Core Questions

```
##                 x freq
## 1 Every 1-2 hours  167
## 2 Every 3-4 hours  151
## 3      Every hour   35
## 4           Other   22
```

```
## [1] "Every 1-2 hours" "Every 3-4 hours" "Every hour"      "Other"
```

```
##              x freq
## 1        Other   61
## 2 Three months  301
## 3   Two months   13
```

```
  levels(factor(Core_Questions$State))
```

```
##  [1] "Alabama"       "Arizona"       "California"    "Colorado"
##  [5] "Connecticut"   "Florida"       "Georgia"       "Illinois"
##  [9] "Maryland"      "Massachusetts" "Michigan"      "Minnesota"
## [13] "Nevada"        "New Jersey"    "New Mexico"    "New York"
## [17] "Ohio"          "Pennsylvania"  "Tennessee"     "Texas"
## [21] "Virginia"      "Wisconsin"
```

```
  levels(factor(Core_Questions$S_D_E))
```

```
## [1] "Other"        "Three months" "Two months"
```

```
  levels(factor(Core_Questions$RO_F_EG))
```

```
## [1] "1-25%"        "25-50%"       "50-75%"       "75-100%"
## [5] "Fully funded" "Not funded"
```

```
  levels(factor(Core_Questions$Deadline_today))
```

```
## [1] ""    "No"  "Yes"
```

```
  levels(factor(Core_Questions$Workload_today))
```

```
## [1] ""         "Heavy"    "Light"    "Standard"
```

```
  levels(factor(Core_Questions$Workplace))
```

```
## [1] "Home"   "Office" "Other"
```

```r
  levels(factor(Core_Questions$R_Style))
```

```
## [1] "Hands-off" "Hands-on"
```

```r
  levels(factor(Core_Questions$TW_W_H))
```

```
## [1] "< 30"  "> 50"  "30-40" "40-50"
```

```r
  levels(factor(Core_Questions$Break))
```

```
## [1] "Every 1-2 hours" "Every 3-4 hours" "Every hour"      "Other"
```

```r
  levels(factor(Core_Questions$Email))
```

```
## [1] "Reply instantly"  "Reply Once/Twice"
```

```r
  levels(factor(Core_Questions$funding_proposal))
```

```
## [1] "No"  "Yes"
```

```r
  levels(factor(Core_Questions$A_N_Pro))
```

```
## [1] ""     ">=10" "1-2"  "3-4"  "5-6"  "7-9"
```

```r
  levels(factor(Core_Questions$funding_agency))
```

```
##  [1] ""
##  [2] "DOD"
##  [3] "DOE"
##  [4] "DoT"
##  [5] "Equally distributed across NSF, NASA, DOD, DHS"
##  [6] "FWS"
##  [7] "internal"
##  [8] "NASA"
##  [9] "NIH"
## [10] "NIJ"
## [11] "NIST"
## [12] "NOAA"
## [13] "NRC"
## [14] "NSF"
## [15] "Oil industry"
## [16] "Petroleum Research Fund (ACS), private industry"
## [17] "Philanthropic foundations"
## [18] "private"
## [19] "Private Foundation"
## [20] "Private Industry"
## [21] "Private Investors in real estate- grants though universite foundation"
## [22] "SENACYT"
```

```
## [23] "State funding sources "
## [24] "State of CA"
## [25] "State of California"
## [26] "Texas Department of Transportaton"
## [27] "TRB"
## [28] "TxDOT, NCHRP"
## [29] "USDA"
```

```
  levels(factor(Core_Questions$Success))
```

```
## [1] ""       "< 10%"  "> 90%"  "10-20%" "20-30%" "30-50%" "50-75%" "75-90%"
```

```
  levels(factor(Core_Questions$Com_Proposal))
```

```
## [1] ""           "< 1 week"   "> 2 months" "1-2 months" "1-2 weeks"
## [6] "2-4 weeks"
```

```
  levels(factor(Core_Questions$L_Of_SR))
```

```
## [1] ""            "< 1 month"   "> 12 months" "1-3 months"  "3-6 months"
## [6] "6-12 months"
```

```
  levels(factor(Core_Questions$W_WB_PD))
```

```
## [1] ""                   "About the same"     "Less"
## [4] "More"               "Significantly less" "Significantly more"
```

```
  levels(factor(Core_Questions$Submit_P))
```

```
## [1] "1-3 hours before"      "1 day before"          "2 or more days before"
## [4] "3-6 hours before"      "Minutes before"
```

```
  levels(factor(Core_Questions$Stress_PD))
```

```
## [1] ""                    "Extremely  more"     "Extremely less"
## [4] "Same"                "Significantly  more" "Significantly less"
```

```
  levels(factor(Core_Questions$refereed_conference))
```

```
## [1] "No"  "Yes"
```

```
  levels(factor(Core_Questions$A_N_Conf_Pap))
```

```
## [1] ""      ">= 10" "1-2"   "3-4"   "5-6"   "7-9"
```

```
  levels(factor(Core_Questions$core_rank))
```

```
## [1] ""   "A"  "A*" "B"  "C"
```

```
  levels(factor(Core_Questions$if_you_submit_manuscripts))
```

```
## [1] ""       "< 10%"  "> 90%"  "10-20%" "20-30%" "30-50%" "50-75%" "75-90%"
```

```
  levels(factor(Core_Questions$far_in_advance_do_you))
```

```
## [1] ""           "< 1 week"   "> 2 months" "1-2 months" "1-2 weeks"
## [6] "2-4 weeks"
```

```
  levels(factor(Core_Questions$length_of_supp))
```

```
## [1] ""            "< 1 month"   "> 12 months" "1-3 months"  "3-6 months"
## [6] "6-12 months"
```

```
  levels(factor(Core_Questions$in_the_week_leading_to_a_c))
```

```
## [1] ""                   "About the same"     "Less"
## [4] "More"               "Significantly less" "Significantly more"
```

```
  levels(factor(Core_Questions$you_typically_subm))
```

```
## [1] "1-3 hours before"      "1 day before"          "2 or more days before"
## [4] "3-6 hours before"      "Minutes before"
```

```
  levels(factor(Core_Questions$ss_level_in_a_fundi))
```

```
## [1] ""                    "Extremely  more"     "Extremely less"
## [4] "Same"                "Significantly  more"
```

```
  count(Core_Questions$funding_agency)
```

```
##                                                                  x
## 1
## 2                                                              DOD
## 3                                                              DOE
## 4                                                              DoT
## 5                        Equally distributed across NSF, NASA, DOD, DHS
## 6                                                              FWS
## 7                                                         internal
## 8                                                             NASA
## 9                                                              NIH
## 10                                                             NIJ
## 11                                                            NIST
## 12                                                            NOAA
```

```
## 13                                                                    NRC
## 14                                                                    NSF
## 15                                                          Oil industry
## 16                          Petroleum Research Fund (ACS), private industry
## 17                                              Philanthropic foundations
## 18                                                                private
## 19                                                  Private Foundation
## 20                                                    Private Industry
## 21 Private Investors in real estate- grants though universite foundation
## 22                                                                SENACYT
## 23                                               State funding sources
## 24                                                         State of CA
## 25                                                  State of California
## 26                                    Texas Department of Transportaton
## 27                                                                TRB
## 28                                                       TxDOT, NCHRP
## 29                                                               USDA
##    freq
## 1    21
## 2    17
## 3    21
## 4     1
## 5     1
## 6     1
## 7     1
## 8    11
## 9    62
## 10    3
## 11    1
## 12    1
## 13    1
## 14  217
## 15    1
## 16    1
## 17    1
## 18    1
## 19    2
## 20    1
## 21    1
## 22    1
## 23    1
## 24    1
## 25    1
## 26    1
## 27    1
## 28    1
## 29    1
```

```
# ######Test a single core questions
#   temp <- count(Core_Questions$Workload_today)
#   colnames(temp) <- c("item", "count")
#   temp <- temp[!(temp$item == ""),]
#
#  bar_plot <- ggplot(data = temp, aes(x = item, y = count)) +
```

```
#     geom_bar(stat = "identity",
#              width = 0.5,
#              fill = "steelblue") +
#     theme_minimal() +
#     scale_y_continuous(breaks = seq(0, ylimit, by = 5),
#                        limits = c(0, ylimit)) +
#     labs(x = "", y = "Participant count", title = title_list[i - 1]) +
#     theme(
#       panel.grid.major = element_blank(),
#       panel.grid.minor = element_blank(),
#       plot.title = element_text(hjust = 0.5),
#       axis.text.x = element_text(
#         face = "bold",
#         size = 10 ,
#         angle = 30,
#         hjust = 1
#       ),
#       axis.text.y = element_text(face = "bold", size = 10)
#     )+
#    scale_x_discrete( limits=list[[1]])
#
#  bar_plot
```

```
## [1] "state_do_you_reside"
```

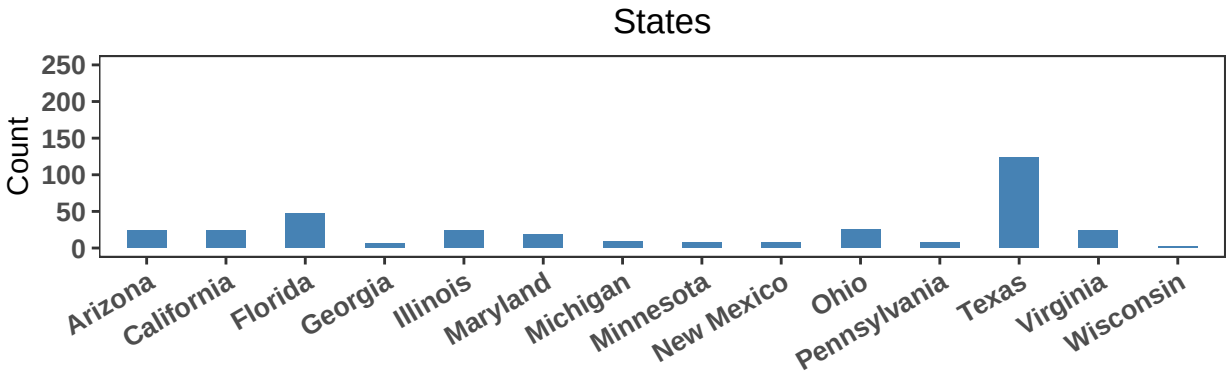
```
## Warning: Removed 8 rows containing missing values (position_stack).
```

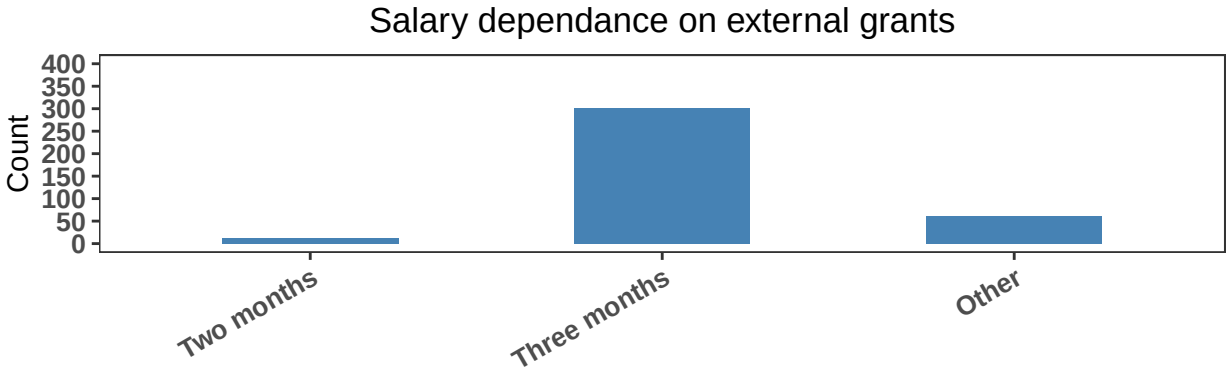
```
## Warning: Removed 18 rows containing missing values (position_stack).
```

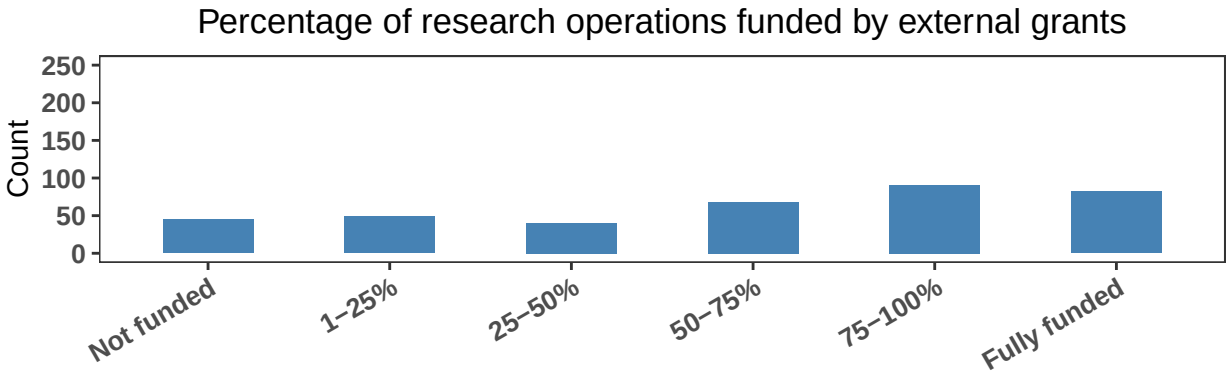
```
## Warning: Removed 1 rows containing missing values (position_stack).
```

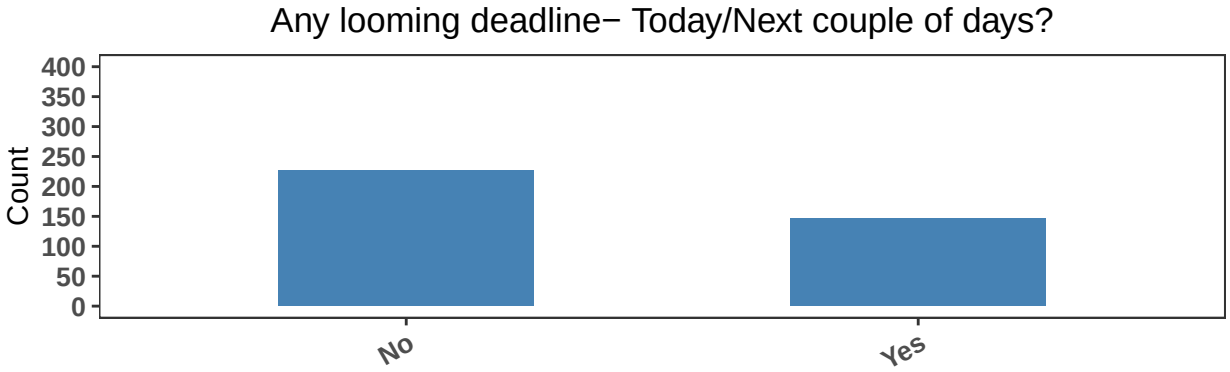
```
## Warning: Removed 1 rows containing missing values (position_stack).
```

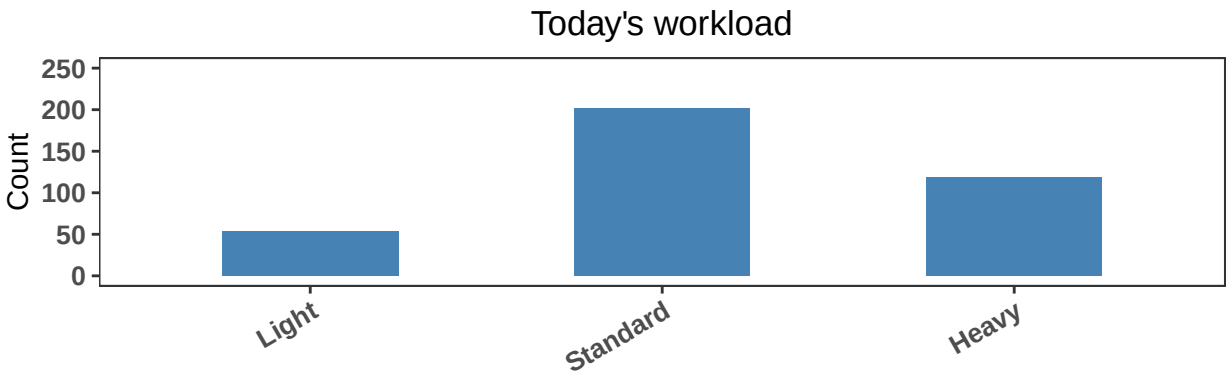
```
## Warning: Removed 1 rows containing missing values (position_stack).
```

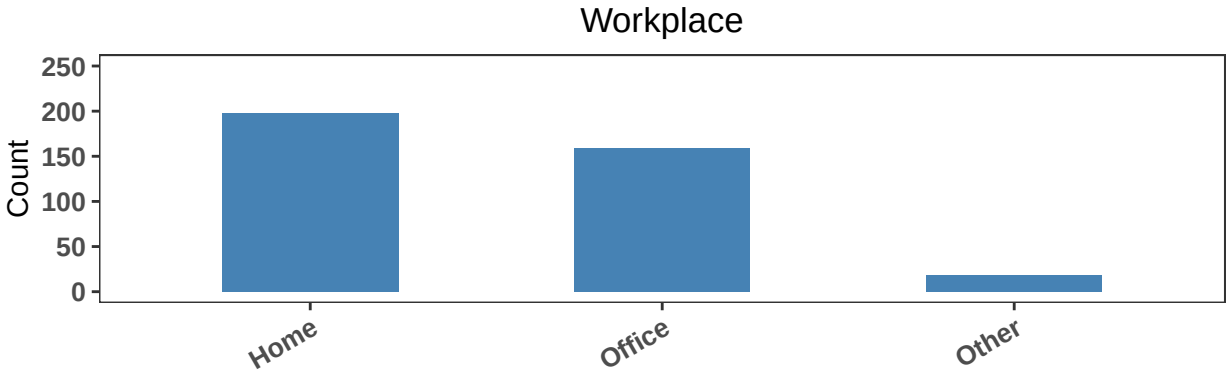

States
Count
250
200
150
100
50
0
Arizona
California
Florida
Georgia
Illinois
Maryland
Michigan
Minnesota
New Mexico
Ohio
Pennsylvania
Texas
Virginia
Wisconsin

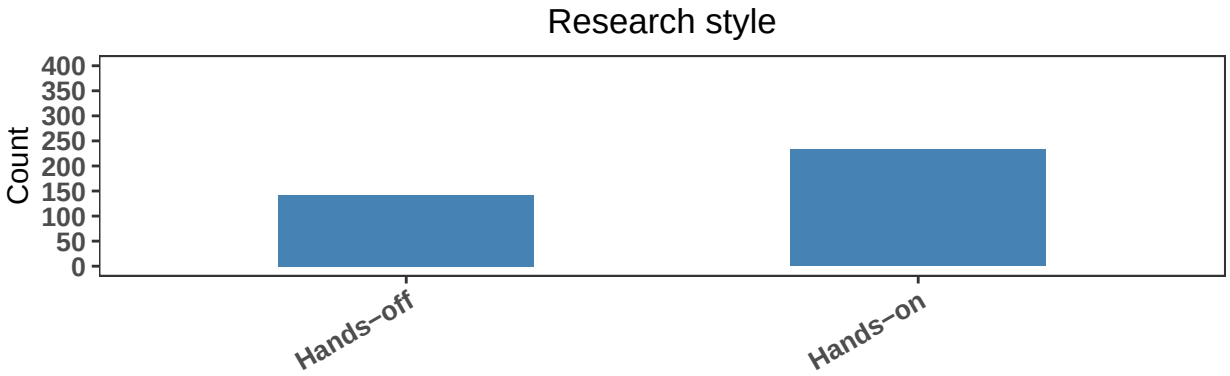

Salary dependance on external grants
Count
400
350
300
250
200
150
100
50
0
Two months
Three months
Other

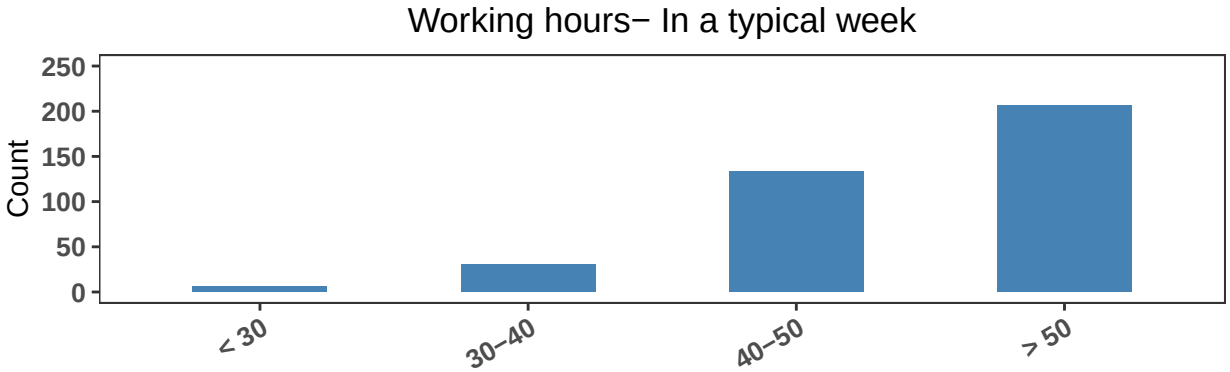

Percentage of research operations funded by external grants
Count
250
200
150
100
50
0
Not funded
1−25%
25−50%
50−75%
75−100%
Fully funded

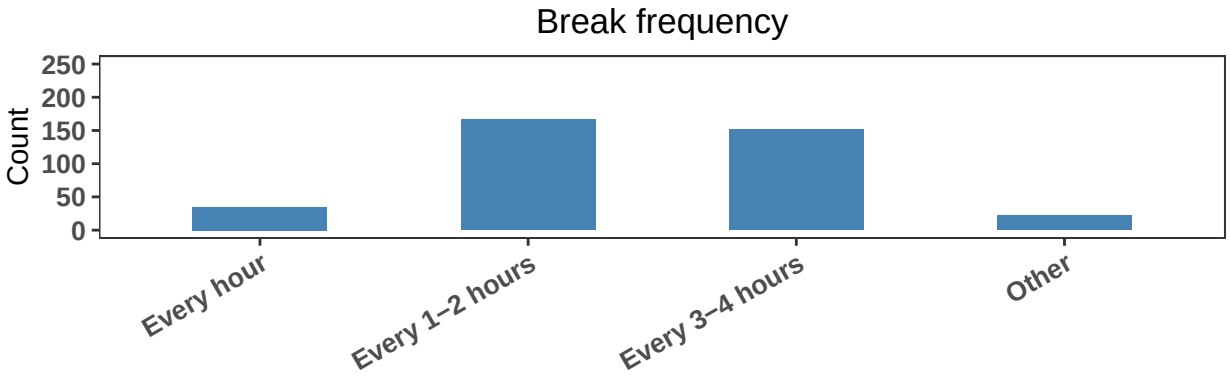

Any looming deadline− Today/Next couple of days?
Count
400
350
300
250
200
150
100
50
0
No
Yes

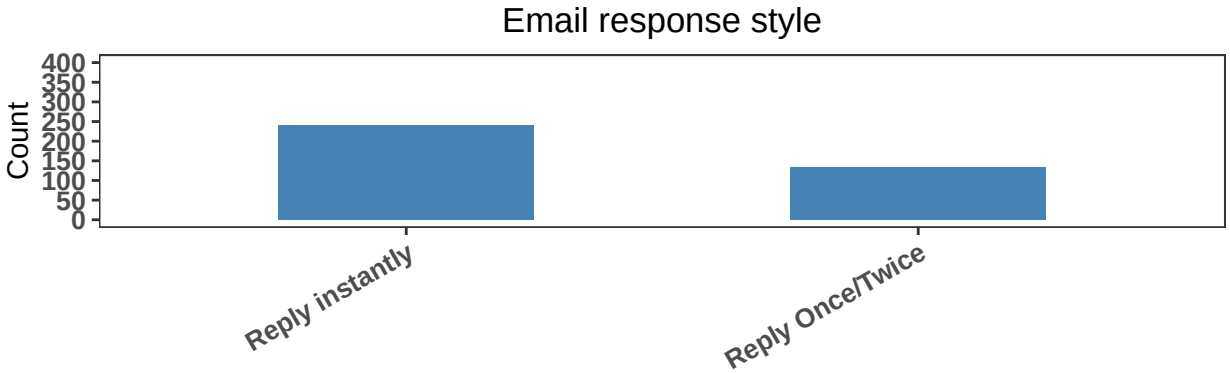

Today's workload
Count
250
200
150
100
50
0
Light
Standard
Heavy

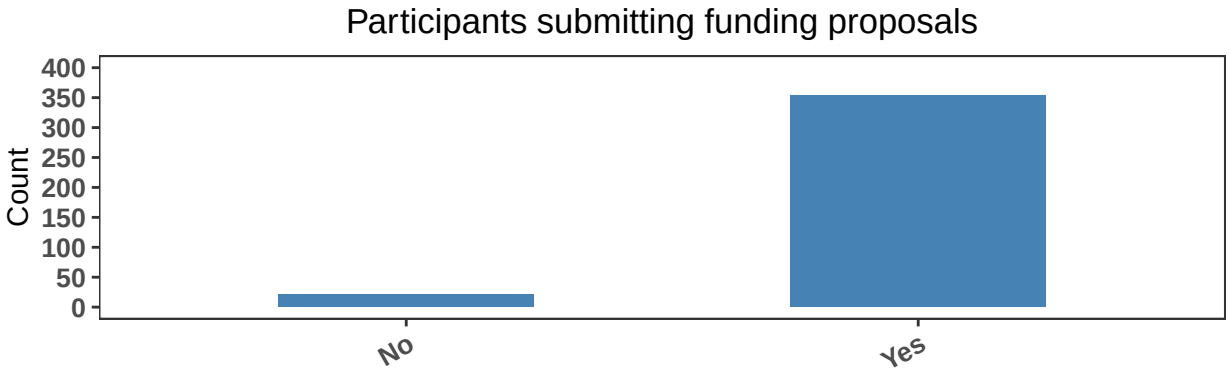

Workplace
Count
250
200
150
100
50
0
Home
Office
Other

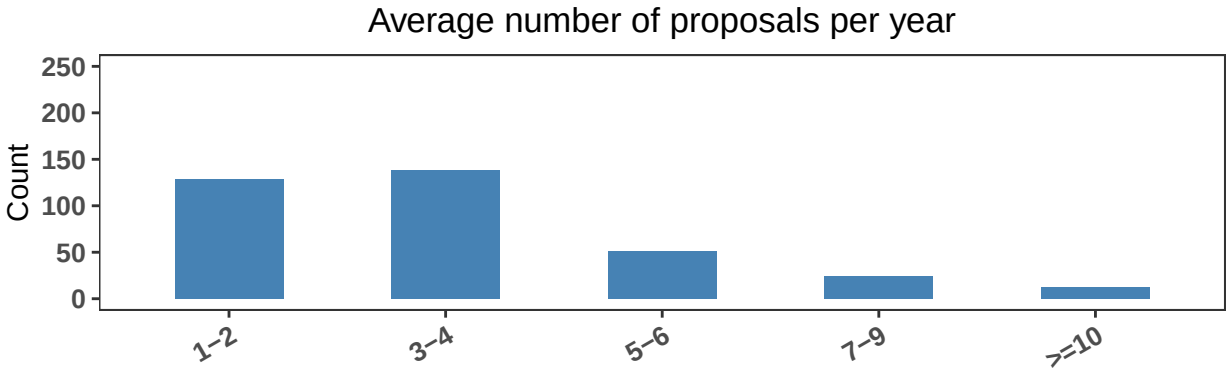

Research style
Count
400
350
300
250
200
150
100
50
0
Hands−off
Hands−on

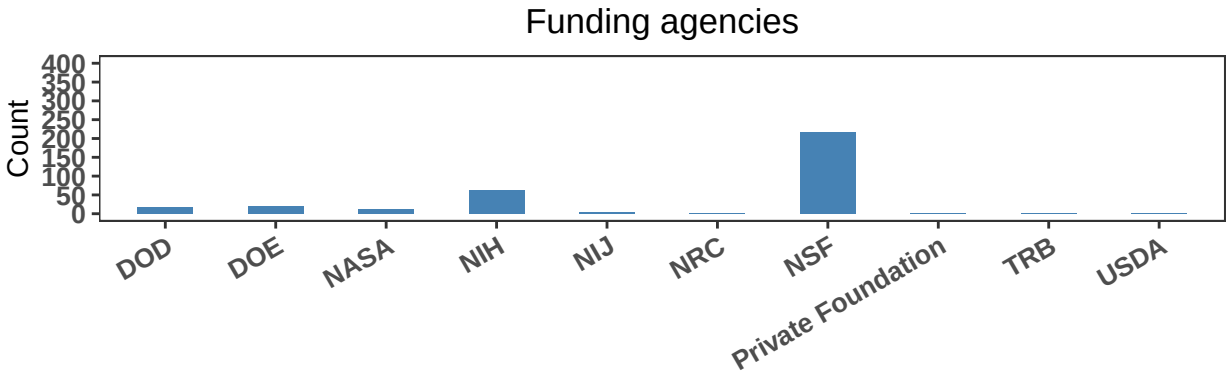

Working hours− In a typical week
Count
250
200
150
100
50
0
< 30
30−40
40−50
> 50

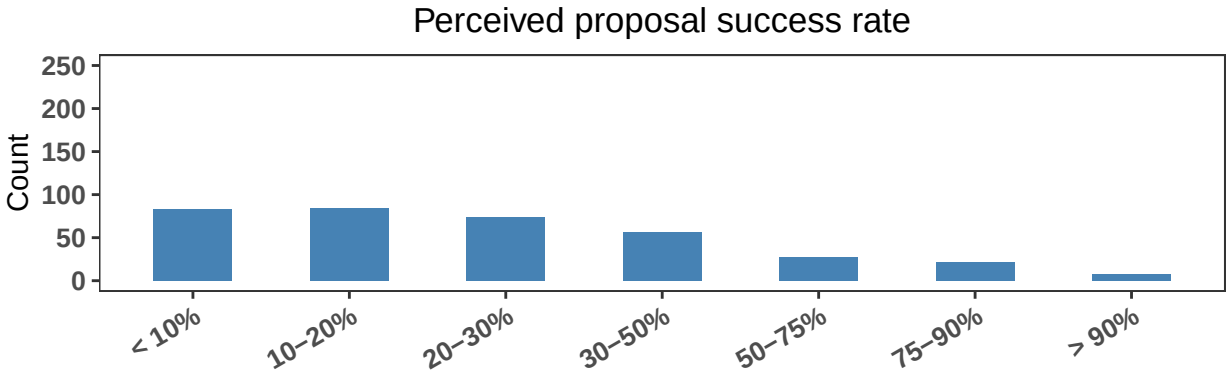

Break frequency
Count
250
200
150
100
50
0
Every hour
Every 1–2 hours
Every 3–4 hours
Other

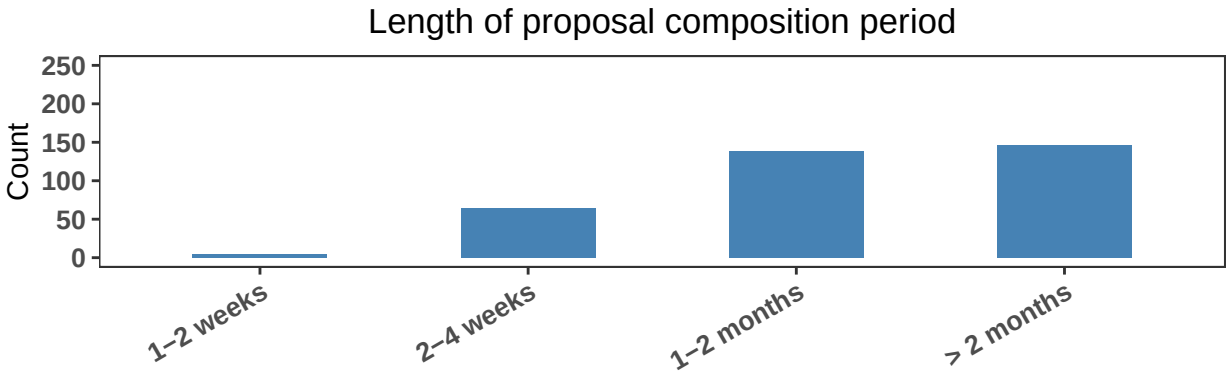

Email response style
Count
400
350
300
250
200
150
100
50
0
Reply instantly
Reply Once/Twice

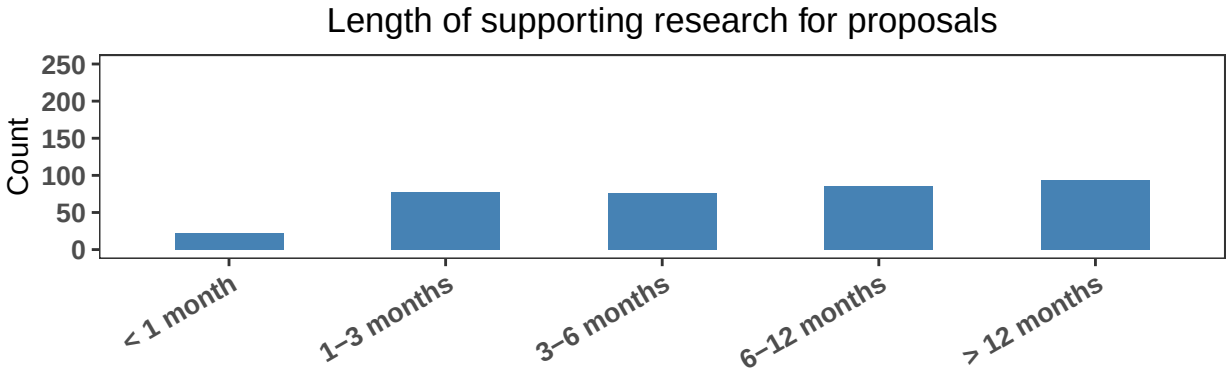

Participants submitting funding proposals
Count
400
350
300
250
200
150
100
50
0
No
Yes

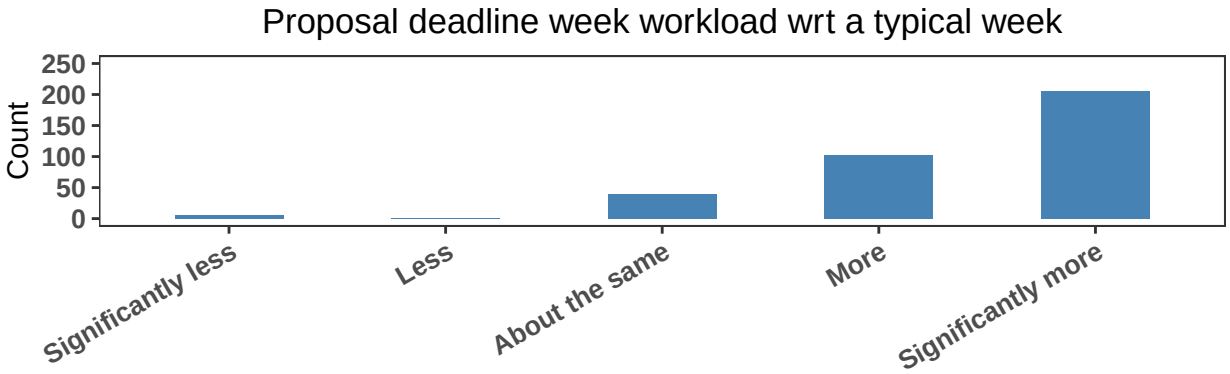

Average number of proposals per year
Count
250
200
150
100
50
0
1–2
3–4
5–6
7–9
>=10

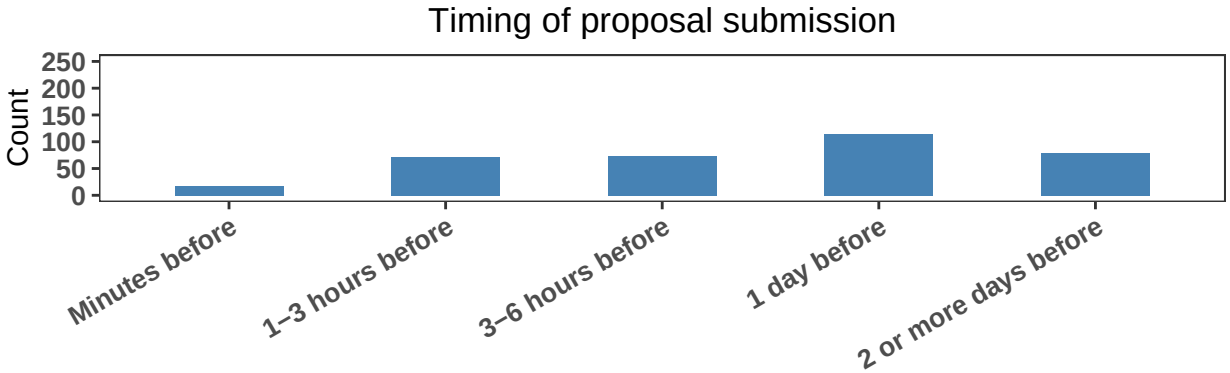

Funding agencies
Count
400
350
300
250
200
150
100
50
0
DOD
DOE
NASA
NIH
NIJ
NRC
NSF
Private Foundation
TRB
USDA

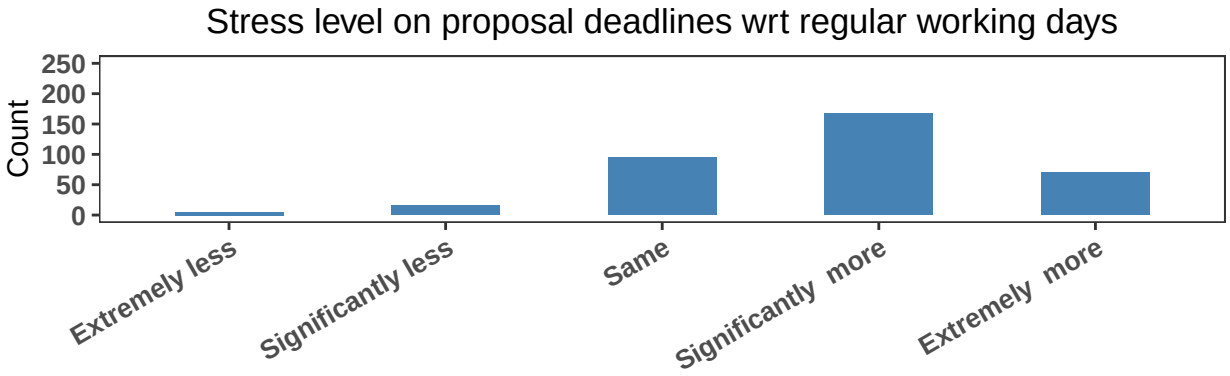

Perceived proposal success rate
Count
250
200
150
100
50
0
< 10%
10–20%
20–30%
30–50%
50–75%
75–90%
> 90%

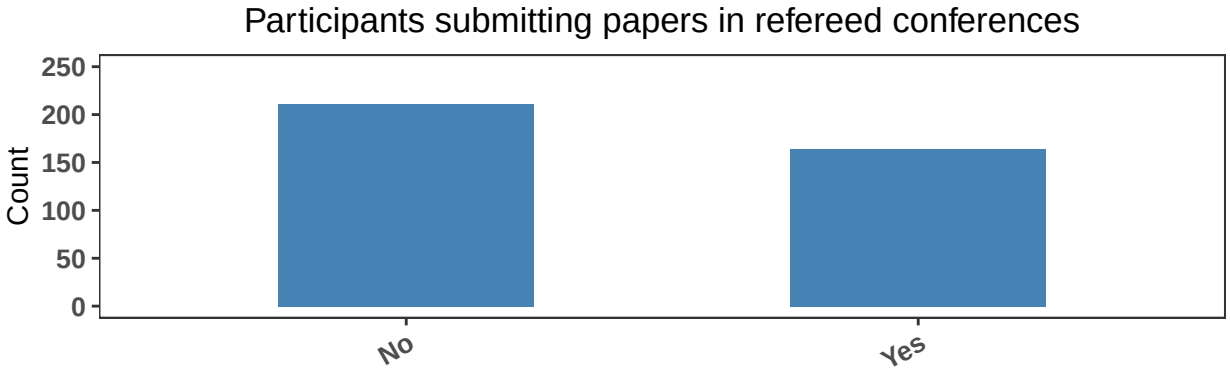

Length of proposal composition period
Count
250
200
150
100
50
0
1–2 weeks
2–4 weeks
1–2 months
> 2 months

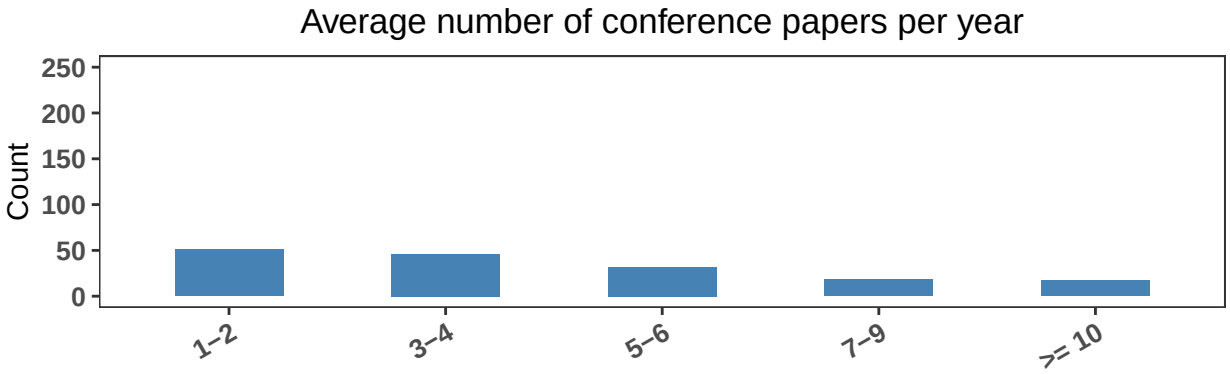

Length of supporting research for proposals
Count
250
200
150
100
50
0
< 1 month
1–3 months
3–6 months
6–12 months
> 12 months

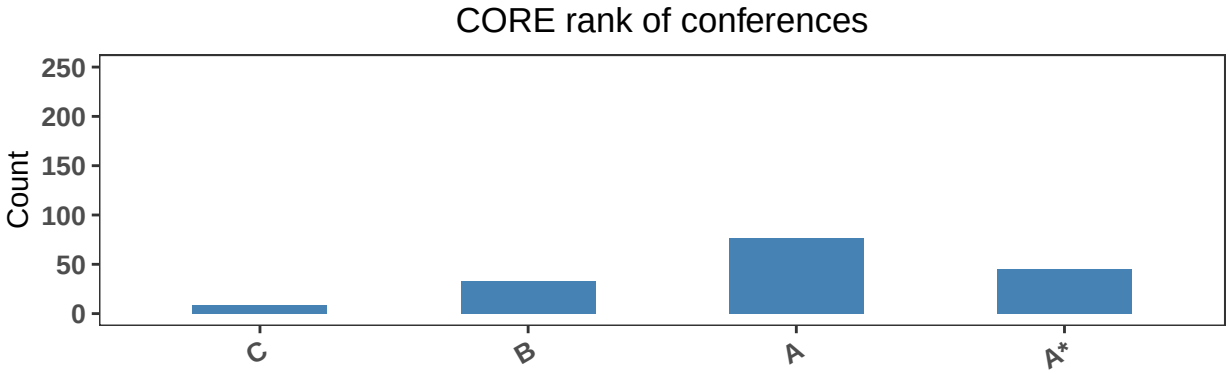

Proposal deadline week workload wrt a typical week
Count
250
200
150
100
50
0
Significantly less
Less
About the same
More
Significantly more

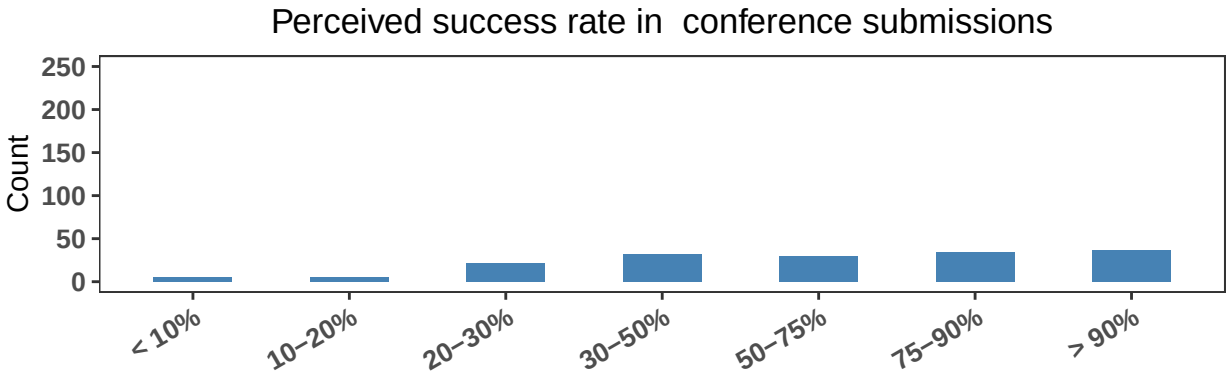

Timing of proposal submission
Count
250
200
150
100
50
0
Minutes before
1–3 hours before
3–6 hours before
1 day before
2 or more days before

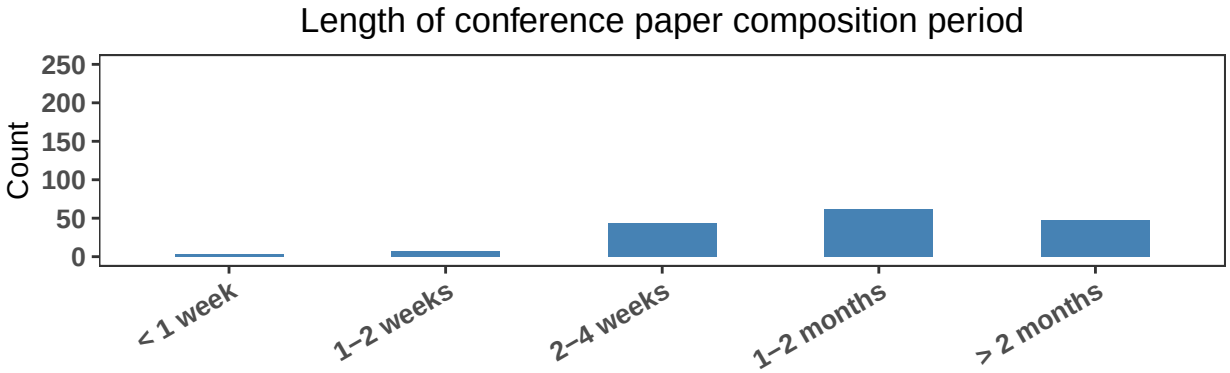

Stress level on proposal deadlines wrt regular working days
Count
250
200
150
100
50
0
Extremely less
Significantly less
Same
Significantly more
Extremely more

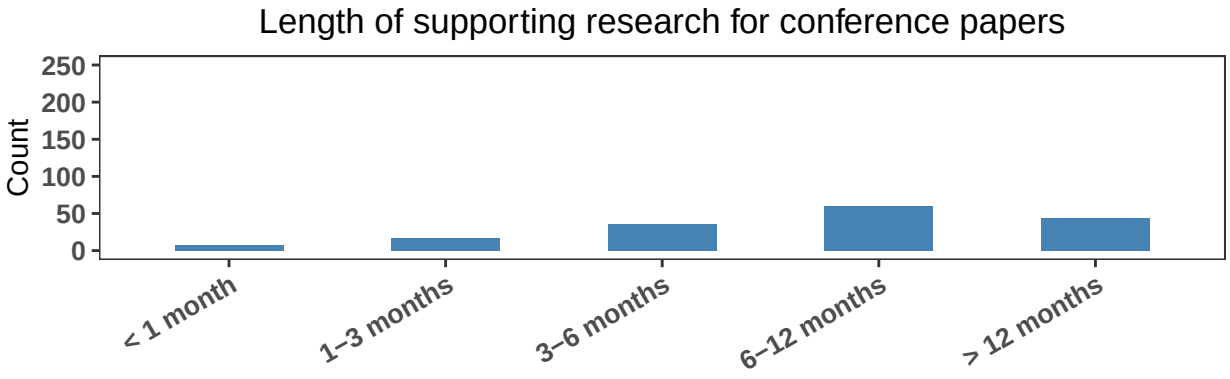

Participants submitting papers in refereed conferences
Count
250
200
150
100
50
0
No
Yes

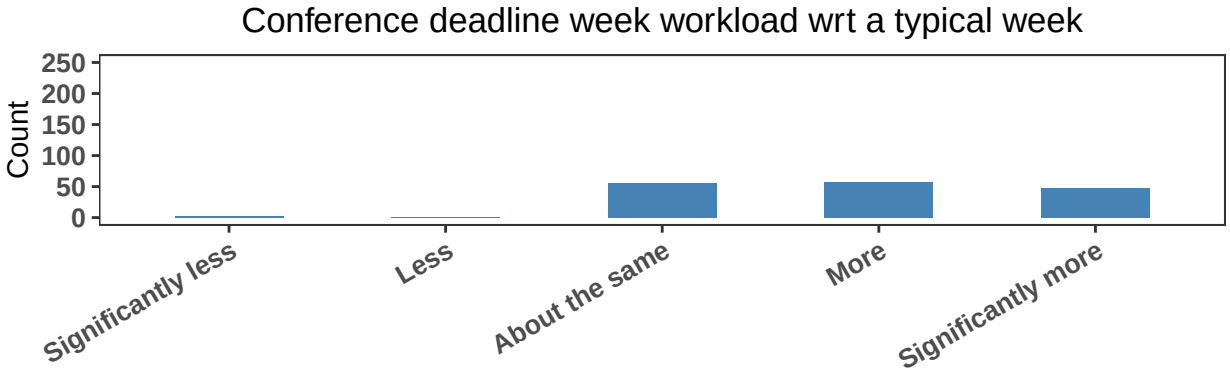

Average number of conference papers per year
Count
250
200
150
100
50
0
1–2
3–4
5–6
7–9
>= 10

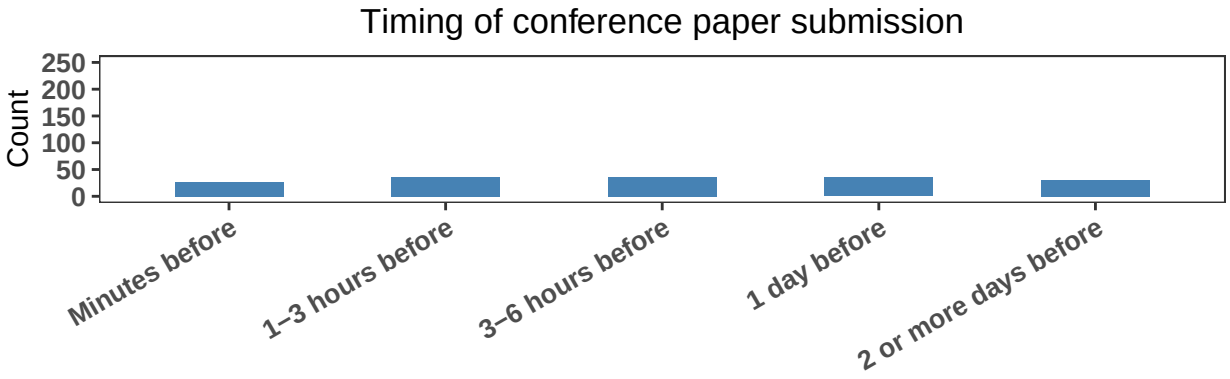

CORE rank of conferences
Count
250
200
150
100
50
0
C
B
A
A*

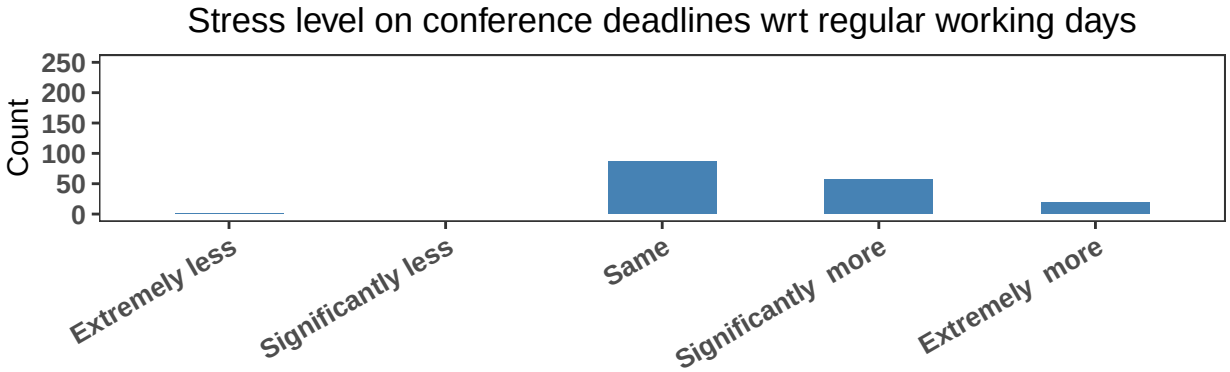

Perceived success rate in conference submissions
Count
250
200
150
100
50
0
< 10%
10–20%
20–30%
30–50%
50–75%
75–90%
> 90%


Length of conference paper composition period
Count
250
200
150
100
50
0
< 1 week
1–2 weeks
2–4 weeks
1–2 months
> 2 months


Length of supporting research for conference papers
Count
250
200
150
100
50
0
< 1 month
1–3 months
3–6 months
6–12 months
> 12 months


Conference deadline week workload wrt a typical week
Count
250
200
150
100
50
0
Significantly less
Less
About the same
More
Significantly more


Timing of conference paper submission
Count
250
200
150
100
50
0
Minutes before
1–3 hours before
3–6 hours before
1 day before
2 or more days before


Stress level on conference deadlines wrt regular working days
Count
250
200
150
100
50
0
Extremely less
Significantly less
Same
Significantly more
Extremely more