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Community type	#Nodes	#Recordings	#Rāgas
Gamakas	High	High	High
Composition phrases	Medium	Low	Low
Characteristic phrases	Medium	Medium	Low

- 10 rāgas, 16 pieces each, 57 artists

Setup and Evaluation measureon

- Select top 10 characteristic communities per rāga
- 10 professional Carnatic musicians
- Binary rating: Yes or No
- Mean ( $\mu_p$ ) per phrase

# Discovering Rāga Motifs by Characterizing Communities in Networks of Melodic Patterns

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a	$\mu_r$	$\sigma_r$	Rāga	$\mu_r$	$\sigma_r$
nsadhvani	0.84	0.23	Bēgada	0.88	0.11
navardhini	0.78	0.17	Kāpi	0.75	0.10
oār	0.81	0.23	Bhairavi	0.91	0.15
yāni	0.90	0.10	Behāg	0.84	0.16
nbōji	0.87	0.12	Tōḍi	0.92	0.07

## Conclusions



 Topological properties of the pattern network can be used for determining similarity threshold.

 Functional roles of the patterns can be exploited for pattern characterization.

 Proposed methodology is successful in identifying musically meaningful melodic patterns.