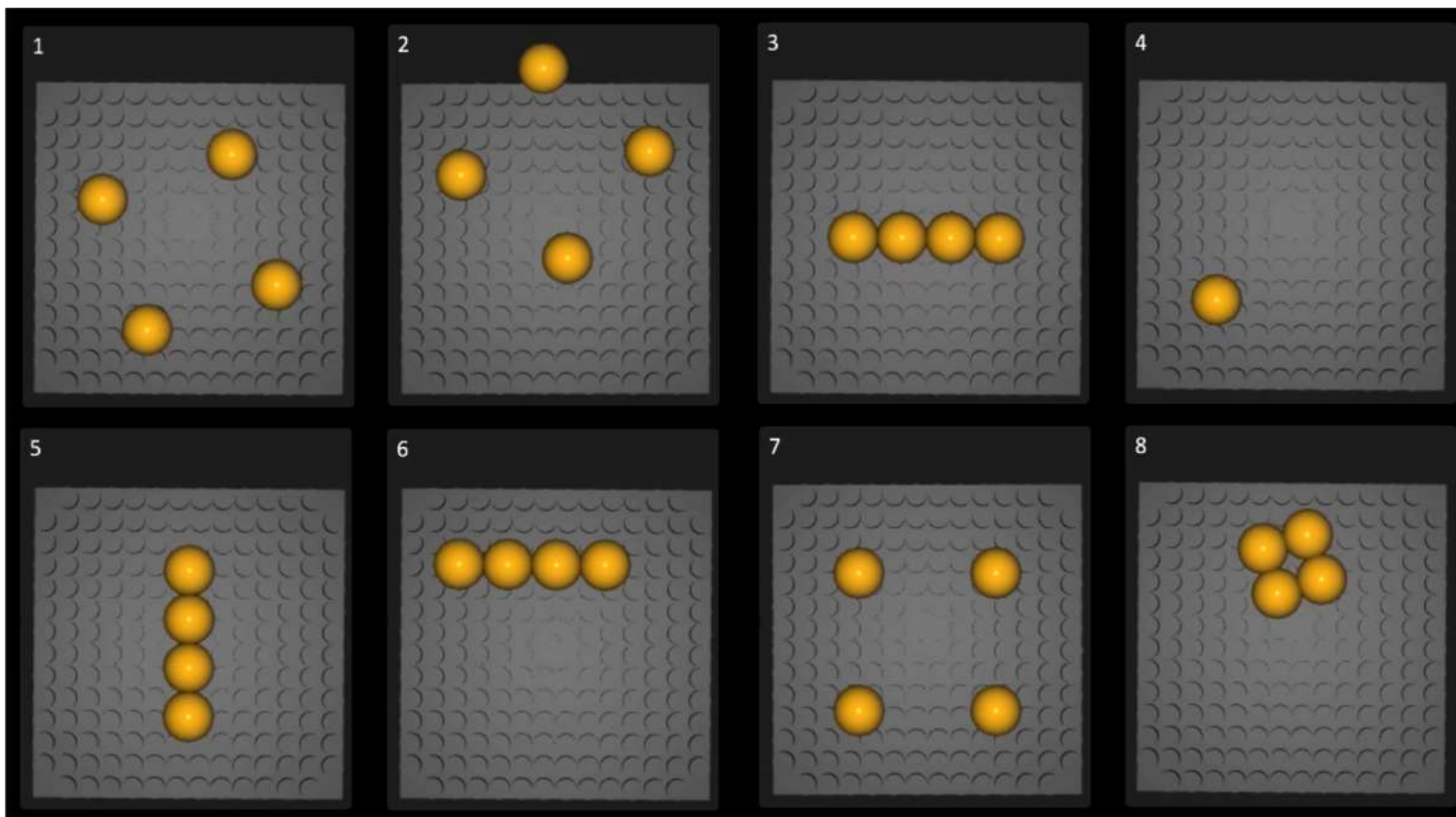
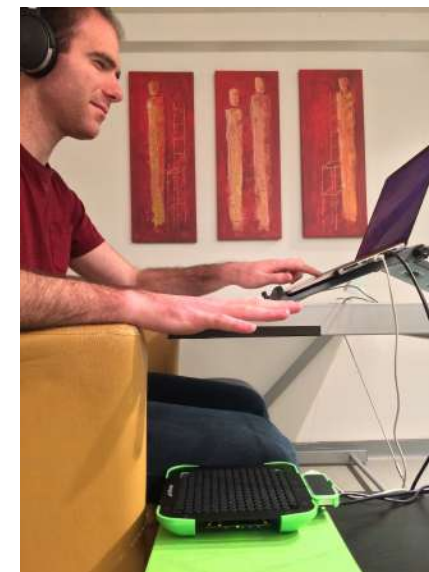


Are Mid-Air Haptic Shapes a Suitable Way to Convey Information?



Video created by recording shape templates using the sensation editor software of Ultrahaptics©.

- Identification learning task
- 1 sec to feel
- Visual representation
- Corrective feedback



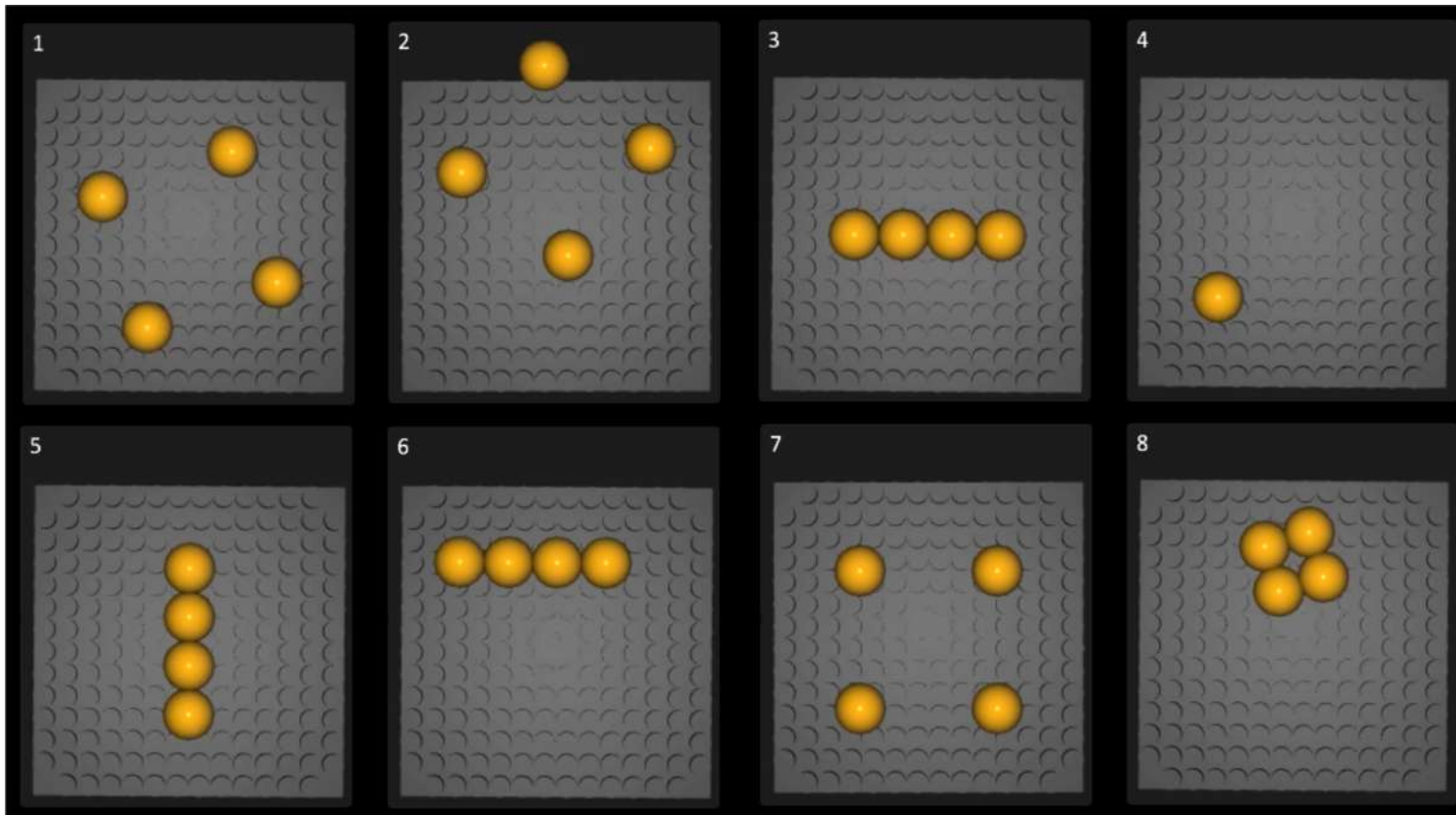
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Confusion matrix


	circle	open	horiz	dial	vert	scan	square	close
circle	.28	.14	.04	.10	.04	.14	.11	.12
open	.13	.35	.05	.05	.04	.08	.06	.17
horiz	.05	.05	<u>.50</u>	.05	.08	.12	.07	.06
dial	.15	.05	.01	<u>.54</u>	.03	.06	.04	.08
vert	.04	.07	.13	.04	<u>.51</u>	.04	.05	.06
scan	.08	.05	.04	.04	.10	<u>.60</u>	.03	.04
square	.08	.08	.19	.08	.16	.08	.28	.02
close	.11	.21	.07	.06	.08	.10	.08	.26

- N = 50
- Columns = responses
- Rows = presented
- Diagonal = prop correct

Are Mid-Air Haptic Shapes a Suitable Way to Convey Information?



- Horizontal line (3)
 - Dial (4)
 - Vertical line (5)
 - Hand scan (6)
- 
- Line-based
 - Single focal point

- Circle (1)
 - Open (2)
 - Square (7)
 - Close (8)
- 
- Circular
 - Multiple, diffuse points