Journal of the Sydney University Physics Society

Brought to you by the colour Green

Volume N, Issue k

WHEREFORE ART THOU PLUTO?

August 26, 2006, I was sitting in my lounge chair when suddenly I felt a strange presence. It felt like change... Suddenly the air became moist with despair. I instantly turned to my nearby television... no, microwave. Where the hell's the T.V.?

Oh there it is, by the microwave. I flipped the switch, I was suddenly assaulted by some hot chick in a suit. Obviously this was "A Current Affair" or like that other one with the similar name. Nearby was some man wearing a lab coat... was he some kind of fabled expert? Yes. He was flipping through a book, and clicking his ever trusty mouse. Everything was a blur, something about Pluto, my favourite Disney character and planet... Something about not being a planet. I was confused, this wasn't afternoon cartoons. What the hell are they talking about? Not a planet?

I turned my wheelie chair, this usually resulted in a feeling of joy and happiness. Similar feelings but definitely not the same one. However this feeling was of terror. I turned on the computer... No microwave... Damnit microwave what the hell dude? Ok, computer on, trusty Google. I searched "Pluto not a planet what the hell dude?" And I clicked "I'm feeling lucky", even though I wasn't. After sifting through the multiple pornographic pop-ups I made my way to CNN.com. I was astounded , confounded and pretty turned on by the porn all at the same time. Wait a second, porn on CNN.com? I better not give them my credit card details...

Pluto, a planet no more?

So anyways apparently Pluto ain't not a planet no more. [Sigh, Ed.] But he is still a dog, even though Goofy is also a dog and he gets to play golf with Mickey and stuff. Whereas Pluto just sits around being mute..

So what angle am I working? Good question. Have a lollie from the SciSoc stall. Win.

Stephen Clement

Architecture I

EDITORIAL

So, this is my first time editing a student publication. And I still have no idea what I'm doing.

I thought, it would be a great idea to do some horoscopes as a huge space filler. Alas, the science magazine (our direct competition ... the "Aqua Regia") took it upon themselves to ruin (read: steal) my awesome idea.

They also took out the idea of an alternate language Sudoku (Greek letters instead of numbers, just like in uni maths!) and the 9 letter targets. So I was pretty screwed.

I don't really have a good solution, so I decided to rip off William Wu from his puzzles forums. Kudos.

Anyway, Jeremy will be awesome this year.

Thomas Clement

Engineering/Science IV

Inside this issue:

Yellow box of semi-interesting facts:

- Global warming arrested for indecent exposure.
- Beyonce after her new hit Irreplaceable is slated to be the next PM, backed by the ALP.
- Ironic t-shirt fails to attract women.
- Peter Petrelli dies.
- Warning: "Heroes" spoiler above.

PRESIDENT'S REPORT

Hello everybody. For those of you who are starting this year: Welcome to Physoc! Physoc is a happy collective of physics students, who are attempting to escape and I have found myself in charge of them. Anyone is free to participate in Physoc events, but we love union members (we get funding for union members). Now, I suppose you're wondering what Physoc does. Well, apart from this newsletter, we burn sausages at our BBQs, organise cricket and soccer matches, lunchtime talks and discussions (this means we swap assignment and past exam solutions) and, of course, we organise the pub crawl. Yup, stagger from pub to pub with other nerds. We also love first years (seriously, we do) and we organise a special event for them in the first week of first semester involving naked Barbie dolls and rubber bands... Come and get to know lab partners before spending an entire semester with them.

Duncan Sutherland

Science XIII

The Committee 2007:

El Presidente: *Duncan Sutherland*

President with Vices: *Unknown person*

Keeper of records: *Ben Fulcher*

Keeper of monies: *Steve Dekker*

Discrete Events Propegator: *Thomas Clement*

RALPH'S café.com
The Arena Sports Centre

Flagrant advertising for our awesome sponsor!
Best food between physics and ... well ... Ralphs!

QUOTES COMPETITION

Each year, Physoc runs a quotes competition, where students are able to submit the numerous stupid things that slip forth from lecturers in their normal stream of verbal diarrhea. Usually, this competition is a matter of pride among physics lecturers and is hotly contested. Particularly by a certain astrophysics professor, who has so far been unsuccessful.

Send your quotable quotes, your name and email details to:

usydphysoc@gmail.com

You will be in the running for a fantastic (although as yet undetermined) prize.

The lecturer will also receive a prize and fame forever.

Here's some from past years as an example of the quality (?):

Anne Green, (Physics): "Either you know it all already or I am irrelevant"

Tim Bedding, (Physics): "Electrons can't feel their own electric field. Its a body odour principle"

"Practice in front of the mirror. I've never been able to do this - it's too distracting."

"Maxwell was Scottish so he probably said 'Och.'"

"I'm not trying to win the quotes competition. I've given up. "

Geraint Lewis, (Physics): "The monkey is humanely destroyed when it reaches the event horizon."

Andrew Mathas, (Maths): "We could say the lemmings are all bisexual, but that's unlikely."

SPACEFILLERS!

DO YOU WANT TO IMPROVE YOUR PUBLICATION RECORD?

How to submit your articles to Jeremy...

Submit anything and everything to us. Articles don't just grow on trees.

Any old crap will do, for example, you could write an informative and entertaining article for the feature above. You could be creative and write a great semi-autobiographical literary work, to be serialised in many parts: 'Down and Out in Physics and Carslaw', or if poetry is more your thing how about 'Ode to a First Year Experiment'? Or submit a cartoon for our back page.

You can submit anonymously, in case you're worried people will think you are a closet arts student.

We will take anything and unlike other reputable journals, we encourage plagiarism and rip offs.

This template anachronism is symbolic of the sheets of paper we need YOU to provide!

Send your contribution to:

usydphysoc@gmail.com

Or stick it in the Jeremy and Physoc box somewhere in physics, last seen in the first year student office. If anyone has seen it recently, let me know.

(This is the kind of blank space we need to fill ...

cough ...)

PUZZLE SECTION

I thought a smart idea would be to include a puzzle section, for your enjoyment throughout the year (read: during lectures). Consequently, I have no recourse but to flagrantly rip off (with citation of course) the puzzles by William Wu (http://www.ocf.berkeley.edu/~wwu/riddles/intro.shtml)

This year, we'll start off with a bang. A currently unsolved puzzle, the "100 Prisoners and a Light Bulb" has generated a huge amount of interest over the years. So I have taken it upon myself to bring it to the masses. (Note to discerning readers: The problem is unsolved as to optimality of solution. Solutions have been found that enable the prisoners to escape. Your task, to find the optimal solution. Failing that, to find a solution that on average releases the prisoners in under 10 years.) Without further ado:

100 Prisoners and a Light Bulb:

100 prisoners are imprisoned in solitary cells. Each cell is windowless and soundproof. There's a central living room with one light bulb; the bulb is initially off. No prisoner can see the light bulb from his or her own cell. Each day, the warden picks a prisoner equally at random, and that prisoner visits the central living room; at the end of the day the prisoner is returned to his cell. While in the living room, the prisoner can toggle the bulb if he or she wishes. Also, the prisoner has the option of asserting the claim that all 100 prisoners have been to the living room. If this assertion is false (that is, some prisoners still haven't been to the living room), all 100 prisoners will be shot for their stupidity. However, if it is indeed true, all prisoners are set free and inducted into MENSA, since the world can always use more smart people. Thus, the assertion should only be made if the prisoner is 100% certain of its validity.

An interpretive drawing of a light bulb. 100 prisoners not included.

Before this whole procedure begins, the prisoners are allowed to get together in the courtyard to discuss a plan. What is the optimal plan they can agree on, so that eventually, someone will make a correct assertion?

As the problem is well documented with solutions easily available on the internet, we would hope someone from Sydney University (ideally the physics department) could come up with a better solution than the most optimal one available on the internet.

Submit your best solutions to:

usydphysoc@gmail.com

EASIER PUZZLE SECTION

Again, totally ripped off from William Wu's puzzle page, but somewhat easier than the above.

Simultaneous Hat Colour Guessing:

Three players enter a room and a red or blue hat is placed on each person's head. The colour of each hat is determined by a coin toss, with the outcome of one coin toss having no effect on the others. Each person can see the other players' hats but not his own.

No communication of any sort is allowed, except for an initial strategy session before the game begins. Once they have had a chance to look at the other hats, the players must simultaneously guess the colour of their own hats or pass. The group shares a hypothetical $3 million prize if at least one player guesses correctly and no players guess incorrectly.

For the more suicidal readers:

The same game can be played with any number of players. The general problem is to find a strategy for the group that maximizes its chances of winning the prize.

Again, the internet holds the answer to the puzzle, so no submission of answers. Nonetheless, it's a good mental stretch. Hint: I hope you've done coding theory!

PISS EASY PUZZLE SECTION

1) If there are 3 bananas and I take away one banana, how many bananas do I have?

2) 1 + 1 = ?
Prove it.

3) And another one by William Wu:

Nonhomogeneous rope burning:

You have two ropes, each of which takes one hour to burn completely. both of these ropes are nonhomogeneous in thickness, meaning that some parts of the ropes are chunkier than other parts of the rope. using these nonhomogeneous ropes and a lighter, time 45 minutes.

No outside the box solutions! This goes for all problems.

Thomas Clement

Engineering/Science IV

Answers:

They're upside down...

Answers:

1) 1 banana, as I took away just 1.

2) 2. It's a little bit harder to prove, so I won't do it here.

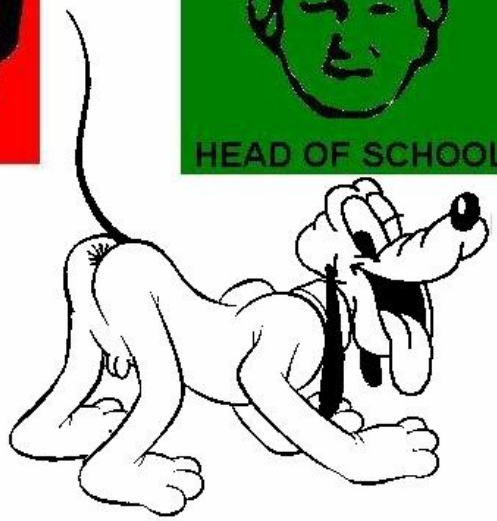
3) Meh, Google it.

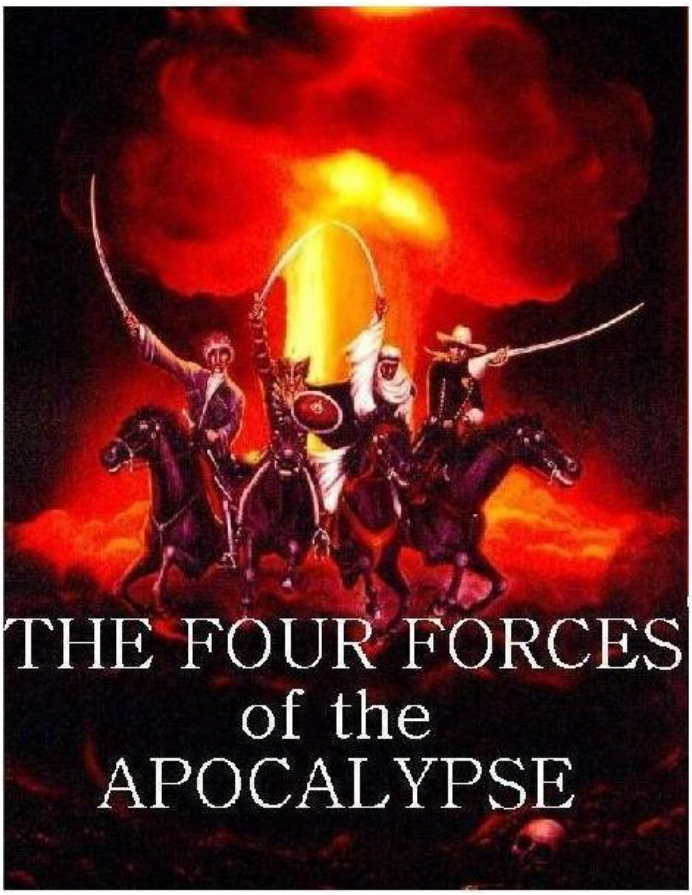
RANDOM BACK PAGE

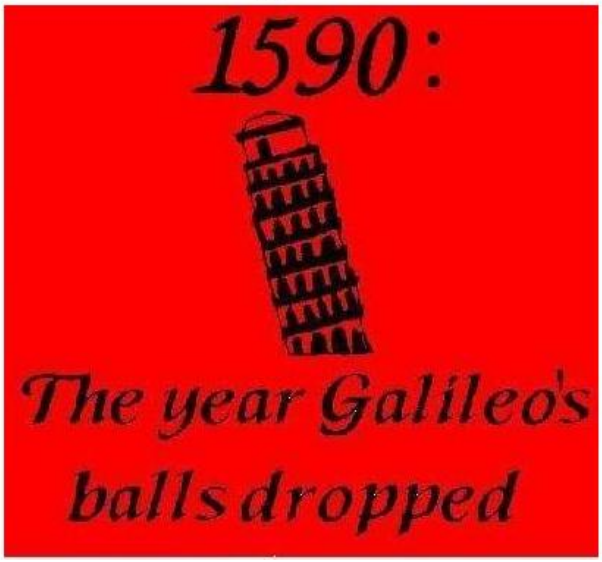
So, welcome to the back page.

Ideally, this will one day be filled by your (the audience's) productive input. However, until such time, it will be full of essentially useless and meaningless trash, devoid of content.

So here are some of the Physoc t-shirt designs from past years:







And as always, we are just one publication of many, which without USU probably wouldn't be here. So thanks USU.

OMG USU FTW!

Your Loving Editor,

-TC-

UNIVERSITY OF SYDNEY UNION

Enriching the student experience
since 1874

NIHILISM

This article on nihilism could valuably be replaced by someone's cool ideas, thoughts, pictures, pornography, advertisements.

See, this is YOUR opportunity to see something YOU do in print! Just send us an e-mail:

usydphysoc@gmail.com

(P.S. No illegal pornography)

[Actually, no pornography. Ed.]