Pedestrian And Cyclist Impact

Vehicle Design Standards for Pedestrian and Cyclist Safety;110 10.1;Introduction;110 10.2;Bodies Developing Pedestrian Safety Standards;111 10.3;Types of Test Proposed;112 10.4;Subsystem Tests: Legform Impactor to Bumper;113 10.5;Upper Legform to Bonnet Leading Edge;115 10.6;Headform to Bonnet Top: Adult and Child;118 10.7;Implementation into Legislation;120 10.8;Concluding Remarks;122 10.9;References;122 11;Chapter 7 Mathematical Formulations for Impact Modelling;126 11.1;Introduction;126 11.2;Notation;127 11.3;Timing;128 11.4;Impulse and Momentum;129 11.5;Single Segment Formulation Using Momentum Considerations;131 11.6;Post Primary Impact Kinematics;132 11.7;Head Contact Time;132 11.8;Post Head Impact Kinematics;133 11.9;Pedestrian Formulation Using an Ordinary Differential;135 11.10;Equation (ODE) Approach;135 11.11;Rigid Body ODE Approach with a Hinge Segment;138 11.12;Three-Dimensional Effects;141 11.13;Problems with a Rigid Body Approach;142 11.14;A Finite Element Approach to Pedestrian Impact;143 11.15;Concluding Remarks;146 11.16;References;146 12;Chapter 8 Models for Simulating Impact;148 12.1;Introduction;148 12.2;Pedestrian Physical Dummy Models;148 12.3;Mathematical Models;149 12.4;Multibody Models;152 12.5;Finite Element Models;156 12.6;Application of Finite Element Pedestrian and Cyclist Models;163 12.7;Concluding Remarks;163 12.8;References;166 13;Chapter 9 Ground Contact Injuries;170 1 EAN/ISBN : 9789048127436 Publisher(s): Springer Netherlands Discussed keywords: Fahrradunfall, Fugnger, Verkehrsunfall Format: ePub/PDF Author(s): Simms, Ciaran - Wood, Denis