

# Oregon's Andy Trattner: From Chess to MIT

by Brian Berger

Perhaps you have encountered Andy Trattner at one of the many chess tournaments held by the Portland Chess Club, or met him at some other chess venue—possibly one in which you sat across the board from him. What you would recall is a young man with a quiet demeanor, who plays a mean game of chess. What you probably would not know is that this Lincoln High senior, recently named Oregon's male Presidential Scholar, wears many hats, the latest of which was as a research team member at Portland State University, the other members being mainly graduate students.

You see, Trattner not only knows how to separate opponents from their rating points, but is quite adept at separating gasses and liquids in zero gravity, a NASA project Trattner was allowed to join after meeting with Portland State University mechanical engineering professor Mark Weislogel, a NASA veteran. Trattner's help in remotely manipulating mechanisms on the International Space Station led him to be a credited co-author of a paper expected to be published in *The Journal of Fluid Mechanics*, the top publication in the field.

It's little wonder that Trattner was given a chance on the NASA project, since from an early age he has excelled in whatever he chooses to do, be it becoming Oregon's top ranked senior high school chess player for 2014, being part of his school's robotics team which entered last year's state championships, scoring tops in Oregon on the National Spanish Exam for fourth-year Spanish students, tying for first place in his school's poetry competition, or honing his acting chops as "Steve" in Lincoln's production of "Almost Maine."

Transferring from Wisconsin in his junior year, Trattner brought with him such an expertise in math that it left Lincoln with nothing further to offer him. Unperturbed, he promptly took on multivariable calculus, differential equations, linear algebra and proof-based analysis at PSU. So it is not surprising, considering the scope and quality of his work in diverse areas, that Trattner was accepted early on to MIT and Caltech, intending to enter MIT this fall.

I recently approached Trattner about being interviewed for *Northwest Chess* magazine, knowing that many who have met or have known him only through his tournament play might be interested in seeing another

side of this amazing young man.

**BB: (1) When and why did you take on the Royal Game?**

**AT:** Although I learned how to move the pieces by age six, my family gravitated towards games like Monopoly or Trivial Pursuits, so I did not really delve into chess until high school. In middle school, our active principal, who funded ping pong and chess activities at school, encouraged my friends and me to play during rainy days at recess and lunch. Knowing that we could improve, intuiting but not fully comprehending that chess is more difficult and precise than anything I knew at the time, I joined Nicolet High School chess club with my closest friend. Because I enjoy problem solving, perhaps because I am mathematically-inclined but enjoy creativity, and certainly because Mr. Brown, our 1900-rated coach, inspired great enthusiasm in us and demonstrated that concrete improvements could be made with concentrated effort, chess—real tournament chess—became my favorite hobby. My first tournament was on November 20, 2010 and my first rating was 737. As a born competitor, I was unsatisfied. Chess was my first insurmountable obstacle. Since schoolwork was only moderately challenging, chess became my primary thinking outlet. I enjoyed the thrill of learning and discovering, constantly improving, and challenging myself to learn more in the face of chess's immense difficulty. I liked that I had full responsibility for my actions and could only blame myself and learn more with each loss.



Andy Trattner. Photo credit: Brian Berger

**BB: (2) Do you see chess remaining a fulfilling and fun part of your life, given the many opportunities that await you?**

**AT:** I'm hoping that opportunities are awaiting me, but I guess since that is never a guarantee, I will have to seize them. Chess is one of those things which is in my power to seize, and since I enjoy it so thoroughly, it will certainly remain with me forever. If not in tournament play (unlikely that I would ever stop!), at least in my learning habits and thought processes.

**BB: (3) What most excites you at the moment?**

**AT:** Going to college, not just for the sake of college, but for the sake of meeting and interacting with the leaders and thinkers of the future, for the experience, and for the opportunities in the New England area to play lots of chess! I am lucky that I get to go early and take some classes at MIT

this summer, while exploring Boston and meeting classmates and faculty as part of an exciting program called Interphase EDGE.

**BB: (4) Is there one person who has most influenced or aided you in your quest to reach certain goals?**

**AT:** I have many people to thank for their life-changing influence. In chess, Mr. Brown's incredible coaching and study program enabled me to progress at a very rapid rate. At home, my aunt Lai pushes me to always do better, to never settle for anything. This constant prodding helped me to overreach myself and contact people who I didn't know, securing work over the past couple years. Jamie Wong at Portland State University (PSU) was instrumental in introducing me to the engineering department there, where I met Dr. Mark Weislogel and Ryan Jenson, both of whom employed me in their exciting work researching fluid dynamics on the International Space Station and creating Unmanned Aerial Systems for precision agriculture at HoneyComb Corporation, respectively. They changed my perspective on school, work, and life, giving me the courage to drop classes which would not have taught me much compared to the real-world experience I gained through technical work; this experience was likely a key factor in my acceptance to great colleges.

**BB: (5) What are some of your favorite books, and why?**

**AT:** Harry Potter was my childhood. Since I have grown up, I found *Ender's Game*, *Foundation*, and *Hyperion* to be entertaining science fiction, Annie Dillard's *Teaching a Stone to Talk* and *Pilgrim at Tinker Creek* to be thought-provoking literature, and *How to Win Friends and Influence People* as well as *The 48 Laws of Power* to be interesting perspectives on human relations and applied psychology.

Of course, chess books impact me greatly because everything I read in them reinforces or teaches important concepts. Fischer's *My 60 Memorable Games* was the

first game collection book I read through, which inspired me and influenced my sharp play. Chernev's book on Capablanca is fun and instructive. I have yet to get to Tal, which I am super-excited to read. My favorite chess book is probably David Bronstein's tournament book on Zurich. Through sheer volume of games, studying it helped me jump from a 1500 rating to the 1700 level last spring at the Harmon Memorial tournament. I finally finished the book this year, and have since surpassed 1900. I am convinced that the time spent focusing and thinking about chess, not really specifically studying openings or endgames or tactics, but simply playing through rich grandmaster games, is the key to my progress thus far.

**BB: (6) What do you think we (the nations of the world) should most concentrate our intellectual and technological resources on, to assure a future for your own, and coming generations?**

**AT:** My generation is largely stuck with the current state of affairs, which is not necessarily negative. In the future, I would like to see inter-planetary human colonies (a vision shared by SpaceX, Mars One, and others) and comprehensive initiatives to reduce global warming, promote alternative energy, and eradicate fossil fuel dependence. However, the biggest improvement with the biggest impact that can be made today is in education. Both in the US and other countries, education systems do not reach their full potential to ensure every child receives the necessary skills not only to read, write, and perform mathematics, but to be conscientious citizens capable of creative and critical thinking, problem-solving, and contributing positively to humanity's future.

**BB: (7) What are your goals at MIT?**

**AT:** My goals at MIT are the same three goals I set for my life: to enjoy whatever I do, to meet people and leave them happier than when I met them, and to ultimately contribute to a better tomorrow. Basically, if I do not feel like each day is the best day of my life, then I am doing something wrong.

I hope to meet lots of amazing people, learn lots of interesting material, then apply the interesting material with those amazing people to do great things—if possible, focused on one or more of the three issues in question 6.

**BB: (8) Is there a question I have not asked you, that you**



Andy Trattner. Photo credit: Brian Berger

**would like to say something about?**

**AT:** My favorite quotation (Seneca the Elder) might be relevant: "Human affairs are like a chess game: only those who do not take it seriously can be called good players."

## Games

**Andy Trattner (1970) –  
Sean O'Connell (1856) [B06]  
Five-Game Match Portland (R3), 2014  
[Andy Trattner]**

**1.e4 d6 2.d4 g6 3.Nc3 Bg7 4.Bg5**

Recommended by Sam Collins in his *Attacking Repertoire for White* book.

**4...a6 5.Qd2 b5 6.Nf3 Nd7 7.a4 b4 8.Nd5 a5 9.Bb5?**

Not well thought-out.

**9...Bb7 10.Bd3 h6**

Black has the far better opening.

**11.Be3**



**11...Ngf6?**

11...g5 with the threat of ...e6 is strong.

**12.c4 bxc3**

12...Ng4 keeps up the pressure better.

**13.Nxc3 Ng4 14.Bf4 e5 15.dxe5 Ngxe5 16.Be2 g5 17.Bg3?**





17.Nxe5 Nxe5 18.Be3 would have prevented this ...Nc5 nuisance.

17...Nxf3+ 18.Bxf3 Nc5! 19.Qc2 Ne6?!

19...0-0 was solid.

20.Nb5 0-0 21.0-0-0 Ra6! 22.Kb1 Qb8

Even though ...Rc6 is stronger, sitting at the board, I felt like ...Qb8 was a great move since I couldn't find a good response and ...Rc6 is still a threat.

23.h4



23...Bc6?

The rook belongs there.

24.e5!

The beginning of a strong attack if Black is not careful.

24...Bxb5 25.axb5 Rb6 26.hxg5 Nxb5 27.Bc6 dxe5 28.Bxe5!?

Complications!! but 28.Qe2 is better since with accurate defense Black can equalize.

28...Bxe5 29.f4!? Bxf4 30.Rxh6 Rxc6!

If 30...Kg7 then 31.g3 which of course I did not see at the time. I was just hoping for tactics on Rg6 checks.

31.bxc6 Qb4??



31...Qe8 is necessary.

32.Rg6+! Kh8 33.Rh1+ Nh7 34.Rg8+ 1-0

Sean O'Connell (1856) –

Andy Trattner (1970) [A04]

Five-Game Match Portland (R4), 2014

1.Nf3 f5 2.d3 Nf6 3.Nc3 e6 4.e4 fxe4 5.dxe4 Bb4 6.Bg5 h6 7.Bd2 d5 8.exd5 exd5 9.a3 Bd6 10.Bd3 Qe7+ 11.Kf1 0-0 12.Nh4 Ng4 13.Nf3 c6 14.g3 Bc5 15.Be1 Ne3+ 16.fxe3 Bh3+ 0-1

Andy Trattner (1812) –

Scott Andrew Levin (1884) [B14]

March 2014 PCC Quad 45  
Portland (R3), March 15, 2014



(L) Andy Trattner, Mike Goffe. Photo credit: Brian Berger

1.e4 c6 2.d4 d5 3.exd5 cxd5 4.c4 Nf6 5.Nc3 e6 6.Nf3 Be7 7.cxd5 exd5 8.Bd3 0-0 9.h3 Nc6 10.0-0 Re8 11.Be3 Be6 12.Ne5 Rc8 13.f4 Na5 14.f5 Bd7 15.g4 Nc4



16.Bxc4 dxc4 17.g5 Bd6 18.gxf6 gxf6 19.Qg4+ Kf8 20.Nd5 Rxe5 21.Bh6+ 1-0

Luke Miller (2202) –

Andy Trattner (1909) [B01]

High School Nationals

San Diego (R4), April 5, 2014

[Andy Trattner]

1.e4 d5 2.exd5 Qxd5 3.Nc3 Qd6 4.d4 Nf6 5.g3 g6 6.Bg2 Bg7 7.Nf3 Qa6!

GMs Tiviakov and Kurajica have some great Scandinavian games. This move I remembered Karajica playing once, so I thought I would try it. My opponent later told me it scared him since he figured I knew the opening very well. It does present some difficulties. White doesn't castle early as he should.

8.Bf4 c6 9.Qd2 0-0 10.Ne5 Be6 11.Nd3 Nbd7

[Diagram top of next column]

12.Bh6?!

The computer thinks this move loses the advantage and wants White to play a4



instead. White has all the space and most of the pressure, so why trade a good bishop when you could develop instead?

12...Rac8 13.Bxg7 Kxg7 14.0-0 Bc4 15.Rfe1?

I cannot see why the computer suggests this as the best move. It gives White terrible d-pawns, which even Luke said he should have prevented with Rd1.

15...Bxd3 16.cxd3 e6 17.Ne4 Rfd8 18.Qc3 Nd5 19.Qb3?!

19.Qc4

19...Qb6

Now White's position is clearly difficult.

20.Ne5

This helps Black reach a winning endgame.

20...Nxc5 21.dxc5

[Diagram top of next page]

21...Qxb3

21...Qxc5 is worth considering, but I had confidence that the endgame would be virtually impossible to hold for White.

22.axb3 a6 23.Ra4 Rc7

Nd5-c7-b5 is a good plan.



24.Bxd5 Rxd5 25.d4 Rcd7 26.Re4 Kf6  
27.Kg2 e5 28.dxe5+ Ke6 29.f4? Rxc5  
30.Rad4 Rxd4 31.Rxd4 Rc2+ 32.Kh3  
Rxb2 33.Rd6+?

33.b4 is better.

33...Ke7 34.Rd3 h5?

This move isn't horrible, but the plan is Black should proceed with 34...a5 and an advance of his pawn majority since White can do nothing.

35.Rc3 Rd2 36.Re3 Ke6 37.Re1



37...h4?

Still being foolish. a5, Kd5, c5, b6, b5 etc. should be played immediately.

38.Re3 hxc3 39.hxc3 Kf5 40.Rf3 Rd7?

Unnecessary preparation. I was too scared to mess up my beautiful position. 40...c5! is much stronger.

41.g4+ Ke6 42.Kh4 c5

Finally! But now Black's advantage is smaller.

43.Rc3 Rc7 44.Kg5

Black should not have allowed White's king to be so active.

44...b5 45.Re3 c4 46.bxc4 Rxc4 47.f5+ gxf5 48.gxf5+ Ke7 49.Ra3 Rc6 50.Rh3! Rb6 51.Rc3?

51.Rh7! offers full equality. But White was in time pressure.

51...b4 52.Rc7+

[Diagram top of next column]

52...Ke8??

Throwing away a win. 52...Kd8 was best.

53.f6?

53.e6! leads to a draw.

53...b3 54.Re7+ Kf8 55.Ra7 Rb8??

55...Kg8! wins.



56.e6! fxe6 57.Rh7 Rb4

In spending 15 minutes on this move, we were both in time pressure now.

58.Rh8+ Kf7 59.Rh7+ Kg8 60.f7+ Kf8  
61.Kf6 Rf4+ 62.Kxe6 b2 63.Rh8+ Kg7  
64.Rg8+ Kh7 65.Rb8 Kg7

A very educational endgame, and although I missed opportunities, my opponent's resourcefulness in time pressure was extraordinary and I was not too unhappy about the result. 1/2-1/2

Andy Trattner (1924) –  
Nick Raptis (2417) [C02]  
May 2014 PCC Quad 45  
Portland (R1), May 17, 2014  
[Andy Trattner]

1.e4 e6 2.d4 d5 3.e5 c5 4.c3 Nc6 5.Nf3  
Nh6 6.a3

6.Bxh6 followed by Bb5 is probably better.

6...f6 7.Bb5 Nf7 8.0-0 Bd7

...a6 here or on move 10 might be better.

9.exf6 Qxf6 10.Re1 Bd6? 11.dxc5 Be7  
12.Bxc6

12.c4!

12...bxc6 13.Qd4

c4 is still good.

13...Qg6

13...0-0 with the idea of recapturing f6 with the g-pawn is good.

14.Bf4 Bf6 15.Qe3

15.Ne5!

15...0-0 16.Ne5?

Thinking that Black would otherwise play ...e5 then pin with a rook. Mistaken idea. 16.Nbd2 is much better.

16...Nxe5 17.Bxe5 Bxe5 18.Qxe5 Rf5  
19.Qd6

19.Qe3 or 19.Qe2 was likely better because of...

19...Raf8! 20.Re2?!

Trying to actively defend, planning f3.

20...Qg4

20...Rg5 is worth considering.

21.f3 Rxf3 22.Nd2

[Diagram top of next column]

22...R3f7



Nick thought taking on c3 gives Black a pawn, although Houdini thinks it is equal.

23.Rae1 h6 24.b4 a5 25.Qg3

Houdini likes 25.bxa5 but I like non-awful pawn structures.

25...Qf5

25...Qxg3 is closer to computer equality.

26.Nf3 axb4 27.axb4

The correct recapture.

27...Rf6 28.Qe5

Obviously, I want to trade, but Qd6 may have been better.

28...Qg6 29.Nd4 Qd3 30.Qe3 Qc4 31.Nf3  
Bc8 32.Qd4 Qb5 33.h3 Rf4

Houdini doesn't like it much, but nothing it suggests can stop White's advantage.

34.Qe5 Qc4 35.Re3

Now White has survived Black's attacks and stands better. I believe around here I offered a draw, which Nick declined. We were both in time-pressure, and he started blitzing out moves.

35...Kh7 36.Nd2

Just playing for tricks. Qd6 is better.

36...Qa2 37.Rg3 R8f6 38.Nf3

38.Qc7 is OK, but I was hoping for...

38...Qc4?? 39.Qc7

Game over.

39...Rf7 40.Qxc8 Qxc3 41.Qxe6?

41.Ng5+

41...Qxb4 42.Qg6+ Kg8 43.Re8+ Rf8  
44.Qxg7# 1-0



Andy Trattner. Photo credit: Brian Berger