Rollover of Heavy Commercial Vehicles

Table of Contents:

1. ROLLOVER ACCIDENTS AND VEHICLE ROLL STABILITY
   Rollover and accident severity
   Roll stability and the occurrence of rollover accidents

2. THE MECHANICS OF STATIC ROLL STABILITY
   Introduction and the simplified roll-plane model
   Rollover of the rigid vehicle
   The vehicle with compliant tires
   The vehicle with roll-compliant suspension
   The influence of lash in suspensions and in the fifth-wheel coupler
   The influence of multiple suspensions
   Other mechanisms influence static roll stability
   Measuring static rollover threshold with the tilt-table experiment

3. DYNAMIC CONSIDERATIONS IN ROLLOVER OF HEAVY VEHICLES
   Simple analyses of the unit vehicle
   Dynamic considerations for articulated vehicles

4. THE INFLUENCE OF SLOshING LIQUIDs AND OTHER MOVING LOADS
   Liquid loads
   Hanging-meat loads

5. ROLLOVER AND THE INTELLIGENT HIGHWAY/VEHICLE SYSTEM

6. REFERENCES

APPENDIX A. NOTES ON ACCIDENT-DATA SOURCES

APPENDIX B. EXTENSION OF THE ANALYSIS OF ROLLOVERS ON RAMPS
   Text of reference
   Comments by CBW

APPENDIX C. ANALYSES OF THE INFLUENCE OF ROLL STABILITY ON ROLLOVER ACCIDENTS
   Percent of accidents involving rollover as a function of roll stability
   Rollover accident rate as a function of roll stability

APPENDIX D. A PARTIAL BIBLIOGRAPHY OF THE LITERATURE ON HEAVY-VEHICLE ROLLOVER