People. Discovery. Innovation.
Les gens. La découverte. L'innovation.

NSERC
CRSNG

Natural Sciences and Engineering
Research Council of Canada

Conseil de recherches en sciences
naturelles et en génie du Canada

Canada

2017 Discovery Grants Competition

Emily Diepenveen Team Leader
Kate Henbest Program Officer
Computer Science Evaluation Group (1507)

CS-Can / Info-Can Chairs Meeting
May 16, 2017 – Edmonton, AB

Natural Sciences and Engineering Research Council of Canada
Conseil de recherches en sciences naturelles et en génie du Canada
Canada

Presentation Overview

- Discovery Grants Competition
  - Context
  - 2017 Results
- NSERC Updates
- Questions

Discovery Grants Competition
General Context

Program Objectives

- To promote and maintain a diversified base of high-quality research capability in the natural sciences and engineering (NSE) in Canadian universities.
- To foster research excellence.
- To provide a stimulating environment for research training.

Discovery Grants Competition
General Context

Conference Model

- 12 Evaluation Groups
- Within each Evaluation Group, applications are reviewed in parallel streams (sections)
- Members from different Evaluation Groups review applications covering topics that cross the traditional boundaries between disciplines (joint reviews)

Discovery Grants Competition
Review Process

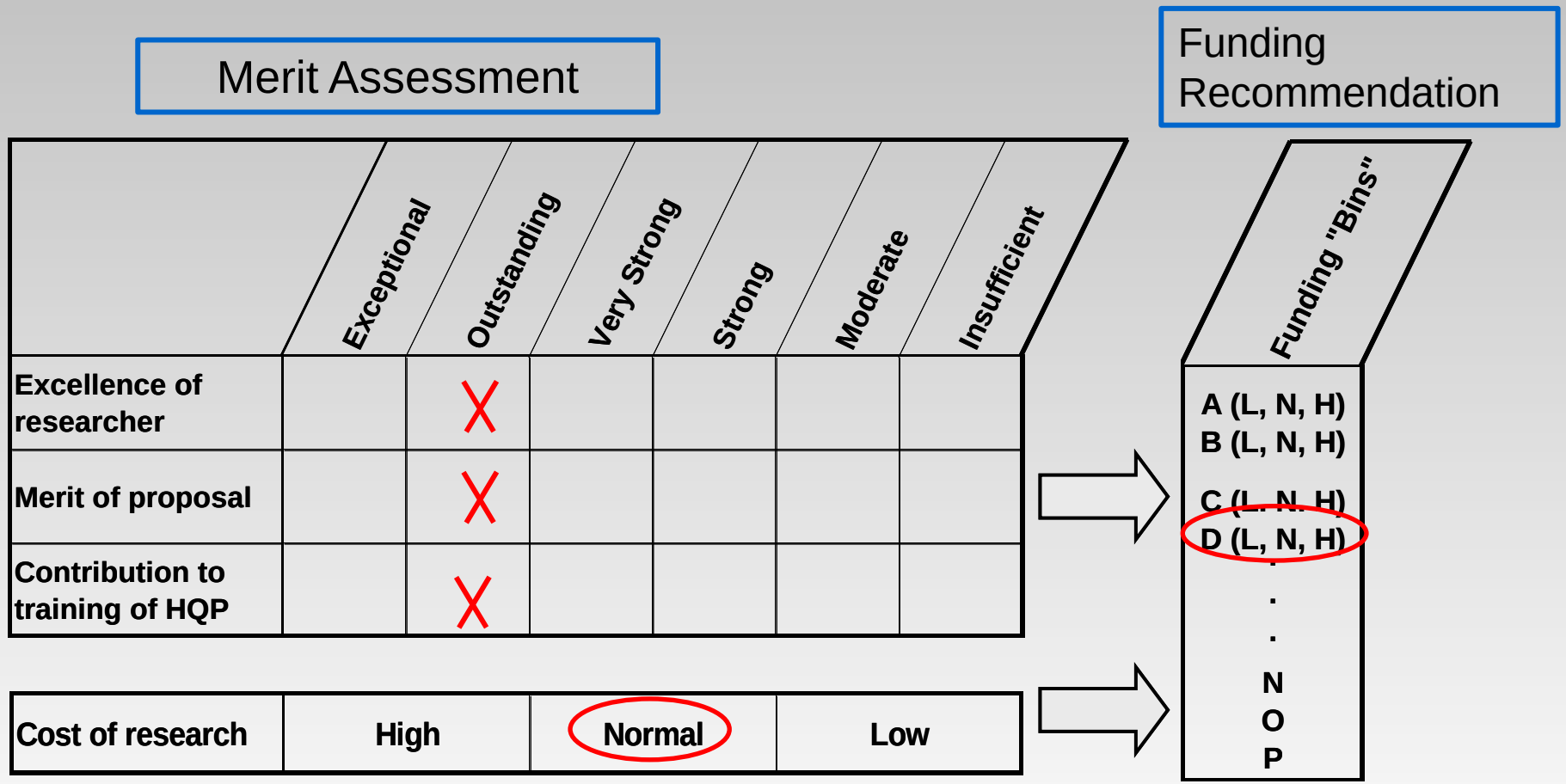
Two-stage review process, as recommended by the International Review of the Discovery Grants Program

- **Stage 1:** Merit assessment
  - Each application assessed by 5 reviewers, using six-point scale to rate three criteria:
    - Excellence of the researcher
    - Merit of the proposal
    - Contributions to the training of HQP

- **Stage 2:** Funding recommendation
  - Ratings lead to grouping of applications into “bins” of comparable overall quality
  - Executive Committee recommends balanced budget at level of “bins”

Discovery Grants Competition

Review Process



Discovery Grants Competition
Roles in Evaluation Group

Members

- 5 members review each application
- Review applications within own EG and other EGs (joint reviews)
- Input on policy issues related to the discipline

Executive Committee

- Section Chairs and Group Chair
- Ensures quality of process, consistency and fairness
- Confirms assignment of applications including joint reviews
- Provides recommendation to NSERC on budget options following review of applications
- Group Chair acts as EG representative on Committee on Discovery Research

Membership list : http://www.nserc-crsng.gc.ca/NSERC-CRSNG/Committees-Comites/ComputerScience-SciencesInformatiques_eng.asp

How to Apply for a DG info session

Session at MacEwan University

May be of interest for newer faculty or researchers submitting a DG application this year

MacEwan University, Room 8-211

May 17, 10am-12pm

Please rsvp to Garson Law lawg22@macewan.ca

2017 COMPETITION RESULTS

ALL EGs AND COMPUTER SCIENCE

Competition statistics in this presentation are not official. Official results will be posted once available: http://www.nserc-crsng.gc.ca/Professors-Professeurs/DiscoveryGrants-SubventionsDecouverte/Index_eng.asp

2017 Competition Results

Peer Review – Thank You!

- 3200+ Discovery Grants Applications =
  - 400+ Evaluation Group Members
  - 16 000+ reviews by EG members
  - 8000+ External Reviewers Reports

Overall Statistics (All EGs)
2017 Discovery Grants Competition

Data[1]	Number of Applications	Number of Awards	Success Rate	Average Grant
Early Career Researchers (ECR)	562	385	69%	$25,409
Established Researchers (ER)				
Holding a grant	1636	1360	83%	$37,396
Not holding a grant[2]	1042	409	39%	$26,806
Grand Total	3240	2154	66%	$33,243

1. *Includes Discovery Grants only (excludes all Subatomic Physics grants).*
2. *Includes returning established unfunded applicants and experienced researchers submitting a first application.*

- Total budget for all EGs: ~ $71,605,000

Note: Non-official results

Overall Statistics (Computer Science)
2017 Discovery Grants Competition

Data[1]	Number of Applications	Number of Awards	Success Rate	Average Grant
Early Career Researchers (ECR)	51	30	59%	$24,700
Established Researchers (ER)				
Holding a grant	181	144	80%	$31,938
Not holding a grant[2]	100	34	34%	$24,647
Grand Total	332	208	63%	$29,702

1. *Includes Discovery Grants in EG1507.*

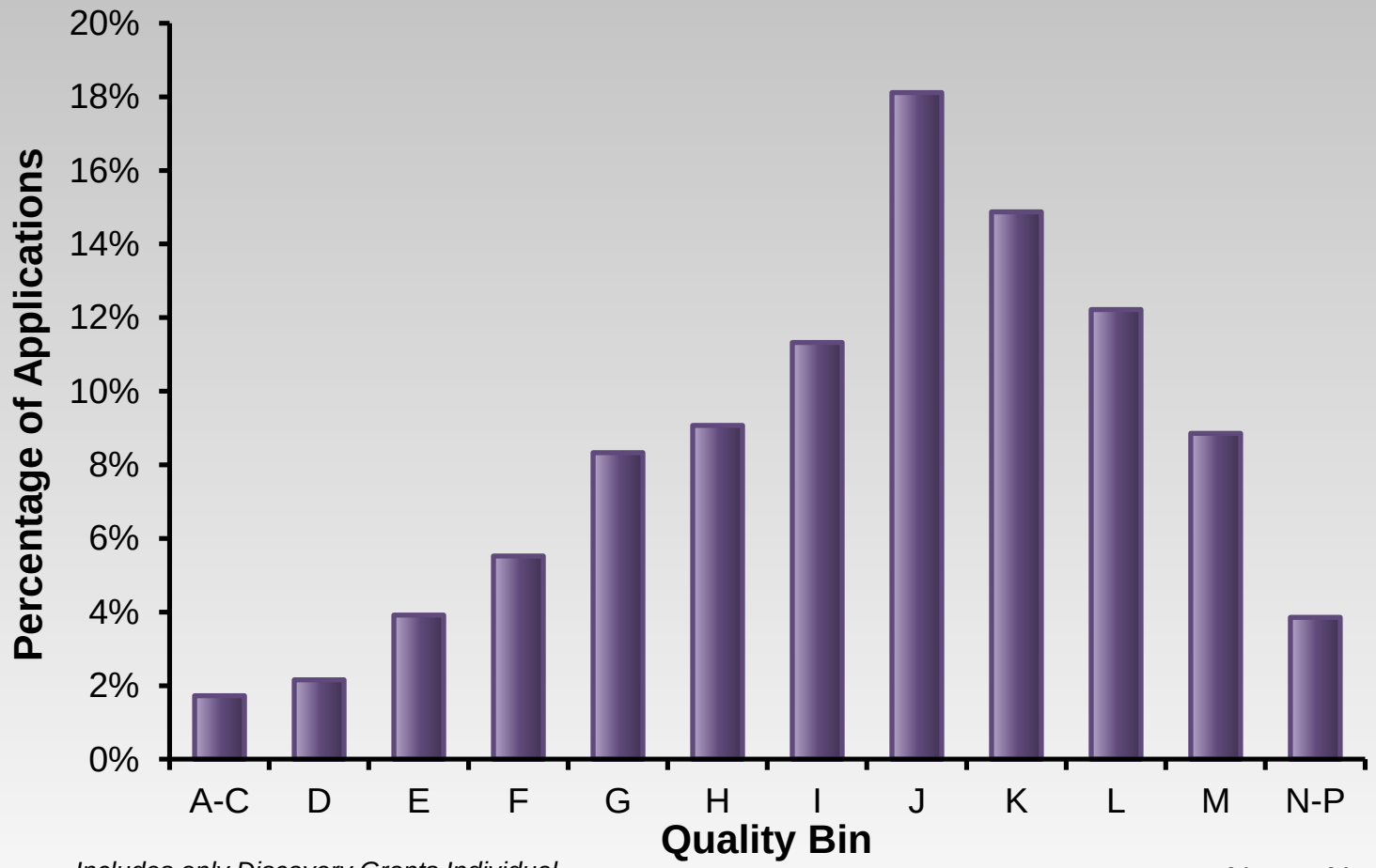
2. *Includes returning established unfunded applicants and experienced researchers submitting a first application.*

- Total budget for CS: ~ $6,178,000

Note: Non-official results

Bin Distribution (All EGs)

2017 Discovery Grants Competition

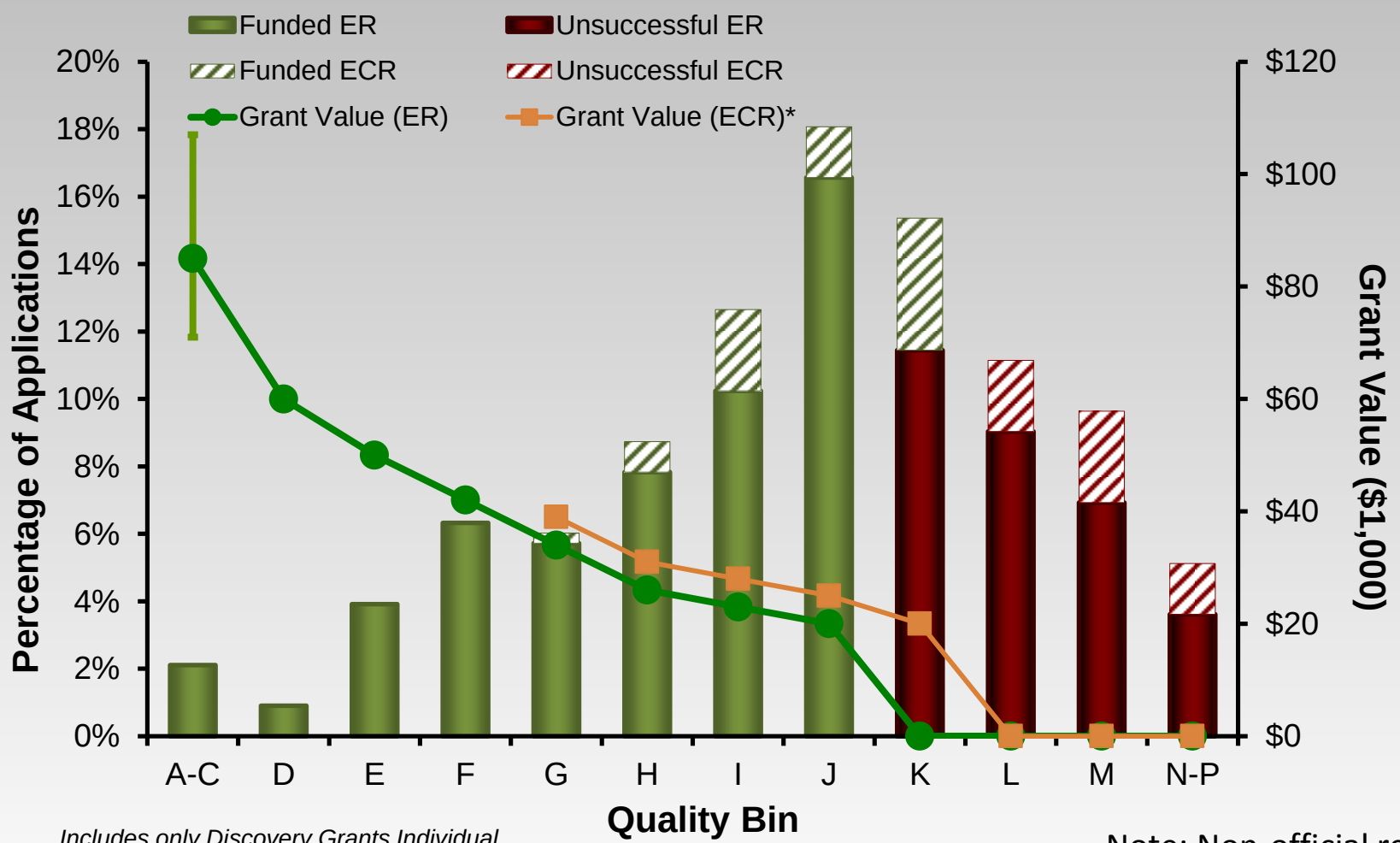


Includes only Discovery Grants Individual

Note: Non-official results

Bin Distribution (Computer Science)

2017 Discovery Grants Competition

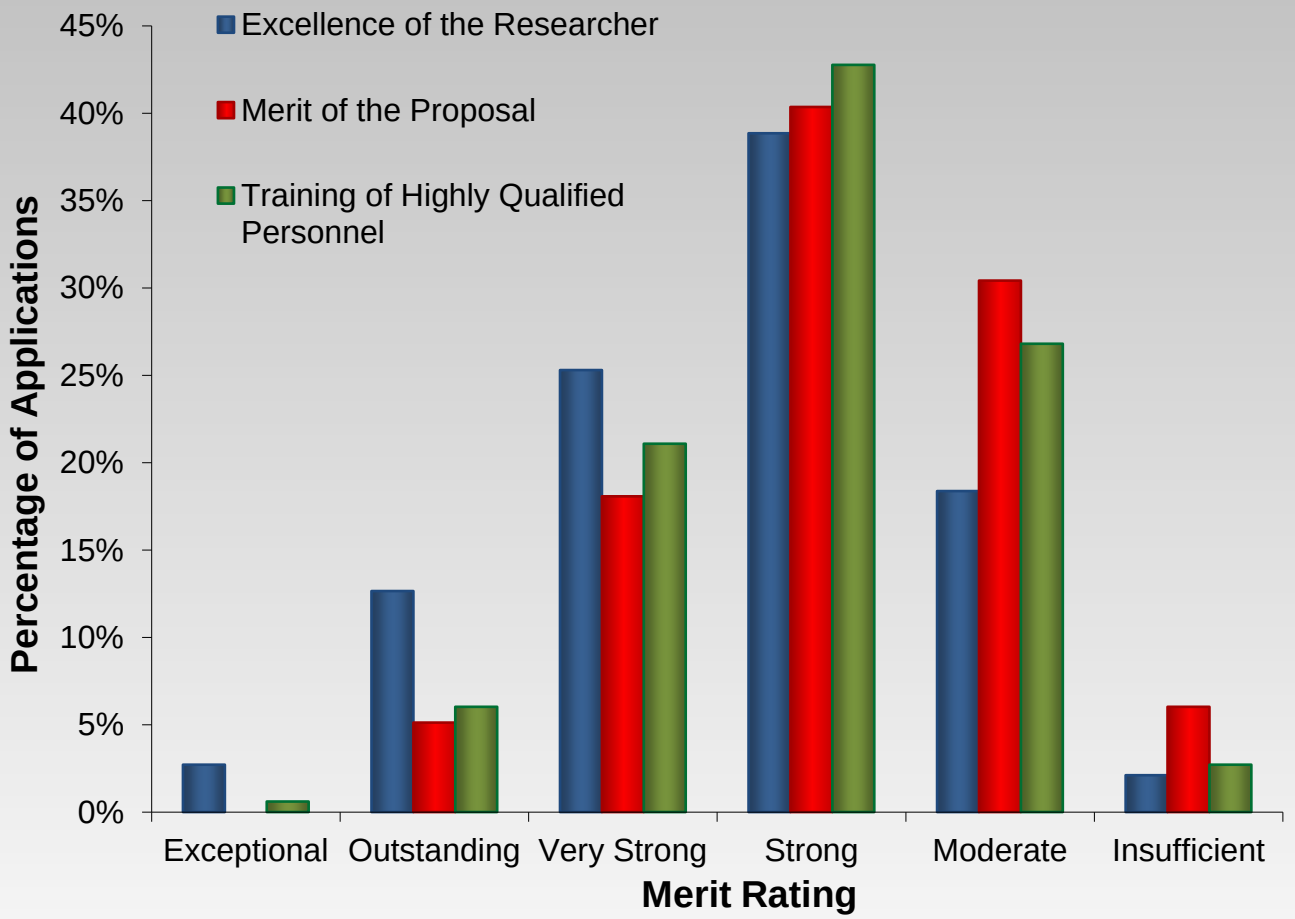


Includes only Discovery Grants Individual

Note: Non-official results

Rating Distribution (Computer Science)

2017 Discovery Grants Competition



Includes only Discovery Grants Individual

Note: Non-official results

Budget balancing in Computer Science EG

- Always a challenging task of balancing the amounts to be awarded (i.e., assigned to merit bins) in relation to the number of applicants funded.
- For Computer Science:
  - ER applicants supported down to merit category J. All applications in category J were supported.
  - ECR applicants supported down to merit category K. All applications in category K were supported.

Budget balancing in Computer Science EG

2017 results relative to the last 3 years within EG 1507:

- **Success rate is higher**
  63% in 2017 vs. 58-60% in 2014-2016
- **Number of applications is higher**
  332 in 2017 vs. 262-298 in 2014-16
- **Average grant is lower**
  $29,702 in 2017 vs. $29,727-$33,734 in 2014-2016
- **Bin values are lower**

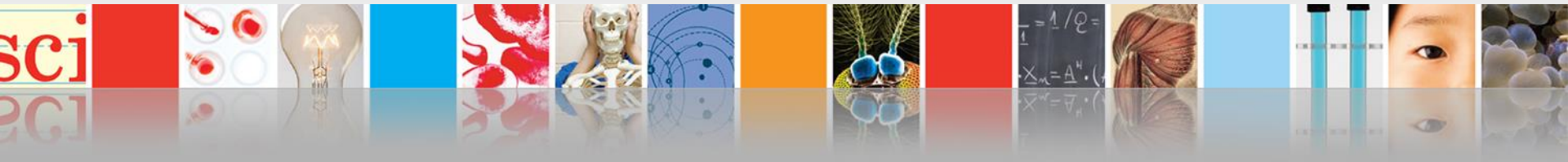
Feedback from Computer Science EG

From policy meeting at end of competition 2017:

- How to improve quality of external reviewer reports
- Suggestions for CCV
- Focus on DAS calibration
- Focus on DG calibration at high/low ends of grid and for ECRs
- Reduce workload of review process where possible
- Overall pleased with expertise coverage on EG and joint reviews for interdisciplinary applications

2017 RESULTS: DAS, RTI AND DDG

ALL EGs AND COMPUTER SCIENCE



Discovery Accelerator Supplements

- DAS provides resources to researchers who:
  - Have highly original and innovative research programs
  - Show strong potential to become international leaders within their field
- $120,000 over three years, up to 125 Supplements per year
- Process:
  - Each EG receives a quota of DAS nominations to recommend.
  - EG members nominate candidates during competition and vote on DAS rating
  - Executive Committee discusses nominees and makes the final recommendation to NSERC

Discovery Accelerator Supplements (All EGs)

2017 Competition

Evaluation Group	Awards
Genes, Cells and Molecules (1501)	12
Biological Systems and Functions (1502)	11
Evolution and Ecology (1503)	9
Chemistry (1504)	6
Physics (1505)	6
Geosciences (1506)	11
Computer Science (1507)	**19**
Mathematics and Statistics (1508)	6
Civil, Industrial and Systems Engineering (1509)	11
Electrical and Computer Engineering (1510)	13
Materials and Chemical Engineering (1511)	10
Mechanical Engineering (1512)	10
Subatomic Physics (19)	1
Total	**125**

Note: Non-official results

Research Tools & Instruments (All EGs)

2014-17 Competition

RTI grants foster and enhance the discovery, innovation and training capability of university researchers in the NSE by supporting the purchase of research equipment.

	2014	2015	2016	2017
Budget	$19.5M	$25M	$26M	$30.5M
# Appl.	468	666	657	748
# Funded	176	218	215	241
Success Rate	38%	33%	33%	32%

Note: Non-official results

Research Tools & Instruments (Computer Science)

2017 Competition

Research Tools & Instruments	Computer, Mathematical and Statistical Sciences
Number of Applications	34
Number of Awards	12
Success Rate	35%
Total Budget	$1,257,191

Note: Non-official results

Discovery Development Grants (All EGs)

- Promote a diversified base of high-quality research in small universities
- Foster a stimulating environment for research training in small universities
- Award valued at $10K /year for 2 years

Competition Results

- 2015: **57** awards
- 2016: **42** awards
- 2017: **54** awards

Note: Non-official results

Results and Statistics

2017 Competitions

Official results will be posted:
http://www.nserc-crsng.gc.ca/Professors-Professeurs/DiscoveryGrants-SubventionsDecouverte/Index_eng.asp

NSERC UPDATES

Discovery Grant Updates

Early Career Researcher - New DG definition

- Early Career Researchers (ECR) are researchers who are **within three years of the start date** of an NSERC eligible position, and who have no academic or non-academic independent research experience prior to the three-year window at the time of submitting the Notification of Intent to Apply for a Discovery Grant (NOI).

- For example, for the 2018 competition, to be classified as an ECR, a researcher submitting an NOI in August 2017 would have been hired on or after **July 2014**.

Discovery Grant Updates
ECR extension option with funds

- ECRs re-applying for the first time will now have the option of **extending their DG by one year with funds**

- **Goal:** Allow early stage researchers additional time to better establish themselves and their research program before re-applying to the Discovery Grant program as established researchers

Discovery Grant Updates

Highly Qualified Personnel – Literature Change

****NEW Instructions****

- Rewording of current HQP criterion
  - Instructions to Applicants
  - Peer Review Manual

Objective:

- Applicants – better description of what is expected
- Members – clearer information for review

Discovery Grant Updates

Gender Equity and Diversity – Literature Change

Applicants are encouraged to promote approaches that increase the inclusion and advancement of women and other under-represented groups in the natural sciences and engineering, as one means to foster excellence in research and training.

Applicants should describe their planned approach to promoting participation from a diverse group of HQP, taking into account equity in recruitment practices, mentorship and initiatives aimed at ensuring an inclusive research and work environment.

Discovery Grant Updates

DND/NSERC Discovery Grant supplement

- Supporting discovery-based research
- 20 supplements at $40,000 per year for 3 years
- Eligibility
  - Researchers applying to current DG competition
  - Proposed research must fit within DND defence and security target areas
- Internal DND committee will select recipients
- Results will be announced in the spring
- Contact: dndsuppmdn@nserc-crsng.gc.ca

Discovery Grant Updates

Maternity and Parental Leave

***Reminder* - NSERC Policy on Paid Maternity / Parental Leave for Students and Postdoctoral Fellows paid from Grants**

- Students and Postdoctoral fellows who are supported by NSERC grants and are eligible may receive up to 6 months of paid maternity / parental leave.
- The leave supplement will be paid by NSERC.

Discovery Grant Updates
Primary Caregiver Policy

NSERC Policy for New Primary Caregivers (Pilot)

- In place as of March 1, 2016
- Researchers who become primary caregivers following the birth or adoption of a child and who are eligible for maternity or parental leave but decline the leave, may be eligible to receive a one-year grant extension with funds

RTI Program Update

- University quotas to be removed for the 2018 competition
  - Competition open to all eligible Canadian university researchers
  - Researchers will be able to participate on one application per competition, either as an applicant or a co-applicant, but not both

NSERC Updates

Open Access

***Reminder* - Tri-Agency Open Access Policy on Publications**

http://www.science.gc.ca/eic/site/063.nsf/eng/h_F6765465.html

- Researchers must make articles freely available online within 12 months of publication
- Applies to all grants awarded May 1, 2015 and onward
- How to comply:
  - Deposit final, peer-reviewed manuscript in a repository; and/or
  - Submit final, peer-reviewed manuscript to journal that offers open access within 12 months
- Contact: openaccess@nserc-crsng.gc.ca

NSERC Updates
Data Management

- Based on research community feedback, the *Tri-Agency Statement of Principles on Digital Data Management* was released in June 2016.

  http://www.science.gc.ca/eic/site/063.nsf/eng/h_83F7624E.html?OpenDocument

- Over the coming months, NSERC, SSHRC and CIHR will be seeking input from the research community on draft policy text and how best to realize the principles presented in the Statement.

- **Online consultation in coming months**– visit NSERC's website over the next few months for news

  http://www.nserc-crsng.gc.ca

NSERC Updates

2017 Federal Budget

New investments in federal science in areas such as clean technology, energy and agricultural science

- Chief Science Advisor
- PromoScience Program
- Canada 150 Research Chairs
- Accelerating innovation through Superclusters
- Investing in R&D for Clean Energy and Transportation
- Advancing Agricultural Science and Innovation
- Investing in Artificial Intelligence
- Review of the National Research Council

NSERC Updates

2017 Federal Science Review

- The Advisory Panel on Federal Support for Fundamental Science presented its report on April 10, 2017

- Recommendations include:
  - increased investment in independent investigator-led research
  - increased coordination among the granting councils and CFI
  - new oversight body for the federal research and innovation ecosystem

Thank you!

Questions or comments?