

## 2015 FEC Reflections

By **JONATHAN SCHAEFFER, DEAN, FACULTY OF SCIENCE**

As usual, all members of FEC (the Vice Dean, seven Chairs, five elected members, and a President's Review Committee representative; the Dean is ex officio) did a superb job of discussing the 296 cases (faculty and FSOs) in a balanced and congenial manner. Difficult decisions were debated, and decisions were made. The wide variety of faculty member profiles had to be understood and accommodated, differentiating between departments, disciplines, academic rank, different levels of research/teaching/service activity, quality of publication venues, teaching performance, research funding levels, graduate supervision, and so on. Indeed, the formula for translating annual performance into increments is complex, yet every member of FEC figures it out. Most FEC cases are handled in under a minute each. When a difficult case arises, the members of FEC are in no hurry; several deliberations lasted more than 20 minutes. Everyone does his or her best to achieve the fairest possible outcome.

This year saw seven faculty members promoted to Full Professor – congratulations to all of them for this wonderful recognition of their research and teaching excellence. Four Assistant Professors were successful at meeting the demanding criteria for

being awarded tenure. The pressure to publish impactful papers and be a strong teacher is high, especially given that you have a maximum of five years to achieve these standards (tenure applications happen no later than the end of the fifth year after your appointment). The caliber of the young researchers joining the ranks of Associate Professor reassures us that the future of the Faculty of Science's reputation for excellence is secure.

With respect to Faculty Service Officers this year, one person was promoted to an FSO III, and one received a continuing appointment.

There are two points that came out of this year's FEC that need wider attention. First, there was tremendous pressure on the Chairs to make increment recommendations that, when summed together, fit within the Faculty of Science's total allocation. The total number of increments available in Science is 1.175 times the number of faculty members and FSOs. The number that FEC decides is slightly lower, as some cases are pre-decided by the Dean and are removed from the general FEC pool. This includes the Department Chairs, the Vice Dean, and the occasional special case.

What made this year different than the past was the division of increments. The university has an agreement on increments for the professoriate and a different agreement for FSOs. Although the agreements look similar from the FEC point of view—1.175 increments per member—in fact the increment pool needs to be differentiated. In the past, a single pool of increments has been allocated by FEC. This year the university correctly decided that this was the wrong interpretation. There are two pools: one for faculty members and one for FSOs. The consequence of this was that if, for example, some increments remained unused in the FSO pool, they could not be used for faculty members. In fact, this was the case, as numerous FSOs are at their maximum increment level, leading to more increments available than can fairly be allocated.

The result was that fewer increments were available to distribute to faculty members. Thus Department Chairs had to be less generous in their increment recommendations.

The second issue is, in part, tied to the first issue. Some faculty members assume that receiving a minimum of 1 increment per year is a right. The reality is different. As one becomes more senior, the expectations for achieving an increment grow. What earned you 1.5 increments as an Assistant Professor might be worth only 1.0 increments as a Full Professor.

Receiving less than 1.0 increment for the first time can be a traumatic experience. Many faculty members argue with their Chair that they are doing as well as they have done in previous years. However, that is not a valid metric. Performance expectations go up every year (slightly, of course) because of one's seniority. Standing still, so to speak, is a guarantee that over time the annual increment recommendation will decrease. When it falls below 1, sometimes an unpleasant situation can arise.

With FEC evaluating nearly 300 cases, it is not a surprise that some people perform at a very high level and earn 2 or more increments. But it is also true that some people perform at a low level and get 0 increments. Each year, our salary is modified by two factors: cost of living, which applies to everyone, and merit. Earning merit implies that you have performed above the minimum level. Receiving 0.5 increments and above is meritorious (0.25 is not allowed), even if one feels it is below the perceived 1.0 baseline of satisfactory performance.

As in any normal distribution, most people fit in the middle, and few are on the extremes of the tails. When a faculty member moves from somewhere in the middle of the distribution to the lower end of the tail, it can be surprise. The Department Chair has the difficult job of recommending increments to FEC. That means comparing the performance of all members of the Department. Any decision that results in a recommendation of less than 1.0 is not taken lightly by a Chair. If the Chair makes a mistake in their decision (high or low), there is a very good chance that FEC will fix it. Rather than arguing with the Chair (a strategy taken by some disgruntled faculty members), it is better to understand the reasons for the recommendation and, if appropriate, take corrective actions. After all, we share the same goal – we want to be

part of a strong and vibrant research, teaching, and service team.

Science continues to lead the University of Alberta in terms of productivity (publications), recognition (awards), and attention (media). The following table shows the number of publications by type. There is no double counting: one paper counts as one, even if it is coauthored and appears on the annual reports of more than one Science faculty member.

| Category        | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|-----------------|---------|---------|---------|---------|---------|
| Journals        | 986     | 1054    | 1079    | 991     | 1130    |
| Conferences     | 193     | 205     | 177     | 186     | 198     |
| Book Chapters   | 51      | 78      | 61      | 57      | 41      |
| Other Refereed  | 119     | 57      | 110     | 141     | 106     |
| Total Refereed  | 1349    | 1394    | 1427    | 1375    | 1475    |
| # of Faculty    | 285     | 283     | 285     | 280     | 285     |
| Average/Faculty | 4.73    | 4.93    | 5.01    | 4.91    | 5.18    |
| Non-refereed    | N/A     | 411     | 440     | 440     | 345     |
| Books           | N/A     | 9       | 15      | 11      | 7       |
| Patents         | N/A     | 9       | 12      | 10      | 15      |

The number of journal papers coming out of our Faculty is at an all-time high, and the average number of papers per faculty member is an impressive 5.18! The average should not be taken as a performance standard because, of course, there are huge variances in the number of papers produced per discipline.

The record number of journal papers is largely due to the particle physics group. They are part of a large international collaboration, the ATLAS project at CERN. This team produced an astonishing 118 journal papers this year, each with several thousand co-authors. The following table factors out the CERN papers and gives a more representative indication of productivity. As the table shows, there is a slow but steady increase in the average number of papers produced per faculty member. This is strong validation that we are doing an excellent job hiring Assistant Professors

| Category                   | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|----------------------------|---------|---------|---------|---------|---------|
| Journals (original)        | 986     | 1054    | 1079    | 991     | 1130    |
| Less ATLAS                 | -40     | -100    | -104    | -50     | -118    |
| Journals (revised)         | 946     | 954     | 975     | 941     | 1012    |
| Total Refereed (original)  | 1349    | 1394    | 1427    | 1375    | 1475    |
| Average/Faculty (original) | 4.73    | 4.93    | 5.01    | 4.91    | 5.18    |
| Total Refereed (revised)   | 1309    | 1294    | 1323    | 1325    | 1357    |
| Average/Faculty (revised)  | 4.64    | 4.62    | 4.69    | 4.78    | 4.81    |

Last year, I reported on the growing popularity of the journal PLOS ONE. In consecutive years, the number of papers published in this journal had gone from a single digit, to 25, to 33. The impact factor of the journal dropped last year and, perhaps, this was a factor in some publishing-venue decisions. This year the number of PLOS ONE papers fell back to 25.

So, quantity is up, but what about quality? The following table shows the ISI impact factor of the journals that we publish in. A journal is placed in a bucket based on its percentile ranking compared to other journals in the same field. As always, this data must be viewed with extreme caution. However, the data can be used as a sanity check to see if anything major has changed from year to year. Obviously there is a lot of noise in this data, but one positive observation is that 70% of the publications coming from the Faculty of Science are in venues that are considered in the top 30% of their field.

| Ranking         | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|-----------------|---------|---------|---------|---------|---------|
| 1-10 per cent   | 27.6    | 27.1    | 25.8    | 27.6    | 25.9    |
| 10-30 per cent  | 37.3    | 40.7    | 43.5    | 43.2    | 44      |
| 30-50 per cent  | 13.4    | 14.6    | 12.0    | 12.1    | 11.2    |
| 50-100 per cent | 12.0    | 10.3    | 10.3    | 8.7     | 10.4    |
| Unranked        | 9.7     | 7.2     | 8.5     | 8.4     | 8.6     |

As always, it was a pleasure serving on FEC. It is inspirational to read about the impressive accomplishments of our academic community—in research, teaching, and service. Thank you for making our Faculty strong and having significant impact locally, nationally, and internationally.

# 2015 FEC Thoughts & Comments

By newly elected members:

IAN MANN, PHYSICS;

JEREMY RICHARDS, EARTH AND ATMOSPHERIC SCIENCES;

## Ian Mann

Despite having seen pictures of the “dreaded binders” in previous FEC reflections, frankly I did not have any real idea about how long it would take me to read each and every one of around 280 files in detail. I was also repeatedly struck by the amount, quality, and impact of the work described in each file. In interacting with our colleagues we can get some idea of a fraction of the research, teaching and service being completed throughout the Faculty – but seeing it summarised in all its glory in these annual reports is honestly pretty humbling. In some ways every year FEC faces a really rather unpleasant task – faced with this incredible level of output how can one possibly allocate merit pay which is limited to an average of only 1.175 merit increments per faculty member? And given the breadth of types and nature of

research being carried out in the Faculty of Science how to do so as fairly as possible? Nonetheless making such recommendations is the task set for FEC by the Collective Agreement.

Every year the FEC struggles with how to compare performance across departments with such different research processes and norms of activity. From extensive laboratory work, completed sometimes in large teams, to individual researchers working for years seeking a proof of a mathematical problem, and everything in between, the scope and variety of research work is broad. As a result, FEC often necessarily draws on the advice of the chairs in providing guidance, especially interpreting the relative impact of the research in their own department. If I could offer one piece of advice for preparing annual reports after my FEC experience it would be this: make sure the impact of contributions is (briefly!) explained in your report. Also use your annual chair review meeting to ensure your chair understands and perhaps more importantly can defend the impact of your contributions.

Every year FEC struggles with questions to which there are no simple answers. How to deal with sabbatical leaves? At a higher level, how should FEC deal with the issue of service? For example, how should one assess a professor who is highly research active and accordingly has not been allocated a large service component to their duties by their chair – especially given that FEC is to make an assessment against all three areas of teaching, research and service? It is my personal opinion that service, including scientific service, is an essential element of professorial duty. However, at times I do wonder if we occasionally lose track of the fact that while service is absolutely essential to the smooth running of the University and can bring high value in enhancing the University's reputation externally, in and of itself it should not be regarded as a means-to-an-end. In these times where Professors are now routinely almost entirely responsible for doing their own administration, we would do well to examine if some service tasks can be streamlined. In the case of FEC, after completing the process, I was left wondering whether the workload associated with the process is worth the outcome – especially since the process compares the performance of

every single faculty member to every other one every single year. With the expected upcoming review of the post-secondary learning act perhaps this is an issue which will be revisited by AASUA in this context. But a streamlined service element in the academy, with due respect for collegiality, faculty input and roles in collective decision making, and respect for academic freedom, might free up more time for the core functions of high quality teaching and research.

I would also like to draw attention to one element of the mechanisms which FEC has adopted in completing its work which concerns me. As per the Collective Agreement, in advance of FEC the Chair of each department provides FEC with a recommendation for the merit increment for each staff member. Before serving on FEC I had assumed that every Chair completed this task using a guideline allocation broadly in line with the target of 1.175 increments per staff member. However, it turns out that this is no longer the case. Instead the Vice-Dean provides each Chair with a different guideline target calculated using the average of the merit increments awarded to that department over the past three years. Of course chairs are free to make whatever recommendation they wish, but FEC must ensure that at the end of the process the overall merit increment allocation from the whole of the Faculty of Science matches the 1.175 target. In my view, only FEC is empowered to do the cross-departmental faculty-to-faculty member comparison. It is my considered opinion that this current procedure introduces a process bias, which perpetuates a differential average merit allocation to some departments over others from year to year. This process bias can last for multiple years, due to the inertia inherent in the formula. Significantly, this process bias exists even before a single piece of meritorious service has been completed in the given year. In the case of one Department in the current year, in order to return to an average of 1.175 merit increments would (according to my own estimate based on FEC files) have required the FEC on average to reduce the recommended merit increment of every single faculty member in that Department by more than one whole quarter increment (0.25). In my opinion the policy should be changed such that each chair is instead asked to work towards the same 1.175 guideline in preparing

their recommendations for FEC; perhaps the guideline for the chairs could even be set lower such that FEC could focus on identifying cases where additional merit is recognised with the room for FEC to also be able to award it? In such a system the Department Chairs could still identify and argue for differential merit and FEC could decide to reward it, but without some of the potential impacts from the process bias which in my view exists at least to some degree within the current system.

If you have similar concerns about this procedure, you might wish to make them known to your chair and/or other FEC representatives; the Chairs, after all, make up the majority of FEC membership. If a majority of FEC members vote to change this then I understand from the Vice-Dean that it could be in place in time for next year's FEC process.

Overall, however, respecting the challenges associated with assessing and comparing the meritorious performance of every faculty member with every other faculty member across the entirety of the Science professoriate in seven different Departments, I believe that the FEC process overall is fair.

### **Jeremy Richards:**

The above comments represent the opinions of Ian Mann, with which Jeremy Richards largely agrees, and in particular the observation that enactment of the FEC process was scrupulously fair. However, Jeremy has been a longtime critic of the FEC process itself, believing that it promotes excessively competitive behaviour between colleagues, and thereby discourages collegiality and collaboration. He suggests that changes to the FEC process, if desired, need to come from the Science Faculty Council (which defines FEC standards of performance: Faculty Agreement §13.09), and through review of the Faculty Agreement itself in which the FEC process is defined (Article 13).