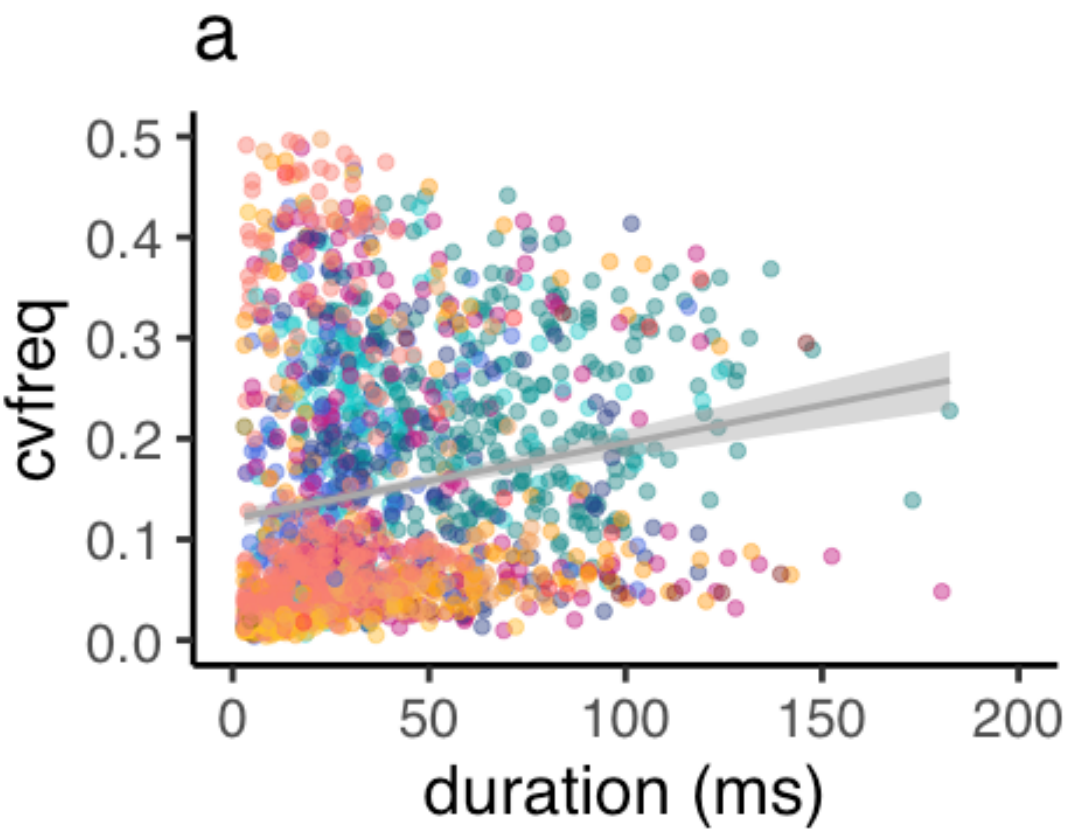
Evaluation for cvfreq

This is an stats summary for sFigs. 2-3 using R Markdown document.

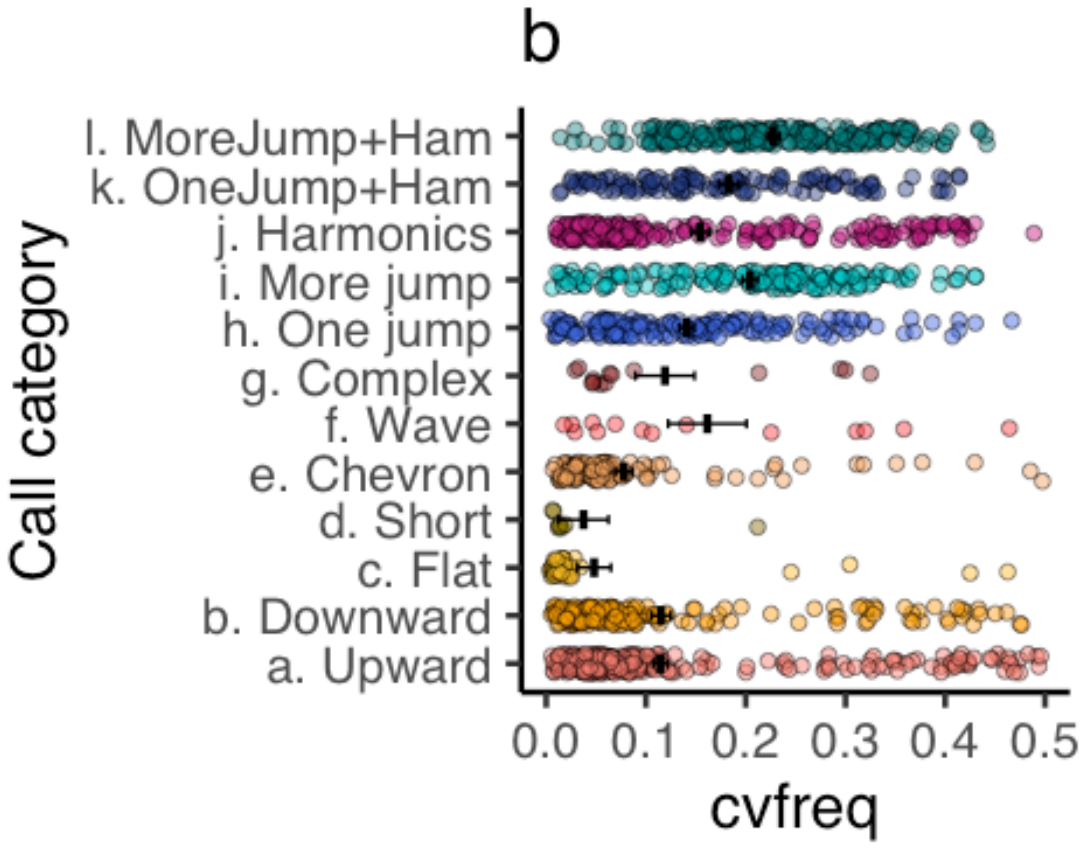
sFig. 2a




```
cor.test(x = d.cvfreq$duration, y = d.cvfreq$cvfreq, method="pearson")

##
##  Pearson's product-moment correlation
##
## data:  d.cvfreq$duration and d.cvfreq$cvfreq
## t = 6.6849, df = 1665, p-value = 3.143e-11
## alternative hypothesis: true correlation is not equal to 0
```

```
## 95 percent confidence interval:
##  0.1145517 0.2080687
## sample estimates:
##       cor
## 0.1616731
```

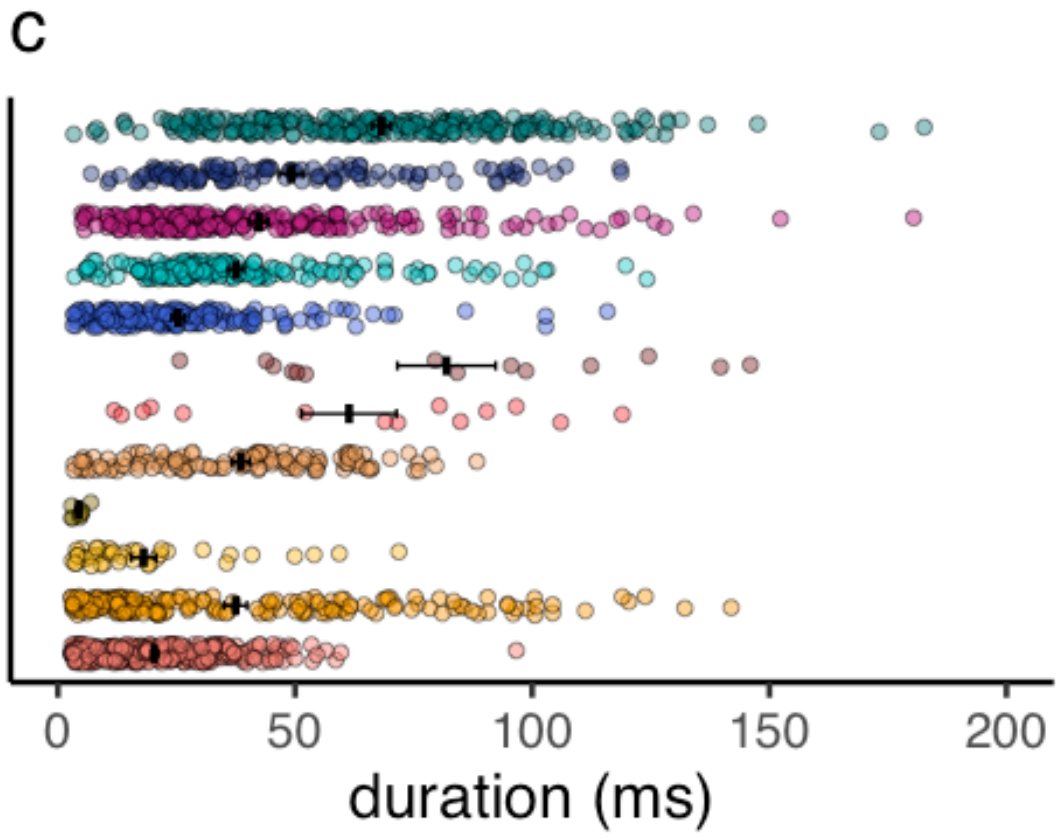
sFig.2b




```
#Welch's one-way ANOVA
oneway.test(d.cvfreq$cvfreq ~ d.cvfreq$category.name)

##
##  One-way analysis of means (not assuming equal variances)
##
## data:  d.cvfreq$cvfreq and d.cvfreq$category.name
## F = 34.065, num df = 11.00, denom df = 135.92, p-value < 2.2e-16

#post-hoc multiple comparison  (Welch)
pairwise.t.test(d.cvfreq$cvfreq, d.cvfreq$category.name, p.adj="holm", pool.sd=
T)
```

```
##
##  Pairwise comparisons using t tests with pooled SD
##
## data:  d.cvfreq$cvfreq and d.cvfreq$category.name
##


               a. Upward  b. Downward c. Flat  d. Short e. Chevron f. Wave g. Complex h. One jump i. More jump j. Harmonics
b. Downward     1.00000   -           -       -        -          -       -          -           -            -
c. Flat         0.00422   0.02100     -       -        -          -       -          -           -            -
d. Short        1.00000   1.00000     1.00000 -        -          -       -          -           -            -
e. Chevron      0.00685   0.09207     1.00000 1.00000  -          -       -          -           -            -
f. Wave         1.00000   1.00000     0.07809 0.53549  0.38716    -       -          -           -            -
g. Complex      1.00000   1.00000     1.00000 1.00000  1.00000    1.00000 -          -           -            -
h. One jump     1.00000   1.00000     0.00033 0.47842  0.00029    1.00000 1.00000    -           -            -
i. More jump    4.1e-11   7.9e-10     3.1e-12 0.00458  < 2e-16    1.00000 0.31002    2.8e-05     -            -
j. Harmonics    0.15600   0.12584     9.4e-06 0.21049  7.5e-07    1.00000 1.00000    1.00000     0.00150      -
k. OneJump+Ham  0.00029   0.00033     2.8e-08 0.03186  5.8e-10    1.00000 1.00000    0.11059     1.00000      0.97069
l. MoreJump+Ham < 2e-16   < 2e-16     < 2e-16 0.00035  < 2e-16    1.00000 0.03031    3.8e-12     0.97069      9.4e-10


                k. OneJump+Ham
b. Downward     -
c. Flat         -
d. Short        -
e. Chevron      -
f. Wave         -
g. Complex      -
h. One jump     -
i. More jump    -
j. Harmonics    -
k. OneJump+Ham  -
l. MoreJump+Ham 0.02312


##
## P value adjustment method: holm
```

sFig.2c



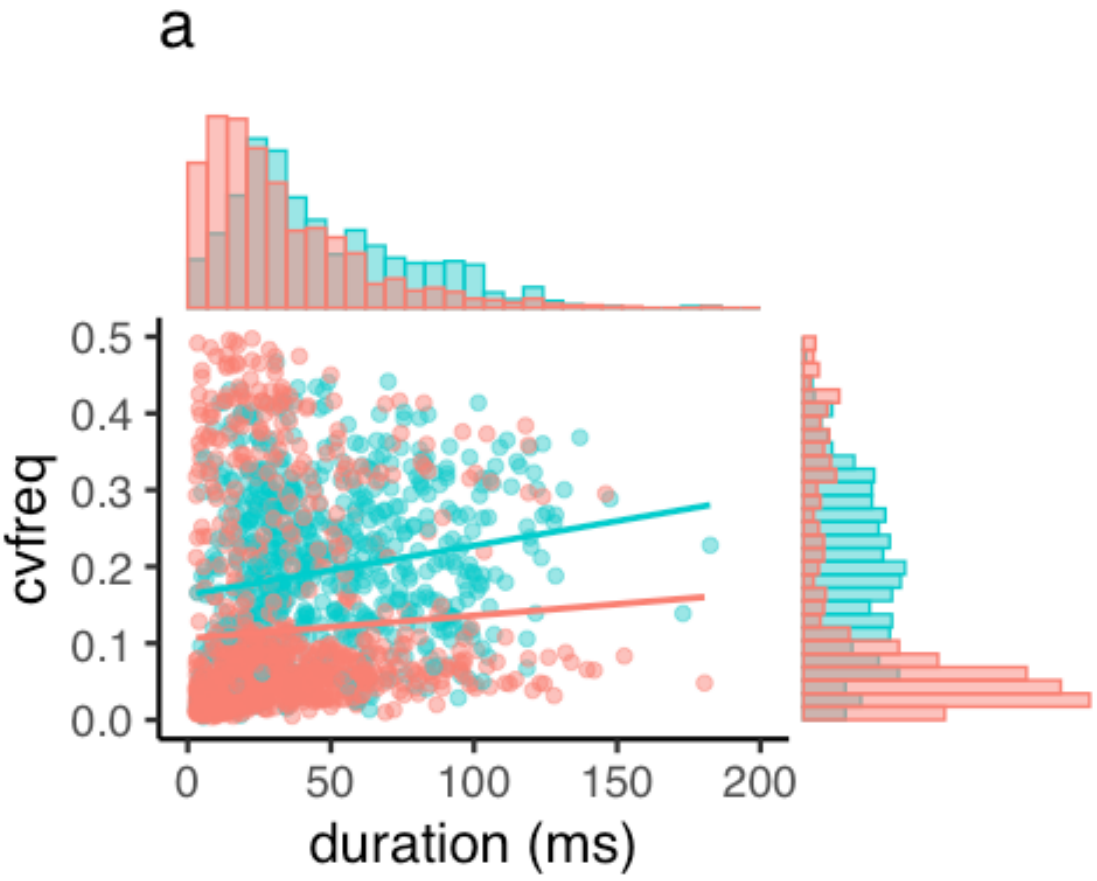

```
#Welch's one-way ANOVA
oneway.test(d.cvfreq$duration ~ d.cvfreq$category.name)

##
##  One-way analysis of means (not assuming equal variances)
##
## data:  d.cvfreq$duration and d.cvfreq$category.name
## F = 188.35, num df = 11.00, denom df = 188.06, p-value < 2.2e-16

#post-hoc multiple comparison  (Welch)
pairwise.t.test(d.cvfreq$duration, d.cvfreq$category.name, p.adj="holm",
pool.sd=T)

##
##  Pairwise comparisons using t tests with pooled SD
##
## data:  d.cvfreq$duration and d.cvfreq$category.name
##
```

	a. Upward	b. Downward	c. Flat	d. Short	e. Chevron	f. Wave	g. Complex	h. One jump	i. More jump	j. Harmonics
b. Downward	4.7e-12	-	-	-	-	-	-	-	-	-
c. Flat	1.00000	0.00022	-	-	-	-	-	-	-	-
d. Short	0.73257	0.00576	1.00000	-	-	-	-	-	-	-
e. Chevron	2.2e-10	1.00000	0.00018	0.00442	-	-	-	-	-	-
f. Wave	8.4e-08	0.01199	9.5e-07	1.0e-05	0.02285	-	-	-	-	-
g. Complex	< 2e-16	7.3e-09	1.6e-14	1.7e-10	3.8e-08	0.44325	-	-	-	-
h. One jump	0.44325	0.00015	0.74818	0.31962	0.00020	8.4e-06	3.4e-14	-	-	-
i. More jump	7.6e-12	1.00000	0.00022	0.00576	1.00000	0.01250	8.6e-09	0.00015	-	-
j. Harmonics	< 2e-16	0.60714	5.8e-07	0.00070	1.00000	0.10181	4.2e-07	1.3e-09	0.66136	-
k. OneJump+Ham	< 2e-16	0.00203	5.0e-10	3.6e-05	0.02098	0.74818	0.00013	1.4e-13	0.00272	0.29978
l. MoreJump+Ham	< 2e-16	< 2e-16	< 2e-16	7.7e-11	< 2e-16	1.00000	0.59777	< 2e-16	< 2e-16	< 2e-16

	k. OneJump+Ham
b. Downward	-
c. Flat	-
d. Short	-
e. Chevron	-
f. Wave	-
g. Complex	-
h. One jump	-
i. More jump	-
j. Harmonics	-
k. OneJump+Ham	-
l. MoreJump+Ham	6.3e-10

##
P value adjustment method: holm

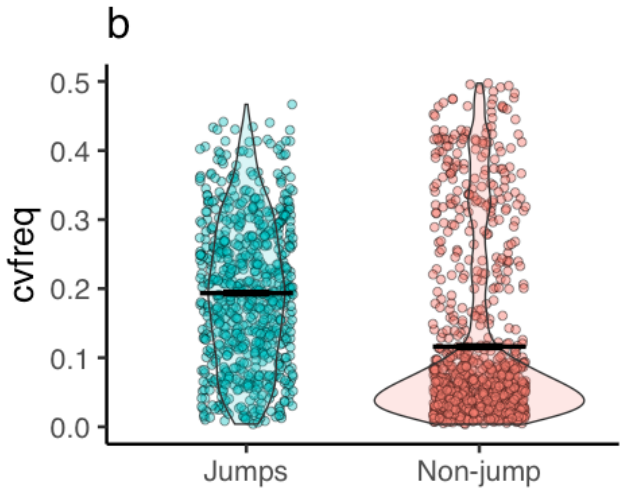
sFig. 3a




```
#ANCOVA
anova(d.mod2)

## Analysis of Variance Table
##
## Response: cvfreq
##                      Df  Sum Sq Mean Sq  F value    Pr(>F)
## duration              1  0.7096 0.70958  47.9029 6.372e-12 ***
## jump_non              1  1.7249 1.72487 116.4434 < 2.2e-16 ***
## duration:jump_non     1  0.0790 0.07895   5.3301   0.02108 *
## Residuals          1663 24.6339 0.01481
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

summary(d.mod2)

##
## Call:
## lm(formula = cvfreq ~ duration * jump_non, data = d.cvfreq)
##
## Residuals:
```

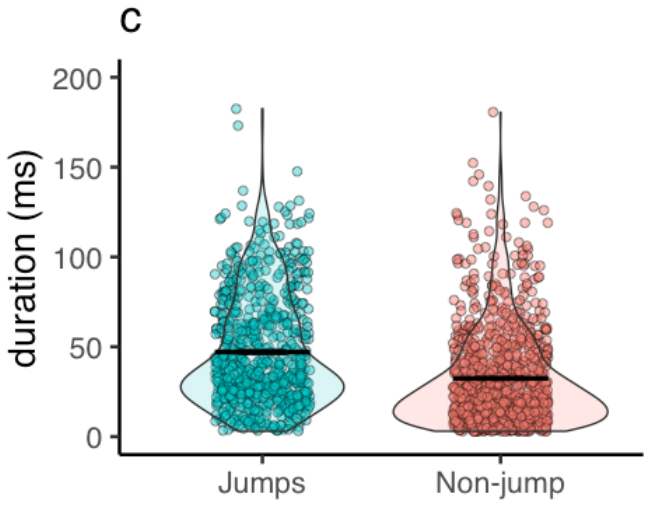
```
##      Min       1Q   Median       3Q      Max
## -0.19656 -0.08676 -0.04634  0.06314  0.42178
##
## Coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                 0.1626766  0.0082692  19.673  < 2e-16 ***
## duration                    0.0006622  0.0001470   4.506 7.08e-06 ***
## jump_nonNon-jump           -0.0479531  0.0103104  -4.651 3.57e-06 ***
## duration:jump_nonNon-jump -0.0004778  0.0002070  -2.309   0.0211 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.1217 on 1663 degrees of freedom
## Multiple R-squared:  0.09258,    Adjusted R-squared:  0.09095
## F-statistic: 56.56 on 3 and 1663 DF,  p-value: < 2.2e-16
```

sFig. 3b




```
t.test(dJumps$cvfreq, dNonjump$cvfreq) #Welch's t-test

##
##  Welch Two Sample t-test
##
## data:  dJumps$cvfreq and dNonjump$cvfreq
## t = 12.479, df = 1663.6, p-value < 2.2e-16
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  0.06164654 0.08463907
## sample estimates:
## mean of x mean of y
## 0.1938395 0.1206967
```

sFig. 3c




```
t.test(dJumps$duration, dNonjump$duration) #Welch's t-test

##
##  Welch Two Sample t-test
##
## data:  dJumps$duration and dNonjump$duration
## t = 10.12, df = 1439.4, p-value < 2.2e-16
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  11.82765 17.51507
## sample estimates:
## mean of x mean of y
##  47.05825  32.38689
```