

Input:

```
CIPerEmpEmo <- umxConfind(MPerEmpEmo_t,parm = c("top.a_std","top.c_std","top.e_std"),run = TRUE)
```

Output:

Path Estimate:

```
> sCIPerEmpEmo$CI$estimate
 [1] 0.000312547 0.439442288 -0.140349393 0.230025490 0.000000000 0.000000000 0.000000000
 [8] 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000
[15] 0.000000000 0.000000000 0.503692637 0.489799699 0.562179763 0.536856121 0.000000000
[22] 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000 0.000000000
[29] 0.000000000 0.000000000 0.000000000 0.000000000 0.863882880 0.225033760 0.120359293
[36] 0.000000000 0.000000000 0.718572569 0.000000000 0.000000000 0.000000000 0.000000000
[43] 0.806082876 0.303263867 0.000000000 0.000000000 0.000000000 0.752930811
> |
```

CI details:

| | parameter | side | value | fit | | diagnostic |
|----|----------------|-------|---------------|----------|-------------|-------------|
| 1 | top.a_std[1,1] | lower | 6.108190e-17 | 10496.02 | active box | constraint |
| 2 | top.a_std[1,1] | upper | 2.716179e-01 | 10496.02 | | success |
| 3 | top.a_std[2,1] | lower | -5.598422e-01 | 10496.02 | active box | constraint |
| 4 | top.a_std[2,1] | upper | 6.189842e-01 | 10496.02 | | success |
| 5 | top.a_std[3,1] | lower | -3.519611e-01 | 10496.02 | active box | constraint |
| 6 | top.a_std[3,1] | upper | 3.909229e-01 | 10496.02 | | success |
| 7 | top.a_std[4,1] | lower | -4.032583e-01 | 10496.02 | active box | constraint |
| 8 | top.a_std[4,1] | upper | 4.687104e-01 | 10496.02 | | success |
| 9 | top.a_std[1,2] | lower | 0.000000e+00 | 10496.02 | | success |
| 10 | top.a_std[1,2] | upper | 0.000000e+00 | 10496.02 | | success |
| 11 | top.a_std[2,2] | lower | 0.000000e+00 | 10496.02 | active box | constraint |
| 12 | top.a_std[2,2] | upper | 0.000000e+00 | 10496.02 | | success |
| 13 | top.a_std[3,2] | lower | 0.000000e+00 | 10496.02 | | success |
| 14 | top.a_std[3,2] | upper | 0.000000e+00 | 10496.02 | | success |
| 15 | top.a_std[4,2] | lower | 0.000000e+00 | 10496.02 | active box | constraint |
| 16 | top.a_std[4,2] | upper | 0.000000e+00 | 10496.02 | | success |
| 17 | top.a_std[1,3] | lower | 0.000000e+00 | 10496.02 | | success |
| 18 | top.a_std[1,3] | upper | 0.000000e+00 | 10496.02 | | success |
| 19 | top.a_std[2,3] | lower | 0.000000e+00 | 10496.02 | | success |
| 20 | top.a_std[2,3] | upper | 0.000000e+00 | 10496.02 | | success |
| 21 | top.a_std[3,3] | lower | 0.000000e+00 | 10496.02 | | success |
| 22 | top.a_std[3,3] | upper | 0.000000e+00 | 10496.02 | | success |
| 23 | top.a_std[4,3] | lower | 0.000000e+00 | 10496.02 | | success |
| 24 | top.a_std[4,3] | upper | 0.000000e+00 | 10496.02 | active box | constraint |
| 25 | top.a_std[1,4] | lower | 0.000000e+00 | 10496.02 | active box | constraint |
| 26 | top.a_std[1,4] | upper | 0.000000e+00 | 10496.02 | | success |
| 27 | top.a_std[2,4] | lower | 0.000000e+00 | 10496.02 | | success |
| 28 | top.a_std[2,4] | upper | 0.000000e+00 | 10496.02 | | success |
| 29 | top.a_std[3,4] | lower | 0.000000e+00 | 10496.02 | | success |
| 30 | top.a_std[3,4] | upper | 0.000000e+00 | 10496.02 | | success |
| 31 | top.a_std[4,4] | lower | 0.000000e+00 | 10496.02 | | success |
| 32 | top.a_std[4,4] | upper | 0.000000e+00 | 10496.02 | | success |
| 33 | top.c_std[1,1] | lower | 3.561156e-01 | 10496.02 | | success |
| 34 | top.c_std[1,1] | upper | 6.171292e-01 | 10496.02 | active box | constraint |
| 35 | top.c_std[2,1] | lower | -4.982397e-01 | 10508.31 | alpha level | not reached |
| 36 | top.c_std[2,1] | upper | 6.277033e-01 | 10496.02 | active box | constraint |
| 37 | top.c_std[3,1] | lower | -4.583907e-01 | 10509.83 | alpha level | not reached |

| | | | | | | |
|----|----------------|-------|---------------|----------|-------------------------|---------|
| 38 | top.c_std[3,1] | upper | 6.963282e-01 | 10496.02 | | success |
| 39 | top.c_std[4,1] | lower | -2.481046e-01 | 10510.38 | alpha level not reached | |
| 40 | top.c_std[4,1] | upper | 6.632332e-01 | 10496.02 | active box constraint | |
| 41 | top.c_std[1,2] | lower | 0.000000e+00 | 10496.02 | | success |
| 42 | top.c_std[1,2] | upper | 0.000000e+00 | 10496.02 | | success |
| 43 | top.c_std[2,2] | lower | 0.000000e+00 | 10496.02 | active box constraint | |
| 44 | top.c_std[2,2] | upper | 0.000000e+00 | 10496.02 | | success |
| 45 | top.c_std[3,2] | lower | 0.000000e+00 | 10496.02 | | success |
| 46 | top.c_std[3,2] | upper | 0.000000e+00 | 10496.02 | | success |
| 47 | top.c_std[4,2] | lower | 0.000000e+00 | 10496.02 | | success |
| 48 | top.c_std[4,2] | upper | 0.000000e+00 | 10496.02 | active box constraint | |
| 49 | top.c_std[1,3] | lower | 0.000000e+00 | 10496.02 | | success |
| 50 | top.c_std[1,3] | upper | 0.000000e+00 | 10496.02 | | success |
| 51 | top.c_std[2,3] | lower | 0.000000e+00 | 10496.02 | | success |
| 52 | top.c_std[2,3] | upper | 0.000000e+00 | 10496.02 | | success |
| 53 | top.c_std[3,3] | lower | 0.000000e+00 | 10496.02 | | success |
| 54 | top.c_std[3,3] | upper | 0.000000e+00 | 10496.02 | | success |
| 55 | top.c_std[4,3] | lower | 0.000000e+00 | 10496.02 | | success |
| 56 | top.c_std[4,3] | upper | 0.000000e+00 | 10496.02 | active box constraint | |
| 57 | top.c_std[1,4] | lower | 0.000000e+00 | 10496.02 | | success |
| 58 | top.c_std[1,4] | upper | 0.000000e+00 | 10496.02 | active box constraint | |
| 59 | top.c_std[2,4] | lower | 0.000000e+00 | 10496.02 | | success |
| 60 | top.c_std[2,4] | upper | 0.000000e+00 | 10496.02 | | success |
| 61 | top.c_std[3,4] | lower | 0.000000e+00 | 10496.02 | | success |
| 62 | top.c_std[3,4] | upper | 0.000000e+00 | 10496.02 | | success |
| 63 | top.c_std[4,4] | lower | 0.000000e+00 | 10496.02 | | success |
| 64 | top.c_std[4,4] | upper | 0.000000e+00 | 10496.02 | | success |
| 65 | top.e_std[1,1] | lower | 7.868650e-01 | 10496.02 | active box constraint | |
| 66 | top.e_std[1,1] | upper | 9.263282e-01 | 10496.02 | | success |
| 67 | top.e_std[2,1] | lower | 1.297507e-01 | 10496.02 | | success |
| 68 | top.e_std[2,1] | upper | 3.153013e-01 | 10496.02 | active box constraint | |
| 69 | top.e_std[3,1] | lower | 5.277037e-03 | 10496.02 | active box constraint | |
| 70 | top.e_std[3,1] | upper | 2.390006e-01 | 10496.02 | active box constraint | |
| 71 | top.e_std[4,1] | lower | 0.000000e+00 | 10496.02 | | success |
| 72 | top.e_std[4,1] | upper | 0.000000e+00 | 10496.02 | | success |
| 73 | top.e_std[1,2] | lower | 0.000000e+00 | 10496.02 | active box constraint | |
| 74 | top.e_std[1,2] | upper | 0.000000e+00 | 10496.02 | active box constraint | |
| 75 | top.e_std[2,2] | lower | 6.507984e-01 | 10496.02 | active box constraint | |
| 76 | top.e_std[2,2] | upper | 7.856286e-01 | 10496.02 | | success |
| 77 | top.e_std[3,2] | lower | 0.000000e+00 | 10496.02 | | success |
| 78 | top.e_std[3,2] | upper | 0.000000e+00 | 10496.02 | | success |
| 79 | top.e_std[4,2] | lower | 0.000000e+00 | 10496.02 | | success |
| 80 | top.e_std[4,2] | upper | 0.000000e+00 | 10496.02 | | success |
| 81 | top.e_std[1,3] | lower | 0.000000e+00 | 10496.02 | | success |
| 82 | top.e_std[1,3] | upper | 0.000000e+00 | 10496.02 | | success |
| 83 | top.e_std[2,3] | lower | 0.000000e+00 | 10496.02 | | success |
| 84 | top.e_std[2,3] | upper | 0.000000e+00 | 10496.02 | | success |
| 85 | top.e_std[3,3] | lower | 7.027687e-01 | 10496.02 | | success |
| 86 | top.e_std[3,3] | upper | 9.005382e-01 | 10496.02 | active box constraint | |
| 87 | top.e_std[4,3] | lower | 1.888169e-01 | 10496.02 | | success |
| 88 | top.e_std[4,3] | upper | 4.093252e-01 | 10496.02 | | success |
| 89 | top.e_std[1,4] | lower | 0.000000e+00 | 10496.02 | | success |
| 90 | top.e_std[1,4] | upper | 0.000000e+00 | 10496.02 | | success |
| 91 | top.e_std[2,4] | lower | 0.000000e+00 | 10496.02 | | success |
| 92 | top.e_std[2,4] | upper | 0.000000e+00 | 10496.02 | | success |
| 93 | top.e_std[3,4] | lower | 0.000000e+00 | 10496.02 | | success |
| 94 | top.e_std[3,4] | upper | 0.000000e+00 | 10496.02 | | success |

| | | | | | |
|----|----------------|-------|--------------|----------|-----------------------|
| 95 | top.e_std[4,4] | lower | 6.922411e-01 | 10496.02 | active box constraint |
| 96 | top.e_std[4,4] | upper | 8.042477e-01 | 10496.02 | active box constraint |