Motivation
Existing Models
Piccoli Junction Model
Fixing Two-by-two Junctions
Guaranteeing Onramp Demand Conservation
Riemann Solver for Junction

## Continuous, Junction-based Model for Ramp Metering

Jack Reilly<sup>1</sup> Maria-Laura Delle-Monache<sup>2</sup> Walid Krichene<sup>1</sup> Samitha Samaranayake<sup>1</sup>

 ${\sf UC}\ {\sf Berkeley}^1$ 

INRIA<sup>2</sup>

October 21, 2012

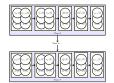


- Motivation
- 2 Existing Models
- 3 Piccoli Junction Model
- 4 Fixing Two-by-two Junctions
- 5 Guaranteeing Onramp Demand Conservation
- 6 Riemann Solver for Junction

- Motivation
- 2 Existing Models
- 3 Piccoli Junction Model
- 4 Fixing Two-by-two Junctions
- 5 Guaranteeing Onramp Demand Conservation
- 6 Riemann Solver for Junction

# Motivation Existing Models Piccoli Junction Model Fixing Two-by-two Junctions Guaranteeing Onramp Demand Conservation Riemann Solver for Junction

#### Slide 1



Program for computing the height of a ball thrown up in the air:  $y = v_0 t - \frac{1}{2}gt^2$ 

The following table describes the variables used in the implementation and their dimensions.

in the implementation and their dimensions.			
Variable	Description	Din	nen
Т	total time steps		1
N	total cells		1
V	total number of variables		1
С	total number of constraints		1
J	objective function		1
Н	system of constraints	1 × (	Γ.
λ	adjoint variables	1 × (	Ī.

Reilly et al.

Cont. model for ramps

- Motivation
- 2 Existing Models
- 3 Piccoli Junction Model
- 4 Fixing Two-by-two Junctions
- 5 Guaranteeing Onramp Demand Conservation
- 6 Riemann Solver for Junction

- Motivation
- 2 Existing Models
- 3 Piccoli Junction Model
- 4 Fixing Two-by-two Junctions
- 5 Guaranteeing Onramp Demand Conservation
- 6 Riemann Solver for Junction

- Motivation
- 2 Existing Models
- 3 Piccoli Junction Model
- 4 Fixing Two-by-two Junctions
- 5 Guaranteeing Onramp Demand Conservation
- 6 Riemann Solver for Junction

- Motivation
- 2 Existing Models
- 3 Piccoli Junction Model
- 4 Fixing Two-by-two Junctions
- **5** Guaranteeing Onramp Demand Conservation
- 6 Riemann Solver for Junction

- Motivation
- 2 Existing Models
- 3 Piccoli Junction Model
- 4 Fixing Two-by-two Junctions
- 5 Guaranteeing Onramp Demand Conservation
- 6 Riemann Solver for Junction