

# AN INSIDER'S LOOK AT THE PER COMMUNITY

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# PER SURVEY

- Survey sent to 39 members of the PER community
- 21 women, 18 men
- Avg. age: 36 for women, 37 for men
- Avg. time spent in PER:  
8.2 years for women (range of 2-25 years)  
9.6 years for men (range of 3-30 years)
- Responses coded, names removed, analyzed by major themes then by gender

# WHY CHOOSE PHYSICS?

|  |              |
|--|--------------|
| Enjoyed the content                            | 5 (0 w, 5 m) |
| Had ability                                    | 3 (0 w, 3 m) |
| For the content                                | 9 (1 w, 8 m) |
| Cool/fascinating                               | 3 (2 w, 1 m) |
| Challenging                                    | 5 (4 w, 1 m) |
| Lack of women/wanted to prove it could be done | 4 (4 w, 0 m) |
| Encouraged                                     | 3 (2 w, 1 m) |

# WHY CHOOSE PER?

|                                |              |
|--------------------------------|--------------|
| Enjoyed the content            | 6 (2 w, 4 m) |
| Had poor experience as student | 4 (1 w, 3 m) |
| <b>For the content</b>         | 9 (1 w, 8 m) |
| Be a better teacher            | 3 (1 w, 2 m) |
| Liked teaching                 | 9 (3 w, 6 m) |
| Physics not interesting        | 4 (1 w, 3 m) |

# GENDER RATIO IN PHYSICS

|   |                      |
|---|----------------------|
| <b>Low but OK</b>                                     | 11 people (9 w, 2 m) |
| Low but I never considered it                         | 4 people (1 w, 3 m)  |
| Low-not sure how I feel about it                      | 8 people (6 w, 2 m)  |
| <b>Low-not comfortable with it</b>                    | 10 people (2 w, 8 m) |
| [Note: NSF data suggests about 20% women in physics.] |                      |

# GENDER RATIO IN PER

|                                  |                       |
|----------------------------------|-----------------------|
| Better than traditional physics! | 19 people (8 w, 11 m) |
| Less than 25% women              | 1 person (1 w, 0 m)   |
| <b>25-50% women</b>              | 8 people (7 w, 1 m)   |
| 50% women                        | 2 people (1 w, 1 m)   |

[Note: My estimate is about 40% women in PER.]

# WHEN DID YOU CHOOSE PHYSICS?

|                  |              |
|------------------|--------------|
| Middle school    | 3 (1 w, 2 m) |
| High school      | 8 (3 w, 5 m) |
| Early college    | 14(8 w, 6 m) |
| Mid-college      | 3 (2 w, 1 m) |
| Late college     | 3 (2 w, 1 m) |
| Graduate school  | 3 (2 w, 1 m) |
| Post-grad school | 1 (1 w, 0 m) |

# WHEN DID YOU CHOOSE PER?

|                  |                 |
|------------------|-----------------|
| Undergraduate    | 3 (1 w, 2 m)    |
| Graduate school  | 21 (11 w, 10 m) |
| Post-doc         | 5 (2 w, 3 m)    |
| Pre-tenure prof. | 4 (3 w, 1 m)    |
| HS Teaching      | 2 (1 w, 1 m)    |



# DO YOU CONSIDER YOURSELF PART OF THE PHYSICS COMMUNITY?

|     |           |              |
|-----|-----------|--------------|
| Yes | 32 people | (16 w, 16 m) |
| No  | 6 people  | (4 w, 2 m)   |

# DO YOU CONSIDER YOURSELF PART OF THE PER COMMUNITY?

|       |           |              |
|-------|-----------|--------------|
| Yes   | 31 people | (13 w, 18 m) |
| No    | 0 people  |              |
| Other | 6 people  | (6 w, 0 m)   |

Warm fuzzy community? Or exclusive and unwelcoming? Both; there were strongly-felt opinions on both sides of this issue.

# TRAD. PHYSICS VS. PER

My reading:

There are distinct differences in the answers about physics and PER.

People come to PER later (makes sense, it's not a high school topic nor much of an undergraduate on).

There is a sense that there are more women in PER.

This would appear to be true. One person voiced a concern that since women tend to appear on the edges, it makes sense they are in PER since PER is on the edge of physics. Another noted that the increased proportion of women makes it more obvious that PER is not physics.

# AAPT MEETINGS

What is important to you about meetings such as the AAPT?

|  |                       |
|--|-----------------------|
| Meet friends, network, socialize                               | 18 people (8 w, 10 m) |
| Share own research, get feedback, and learn about others' work | 3 people (1 w, 2 m)   |
| Keep up with the field   | 5 people (2 w, 3 m)   |
| Opportunities for collaboration                                | 3 people (1 w, 2 m)   |
| <b>Recharge batteries</b>                                      | 2 people (2 w, 0 m)   |

# MENTORING

|                               |                       |
|-------------------------------|-----------------------|
| No mentor                     | 6 people (2 w, 4 m)   |
| Advisor/supervisor            | 11 people (5 w, 6 m)  |
| Formal mentor through program | 7 people (6 w, 2 m)   |
| <b>Department chair</b>       | 3 people (0 w, 3 m)   |
| Professor/met through class   | 3 people (1 w, 2 m)   |
| Other person found on own     | 4 people (2 w, 2 m)   |
| Positive experience           | 20 people (13 w, 7 m) |
| Mixed experience              | 2 people (1 w, 1 m)   |
| Negative experience           | 0 people              |

Issues important to mentoring:

Promotion & tenure/bureaucracy/politics (6); Social/cultural (2);  
Grants & publishing (2); Similarity of mentor/mentee (3);  
Independence (4); Teaching advice (3); Respect for mentee (2);  
Availability of mentor (2)

# FAMILY BACKGROUND

|                      |                      |
|----------------------|----------------------|
| Father in STEM       | 13 people (7 w, 6 m) |
| Mother in STEM       | 3 people (2 w, 1 m)  |
| Sister in STEM       | 3 people (2 w, 1 m)  |
| Brother in STEM      | 4 people (3 w, 1 m)  |
| Other family in STEM | 8 people (3 w, 5 m)  |
| Other/peripheral     | 7 people (4 w, 3 m)  |
| No family in STEM    | 11 people (6 w, 5 m) |

# FAMILY BACKGROUND

23 had “traditional” upbringing (11 women, 12 men),  
4 had non-traditional (3 women, 1 man), 7 had mixed  
upbringing (2 women, 5 men)

The majority were from nuclear families (26 people; 13  
women & 13 men)

4 from multi-generational families (1 woman, 3 men)

3 from multi-parent families (2 women, 1 man)

1 from single-parent family (1 woman)

# INITIAL READINGS

**My reading of this data:  
AAPT is a good thing.**

**Mentoring is a good thing.**

**Family background is fairly  
traditional among PER people.  
Many had at least one family  
member in STEM fields.**