

## Weigh-in-Motion Estimation via Probabilistic Hidden Variable Modeling

### **Disclosure Number**

201002373

### **Technology Summary**

The invention automatically combines limited observations from load sensors to calculate structural parameters of a vehicle to include its wheel weights and spring coefficients. This information then produces the vehicle axle weights and indications of tire inflation. The sensor data considered were one in which a physical model is essentially known in advance. The work focused on sensors measuring the force of a vehicle as it drives on them. This problem had the dual advantages that (1) the physical model admits a simplification that provides a good starting point, and (2) data are available.

### **Inventor**

FERRAGUT, ERIK M

Computational Sciences & Engineering Div

### **Licensing Contact**

SIMS, DAVID L

UT-Battelle, LLC

Oak Ridge National Laboratory

Rm 124C, Bldg 4500N, MS: 6196

1 Bethel Valley Road

Oak Ridge, TN 37831

Office Phone: (865) 241-3808

E-mail: [SIMSDL@ORNL.GOV](mailto:SIMSDL@ORNL.GOV)

Note: The technology described above is an early stage opportunity. Licensing rights to this intellectual property may be limited or unavailable. Patent applications directed towards this invention may not have been filed with any patent office.