

HOW TO SUCCEED IN SCIENCE: LESSONS FROM THE SOCCER FIELD

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SCIENCE AND SOCCER ARE VERY MUCH ALIKE

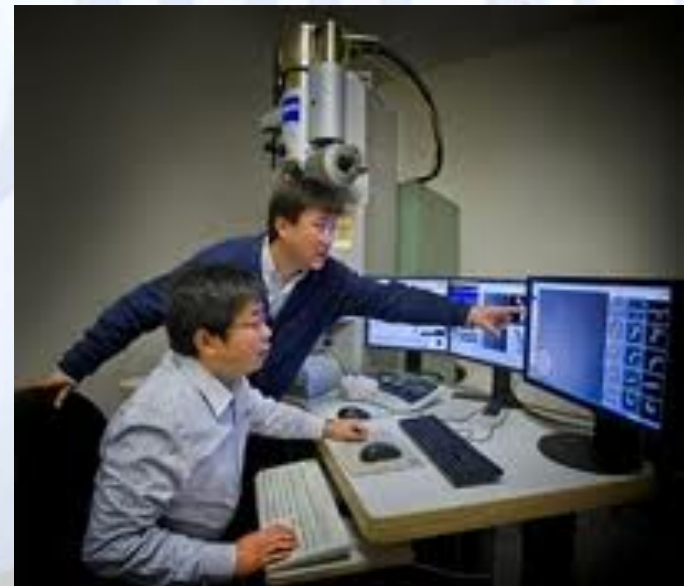


Dedicated to Rachel and Jeremy

A LITTLE ABOUT ME



SCIENCE AND SOCCER CAN'T BE LEARNED FROM WATCHING TV

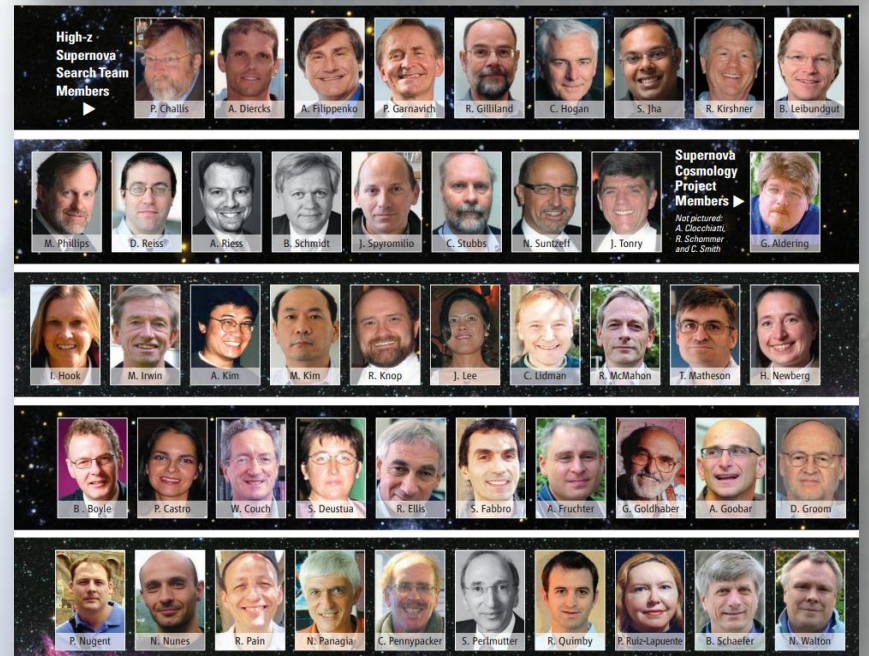


SCIENCE IN ACTION



SCIENCE IS A TEAM ACTIVITY

- You need defense, midfielder, forwards, and a keeper to win a game
- Modern science teams have many players



HARD WORK

- ◆ You only play as well as you practice
- ◆ Science requires hard work
- ◆ Start early and work your way up



FAILURE IS A GOOD THING

- Scores in soccer are low - you take a lot of shots on goal before you succeed
- Failure is a part of doing science
- If you never fail, you're not challenging yourself enough



HAVE TO EXPECT THE UNEXPECTED



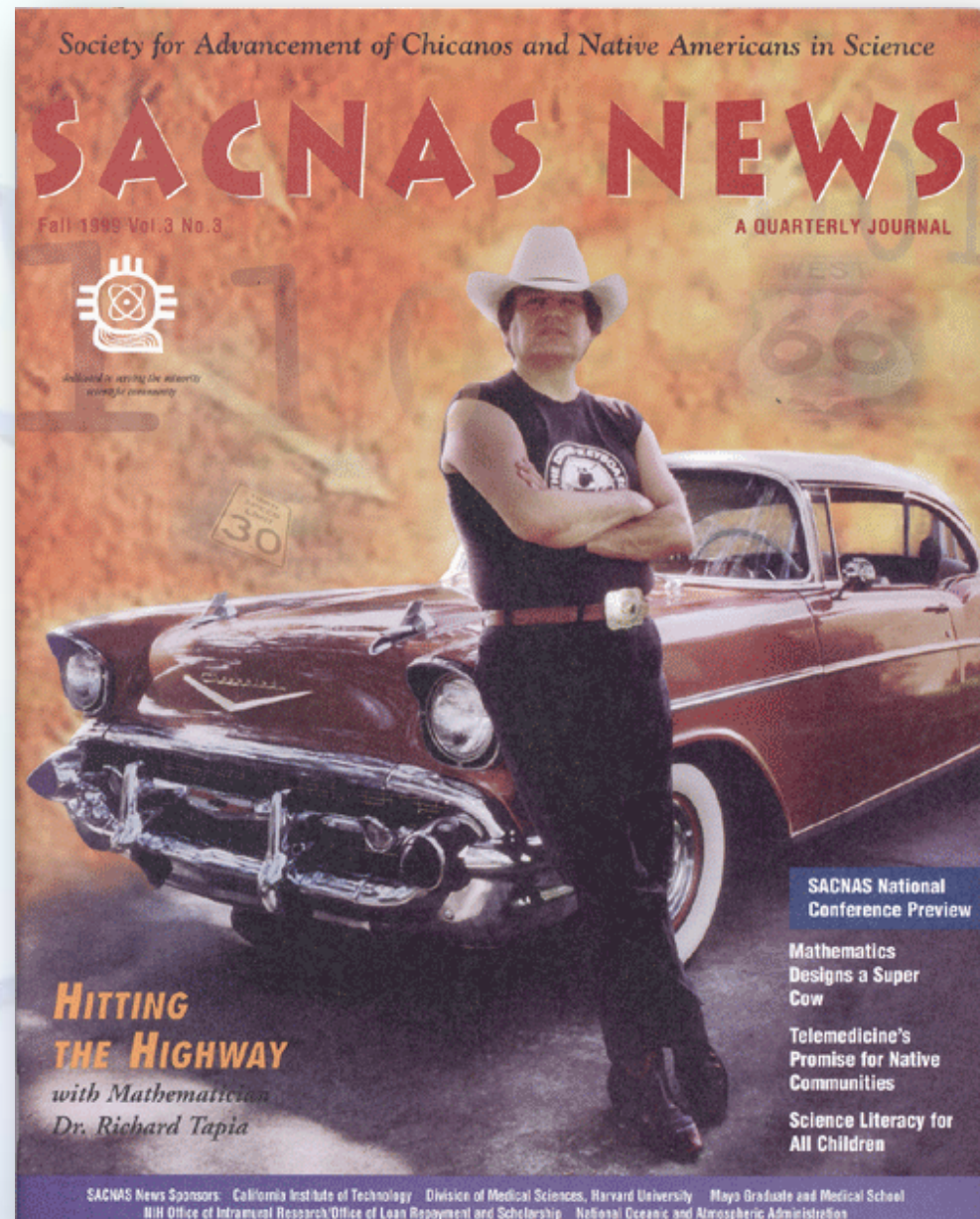
PATIENCE AND STAMINA

- Takes stamina, perseverance, and persistence
- No time outs, can be a long time between halves



ASK FOR ADVICE

- Listen to those who know the game, mentors, advisors, etc.
- Learn how to be mentored
- Then follow up by mentoring those younger than you



HAVE FUN

- Can't do it (just) because your parents want you to
- You have to have a love for it
- Need balance



SUMMARY

- ❑ Ultimately the reward is in playing the game: science and soccer
- ❑ Benefits are plentiful
- ❑ Science thrives with diversity at all levels



Your Name HERE!



FINAL THOUGHT

*“... We will build the roads and bridges, the electric grids and digital lines that feed our commerce and bind us together. **We'll restore science to its rightful place**, and wield technology's wonders to raise health care's quality and lower its cost. We will harness the sun and the winds and the soil to fuel our cars and run our factories. And we will transform our schools and colleges and universities to meet the demands of a new age.”*

President Barack

Obama

The WORLD CUP



vs. The Ph.D.

Organized every
four years.

Takes four years just to
get organized.

Consists of long boring
periods punctuated by
moments of sheer glory.

Consists of long
boring periods.

Gooooaaaaalll!!

Duuuuuuullllll!

Amazing displays of
athletic performance.

A maze of dismaying
academic conformance.

In the U.S., they
call it "Soccer."

In the U.S., they call
you a sucker.

Often comes down to
a single penalty shot.

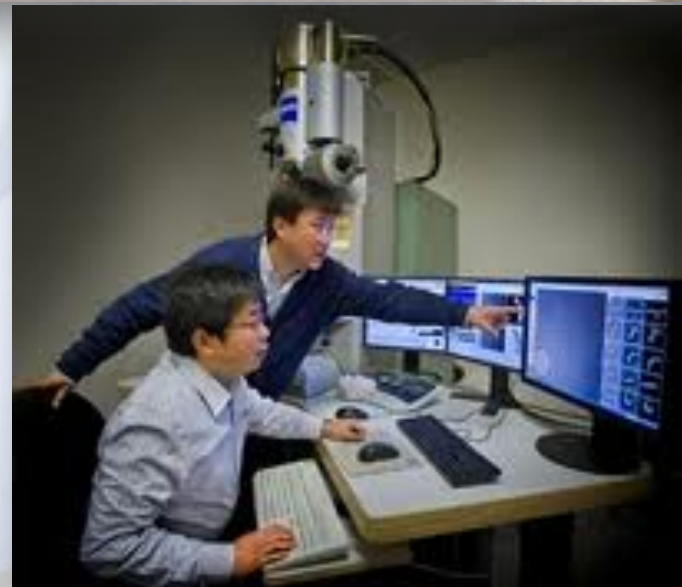
Often comes down to
a single faculty vote.

Watched by billions of
fans from every nation.

Used by millions of
grads for procrastination.



SCIENCE AND SOCCER CAN'T BE LEARNED FROM WATCHING TV



THE TOUGHEST LOSSES MAKE THE STRONGEST TEAMS



