able to have in your undergrad program or others like it.

Also the intensity isn't as pronounced because you have a large group of students that will not be continuing on in the architectural studio trajectory – when you have a very rigid sequence of studios that are required, you tend to build a relationship with your classmates- you are in studio with them for four straight years. This changes the intensity; it allows a consistency from one design course to the next. MIT undergrads are never going to be as archi-focus as other institutions.

PHIL: **There were a couple students that kind of set the tone for the entire studio.** It's usually people that are kind of easy to get along with, you know, not necessarily the best designers or anything, but they were just willing to work and have a good time with everyone. It makes it easier for everyone else to go along, and enjoy the late nights.

JAN: I've been teaching a lot of years, but I don't really know why it [studio culture] develops in some studios and not in others. I do try to promote it as much as possible in my own studios. **I believe that real education begins at 4am in the morning. Again, you need to be able to sit down and let things come to you over time.** I try as much as possible to be in my office here working late to be near my students when they are trying to go through that.

A common theme or problem typically brings the studio together – they can all relate with common goals. Of course, a shared common experience such as a field trip like we had in Cuba will bring a group together: That was a perfect example of how a trip can really bring a group of students together.

While we're an outpost here at N51-N52, there isn't anybody around. They need to be exposed to the thesis studios to see the intensity level. That would really help the studio culture for these guys. We used to have this guy when I was at Harvard that would come in at 11am, leave at 5pm, and he would be finished with his work. We thought he was crazy! The best design work happens at 3am, not 3pm.

These guys have so much on their plate. Design is simply a pocket of time on the schedule, because there is so much other stuff going on around them at MIT. Design doesn't work that way. **You need to sit there and let the model speak back to you in a way – you can't let that happen if you are in studio for 3 hours, you complete your task, and then you leave.**

PINUP: What undergraduate classes do you teach?

PAUL: This spring I will be teaching the studio class, 4.104, for the fourth year. This course is the critical line between its pre-requisite, 4.101 (Experiencing Architecture Studio), and Level I Studio. 4.104 used to only meet twice per week and was considered a drafting course. That changed after Stan Anderson organized the undergraduate curriculum committee, of which I was a member, and now the course meets three times a week and is a much stronger studio environment. **The projects are designed to get students excited about architectural techniques, and they are charged with social and political issues to heighten awareness about issues and the role of architecture.**

PINUP: What kinds of projects do the students work on?

PAUL: The one project I've taught for the last 3 years is the public bathroom. This is often surprising and shocking for the students, but it is representative of class and political issues. We look at how it speaks to the nature of public space and what are its cultural variations. This project allows students to delve into architectural issues, and the students are given a lot of leeway.

I've tried to strengthen the drawing component, emphasizing it as a way of seeing the environment and use it as a vehicle to that end. **We move away from drafting and think instead about how the world looks and appears. For example, working on a very large scale changes the mechanics of drawing, and forces the students to consider how to depict visual experience as a bodily experience.** This is coupled with lectures about architectural drawing conventions and processes over time.

The emphasis of the course, however, is always on three dimensions, and at best on four when we can incorporate movement and habitation successfully into the projects. The design process looks at the students' perception in time and concerns such as opacity, transparency, view, light, and texture. I'm not just teaching perspective, but rather they are exposed to ways of imagining space throughout the semester. A richness of ideas are expressed, and sometimes under a great deal of time pressure. I like to ask them to complete a design component of a project within the two-hour class period. Through this pressure they develop a willingness to push themselves beyond their own boundaries.

The students complete one composite drawing at the end of the semester. They must represent all of the important spatial and technical aspects of their project into one narrative drawing. They are encouraged to make it strong enough to convince a jury that their ideas are clear.

PINUP: What is the overall structure of the course?

PAUL: It is divided into two parts. In the first part the focus is on freeing their ideas, through issues of content and techniques. In the second part, they bring this experience to completion through synthesis. In the end, architecture must stand on its own. There are two projects, the first is the bathroom project and the second changes from year to year. Two years ago we looked at the central artery excavation here in Boston. They also get several tours of current exhibits, and of one firm per semester.

BILL: Only 1/3 of the students that take this course move on through the rest of the architecture studios. ¼ of the students in the course are from Wellesley, we always have 2 or 3 from Harvard, a couple grads (graduate students), and a few seniors that take the course to get a taste of what architecture is like – and to fulfill some institute requirements. We have to be aware of this mix- we can't teach it like some of the graduate courses. We just want to give some of these people the chance to understand *building*.



Study of Central Artery Construction by Jelena Pejckovic

BILL: There is very intentional sequence of idea throughout the undergrad sequence as well. The names of the four studios are:

- Experiencing Architecture Studio (4.101)
- Architecture Studio: Intentions (4.104)
- Architecture Studio: Landscapes (4.105)
- Architecture Studio: Cities (4.125, 126)

**4.101 is named “Experiencing Architecture Studio” because it is an introduction to students from a much larger environment, sometimes outside of architecture.** It is a first exposure to the environment of studio itself. The “Landscapes” studio is intended to allow a deploying of architecture into a context free of urban constraint- this allows the students to develop a categorizing of space away from too many contextual influences. In all of these cases, there is a very intentional progression and connection from one studio to the next.



Thursday, 21 October 2003 10:34:19



# recognize

undergraduate architecture  
[arch/utmp1.next.level.b](http://arch.utmp1.next.level.b)



JAN: There should be more courses related to basic architectural skills and there should be more hands-on type courses being offered: Figure drawing, landscape drawing, many different visual arts classes that we don't have yet... classes that would offer a different way of thinking. Perhaps the undergraduates could build an exhibition for the spring... We need that grounding of building things.

Take the mechanical engineering contest that they have every year here. It is wonderful. All of these kids get together and are trying to attain the same goal. It's on the front page of the Tech. It's really a social situation as much as it is an academic one. The aero engineers have the same type of gathering where the students build the model planes... Why can't we do that?

**I just think that we have some of the best undergraduate architecture students in the country; we just need to take advantage of that.**

PINUP: How well do you think the program prepares students for graduate programs other than MIT's?

PAUL: Very well. Our students are placed at the schools of their choice. Many of us feel that our undergraduates are very capable, talented and energetic. We should do everything we can to give them a more prominent space within the program. Many of them are enterprising students who push the boundaries with other disciplines. People in the department aren't always aware of the quality of undergraduate students here and their contribution to the program. In addition to students who have worked for Shigeru Ban and BMW, last year we placed two students at Princeton. Some of our students go on to M.Arch. II programs. Last year a few stayed on for a 4+2 at MIT.

**BILL: We need to find a way to expose these kids for what they are, and let this affect how they continue – they are so capable, we need to be taking advantage of that as best we can.**

PINUP: How well do you think MIT has prepared you for a career in architecture?

MILENA: I feel I've gotten a very solid education, especially due to the General Institute Requirements. I think after I work for a year, I will have a good

**PAUL: I just want to emphasize that our undergraduates are amazing. We could have the strongest program in the country with these students. We should build on this foundation.**

### **Architecture Lecture Series:**

Oct 21 6:30pm, Room 10-250

Ricardo LEGORRETA "Meditations: New Projects"  
Architect, Mexico City  
Eleventh PIETRO BELLUSCHI LECTURE

Oct 28 6:30pm, Room 10-250

Eduardo CATALANO "Floralis Generica: An Homage to  
Pietro Belluschi"  
Architect, Professor emeritus, MIT

### **Design Computation Lecture Series:**

Oct 24 11am, Room 7-431 (AVT)

George STINY "The Superstar Calculation"  
Professor of Design & Computation, MIT Dpt. of Architecture

### **Design at the Frontier of Engineering and Architecture**

#### **Joint SMArchS Colloquium Building Technology Seminar Series :**

Oct 20 12pm, Room 7-431 (AVT)

Collaboration Between Architects and Engineers  
Guy Nordenson (Princeton/GNA)  
Meejin Yoon (MIT)

Oct 27 12pm, Room 7-431 (AVT)

Advanced Geometry as Mediator  
Charles Walker (Arup)

### **AKPIA Lecture Series: A Forum for Islamic Art and Architecture:**

Oct 23

Dr. Vildan SISMAN "When Literature and Architecture Meet:  
Intersection of Poems and Monuments  
in Sixteenth-Century Istanbul"  
Independent Scholar, Cambridge, MA





We at Pinup are proposing a referendum to change the name of “plazma” to “plasma”, because it’s currently spelled wrong.

