

# Collaborative Research: Resource of Open Problems for Education (ROPE)

## Budget Justification

Dana C. Ernst

### A. PERSONNEL

PI Ernst requests one month's summer salary and the associated fringe benefits each year for 3 years. We have assumed a salary increase of 3% per year. During the funding period, the PI will work intensively on the specific tasks listed in the project description and other related items.

Subtotal: \$23,169
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### B. OTHER PERSONNEL

None.

Subtotal: \$0
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### C. FRINGE BENEFITS

Fringe benefits were calculated using NAU formulas for benefit rates for FY 2013 (19.9%).

Subtotal: \$4,611
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### D. EQUIPMENT

None.

Subtotal: \$0
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### E. TRAVEL

Travel funds are requested to allow the PI to attend national mathematics meetings to disseminate information about ROPE to allow for face-to-face team meetings. Travel to the collaborative PIs' institutions is also planned for meetings with the Advisory Group and External Evaluator. In Years 2 and 3, funds are included to support undergraduate travel to the Joint Mathematical Meetings where they will have a demonstration of ROPE and help staff our booth in the exhibit area at the JMM.

**Year 1:** The PI is requesting a total of \$4,873 .

- \$1,935 for travel to the Joint Mathematics Meetings to meet with PIs.
  - \$240 Registration Fee
  - \$500 Airfare to San Antonio, TX
  - \$900 for lodging (\$225 per night for 4 nights)
  - \$245 for food (\$49 per diem rate for 5 days)
- \$917 for travel to the the University of Michigan to meet with PIs and Advisory Group.
  - \$600 Airfare to Ann Arbor, MI
  - \$200 for lodging (\$100 per night for 2 nights)

- \$168 for food (\$39 per diem rate for 3 days)
- \$2,021 for travel to MathFest to meet with PIs and External Evaluator.
  - \$300 Registration Fee
  - \$750 Airfare to Washington, D.C.
  - \$735 for lodging (\$245 per night for 3 nights)
  - \$236 for food (\$59 per diem rate for 4 days)

**Year 2:** The PI is requesting a total of \$7,501.

- \$5,585 for travel to the Joint Mathematics Meetings to meet with PIs.
  - \$240 Registration Fee for PI
  - \$110 Registration Fee for undergraduate students (\$55 student registration fee for two students)
  - \$1,650 Airfare to Seattle, WA (\$550 each for PI and two students)
  - \$2,700 for lodging (\$225 per night for 4 nights each for PI and two students)
  - \$885 for food (\$59 per diem rate for 5 days each for PI and two students)
- \$1,916 for travel to MathFest to meet with PIs and External Evaluator.
  - \$300 Registration Fee
  - \$750 Airfare to Columbus, OH.
  - \$690 for lodging (\$230 per night for 3 nights)
  - \$176 for food (\$44 per diem rate for 4 days)

**Year 3:** The PI is requesting a total of \$8,581.

- \$6,560 for travel to the Joint Mathematics Meetings to meet with PIs.
  - \$240 Registration Fee for PI
  - \$110 Registration Fee for undergraduate students (\$55 student registration fee for two students)
  - \$2,250 Airfare to Atlanta, GA (\$750 each for PI and two students)
  - \$3,300 for lodging (\$275 per night for 4 nights each for PI and two students)
  - \$660 for food (\$59 per diem rate for 5 days each for PI and two students)
- \$2,021 for travel to MathFest to meet with PIs and External Evaluator.
  - \$300 Registration Fee
  - \$750 Airfare to East Coast (location currently unknown).
  - \$735 for lodging (\$245 per night for 3 nights)
  - \$236 for food (\$44 per diem rate for 4 days)

Subtotal: \$20,955
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## F. PARTICIPANT SUPPORT COSTS

None.

Subtotal: \$0
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**G. OTHER DIRECT COSTS**

None.

Subtotal: \$0

**H. TOTAL DIRECT COSTS**

The total direct cost is the sum of summer salaries, fringe benefits, and travel for years 1–3.

Subtotal: \$48,735

**I. INDIRECT COSTS**

Indirect costs are calculated based on Northern Arizona University’s Colleges and Universities Rate Agreement, which stipulates an on-campus rate of 50% MTDC in year 1 and 52% in years 2 and 3, with exclusions for tuition, equipment, and subawards greater than \$25,000.

Subtotal: \$25,065

**J. TOTAL DIRECT AND INDIRECT COSTS**

This is the sum of items H and I.

**Total:** \$73,800

**K. RESIDUAL FUNDS**

None.

Subtotal: \$0

**L. AMOUNT OF THIS REQUEST**

None.

**Total:** \$73,800