SIfA EMCR Workshop 2015 – Session 1, Panel 1

by Chris Herron & Pascal Elahi

Panel 1: Ilana Feain, Marton Hidas, Andrew Layden, Louise Ord, Geoff Sims, Edwin Tay
Moderator: Cormac Purcell

Edwin: Works for Google as a software engineer, specifically on the Javascript Maps API. Believes that most important skill he picked up before working at Google is the ability to test ideas, and see why things might not work: idea debugging.

Marton: Spends a lot of time working on data management, shifting and organising data, automating processes. Has experience in dealing with large data sets. Took a year off after his post-doc. Only need general computer skills for his work (in addition to other things mentioned).

Andrew: Works at Optiver, a financial 'market making' company. From his experience in space science, he is used to grappling with large datasets, and having an idea of what is a good model. A selling point of being a physicist is that you know how far you can push models, and can communicate ideas.

Ilana: Previous USyd student & CSIRO employee who spent a lot of time working on ASKAP. Now works in medical imaging and is the CEO of Nano-X, a company working on radiotherapy cancer treatment. Finds that imaging skills are important and the ability to question what is happening, and what can be done.

Geoff: Works at Quantium, using large datasets, working on analytics, creates predictions to help clients get a business advantage. Uses Hadoop - a big-data platform. Usew many small computers in parallel to solve big problems - a different approach to solving problems. Very actuarial company. Using Python and Linux is useful.

Louise: Works at Taylor Fry, a consultancy firm. Uses social welfare data, modeling client behaviour and how this relates to government protocol.

Q: "Could you comment on your work-environment and job satisfaction from daily activities?"

Louise - Working with intelligent and humorous people is great. The collaborative environment at her current workplace is excellent. This was a major change from her previous workplace, and one of the key reasons she left. Important to find a company that fits you. For example, if you care about the environment you might look for a carbon-neutral company.

Geoff - Work environment isn't too formal, get to work with smart people. The day-to-day work involving software and problem solving is exciting, although the data analysed itself isn't enthralling.

Marton - A great part of the job is the people, learning from people, and learning new things. He works within a university, and can do a bit of his own work.

Ilana - Has young children, and finds that it is great to have a flexible work environment.

Andrew - Always feels like there is something new happening, making the workplace feel very lively. The culture is 'young', with many employees having recently graduated. The mix between analysis, ideas and cross talk to software team also a plus. There are also interesting ways to apply techniques we already know, and these can make a big impact.

Edwin - The Google stereotype applies, collaborative fun place. Good environment, open plan, with small meeting spaces if you need to talk to someone. However, downside is lots of email, a negative side-effect of being able to find out lots of things (which is a positive).

Q: "Are your managing directors acceptive of new ideas ('front-foot'), or do they look to cut corners, or stick to old ways ('back-foot')? What type of people do you work for?"

Louise - Front-foot. Very open and innovative.

Geoff - Mix, some are active, on the front-foot, others stuck in old ways. Can make it hard to get new things through.

Andrew - Very front-foot, need to keep innovating to stay ahead of the competition.

Ilana – She is the sole person in company, so front-foot :-). The university is front-foot too. Problem is needing to write grants continuously.

Marton - Front-foot, almost too much, believing too much can get done/solved. Some very keen people :-)

Edwin - Front-foot, can reach manager at any time. Manager is someone with more experience, should talk to, to make use of their experience. The manager protects your innovation, and lets you work on what you want.

Q: "Going from astronomy to a new field, is it worth doing formal training, or taking time off, or should we just go straight into a new job?"

Ilana - Went straight into a new field. If you have the right supervisor, then you will pick it up along the way quickly. Just need to get over the jargon. *[Illana changed from imaging in astronomy to imaging in medical physics, so not drastic change]*
Louise - Don't take time off. If you are passionate about something, then you would want to find out more, e.g. online. Learn by doing things, need to be motivated. Good to have supportive mentoring/walk environment. Hard to get back in if you take time off. Ideally, company may give study leave, to learn required skills. *[Louise changed from astronomy research to analytics]*

Geoff - Don't take time off, and upskill if needed. For example, learned predictive modelling and SQL, as these were useful for the job. *[Geoff changed from astronomy research to analytics]*

Andrew - Companies may train you on the job, for example in his case with finance jargon. Many companies want to help develop your skills. *[Andrew changed from space physics research to financial analysis]*

Marton - Took a year travelling after finishing a post-doc. Then spent 4-5 months to find work, and where to settle down with partner. Out of interest, he did an online leadership course in this time. Found that many of his existing skills were applicable and did not have to formally retrain. *[Marton changed from astronomy research to data scientist]*

Edwin - Doesn't hurt to upskill. *[Edwin did not change fields.]*

Q: "Given you've transitioned from astronomy or research, what do you miss most?"

Marton – I miss the research aspect. Feels like a part of the brain isn't being used.

Louise - Misses the subject matter; has a keen interest in cosmology.

Geoff - Misses the subject matter. Also found that it was a relief to have a real job, which outweighed that.

Andrew - Sometimes need to stop researching an idea, and just move on, even if it is something that you are really interested in.

Ilana - Nothing, but still have an academic position.

[Edwin did not transition from astronomy.]

Q: “What do you dislike most, and what was the hardest thing in making a transition?”

Louise - Felt like a bit of a failure to walk from the first (non-astronomy) job, because there was a lack of communication, and a lack of data access at that job [due to secrecy over proprietary financial data]. Don’t dislike anything at current position. Previous non-academic position was restrictive and had a competitive environment between fellow employees.
Geoff - Don’t like formal dress code. Was hard to learn a different field.

Marton - Struggled with letting go of the idea of being a scientist.

Ilana - Identity as an astronomer hard to let go. Incessant grant writing in medical physics is hard (more required than astronomy from her experience) [Note: less grant writing required as a staff scientist at CSIRO].

Edwin - Intern has similar roles to a software engineer, so there wasn’t much of a transition there. Sometimes get tied up with an idea, and emotionally invested because of the amount of time spent on it, but you can’t keep working on it. Also know that your ideas will get challenged by people. Also found that relocating from Perth to Sydney was hard.

Final remarks:

Ilana - Watch the ‘Fake it till you become it’ video on Youtube [https://www.youtube.com/watch?v=Ks-_Mh1QhMc]. Confidence is the key.

Louise - Confidence is very important, believe in your abilities.

Marton - It’s been done before, so you can do it as well.