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Version: Supplemental Material

## Article:

He, F, Xiang, Y, Zhao, X et al. (1 more author) (2020) Informative scene decomposition for crowd analysis, comparison and simulation guidance. ACM Transactions on Graphics, 39 (4). 50. ISSN 0730-0301

https://doi.org/10.1145/3386569.3392407

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## 'Informative Scene Decomposition for Crowd Analysis, Comparison and Simulation Guidance' Supplementary Materials

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#### **ACM Reference Format:**

Feixiang He, Yuanhang Xiang, Xi Zhao, and He Wang. 2020. 'Informative Scene Decomposition for Crowd Analysis, Comparison and Simulation Guidance' Supplementary Materials. *ACM Trans. Graph.* 39, 4, Article 1 (July 2020), 8 pages. https://doi.org/10.1145/3386569.3392407

# 1 VISUALIZATION RESULTS ON REAL-WORLD DATASETS

We show a more complete visualization of Forum (Fig. 1), CarPark (Fig. 2) and TrainStation (Fig. 3) data sets.

#### 2 ANOMALY TRAJECTORIES

We show representative anomaly trajectories in Forum (Fig. 4a) and CarPark (Fig. 4b).

#### 3 VISUALIZATION RESULTS ON SIMULATED DATASETS

We show a more complete visualization of 4 simulations on Forum and TrainStation in Fig.5-8 and Fig.9-12. \*Corresponding author †Corresponding author

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0730-0301/2020/7-ART1 \$15.00 https://doi.org/10.1145/3386569.3392407



Fig. 1. Results on Forum. Top 25 modes are showed. For each row, the last two images are time and speed profiles of the space modes in this row.



Fig. 2. Results on CarPark. Top 13 modes are showed. For each row, the last two images are time and speed profiles of the space modes in this row.

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Fig. 3. Results on TrainStation. Top 14 modes are showed. For each row, the last two images are time and speed profiles of the space modes in this row.



Fig. 4. (a) Representative anomaly trajectories in Forum;(b) Representative anomaly trajectories in CarPark.



Fig. 5. Results on SDR. Top 32 modes are showed. For each row, the last two images are time and speed profiles of the space modes in this row.

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Fig. 6. Results on SDRT. Top 29 modes are showed. For each row, the last two images are time and speed profiles of the space modes in this row.



Fig. 7. Results on SDRTS. Top 30 modes are showed. For each row, the last two images are time and speed profiles of the space modes in this row.



Fig. 8. Results on our guidance dataset. Top 9 modes are showed. For each row, the last two images are time and speed profiles of the space modes in this row.

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Fig. 9. Results on SDR. Top 13 modes are showed. For each row, the last two images are time and speed profiles of the space modes in this row.



Fig. 10. Results on SDRT. Top 15 modes are showed. For each row, the last two images are time and speed profiles of the space modes in this row.



Fig. 11. Results on SDRTS. Top 15 modes are showed. For each row, the last two images are time and speed profiles of the space modes in this row.

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Fig. 12. Results on our guidance dataset. Top 9 modes are showed. For each row, the last two images are time and speed profiles of the space modes in this row.