
References

- Baumgärtner, W. (1998), 'Bridge-truck Interaction: Simulation, Measurements and Load Identification', in *5th International Symposium on Heavy Vehicle Weights and Dimensions*, Maroochydore, Australia, March/April.
- Baumgärtner, W. (1999), 'Bridge-Vehicle Interaction using Extended FE Analysis', *Heavy Vehicle Systems, Int. Journal of Vehicle Design*, Vol. 6, Nos. 1-4, pp.1-12.
- Blab, R., Stanczyk, D. & Caprez, M. (1997), 'European activities on Weigh-In-Motion (WIM) systems on roads', in *Proceedings of the WAVE Mid-Term Seminar*, Published by the Laboratoire Central des Ponts et Chaussées (LCPC), Delft, Holland, pp. 109-118, September.
- Caprez, M. (1998), 'WIM Application to Pavements', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 281-290.
- Cantieni, R. (1983), 'Dynamic Load Tests on Highway Bridges in Switzerland – 60 Years Experience of EMPA' in *EMPA Report No. 211, Swiss Federal Laboratories for Materials Testing and Research*, Dübendorf, Switzerland.
- Caussignac, J-M., Larcher, S. & Rougier, J.C. (1998), 'Weigh-In-Motion using Optical Fibre Technology', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 429-434.
- Caussignac, J-M. & Rougier, J-C. (1999), 'Fibre Optic WIM Sensor and Optoelectronic System – Preliminary Tests', in *Proceedings of the Final Symposium of the project WAVE*, Ed. B. Jacob, Hermes Science Publications, Paris, France, pp. 255-264.
- Cebon, D. (1999), 'Multiple-Sensor WIM Systems', in *Proceedings of the Final Symposium of the project WAVE*, Ed. B. Jacob, Hermes Science Publications, Paris, France, pp. 177-196.

- Chompooming, K. & Yener, M. (1995), 'The Influence of Roadway Surface Irregularities and Vehicle Deceleration on Bridge Dynamics using the Method of Lines', *Journal of Sound and Vibration*, Vol. **183**, No. 4, pp. 567–589.
- Chou, C.P. & Tsai, H-Y. (1999), 'Study of the Application of High Speed Weigh-In-Motion to Law Enforcement', in *Post-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 27-36.
- Cifuentes, A.O. (1989a), *Using MSC/NASTRAN: Statics and Dynamics*, Springer-Verlag New York Inc.
- Cifuentes, A.O. (1989b), "Dynamic response of a beam excited by a moving mass", *Finite Elements in Analysis and Design* 5, Elsevier Science Publishers B.V., Amsterdam, pp. 237-246.
- Clough, R.W. & Penzien, J. (1975), *Structural Dynamics*, McGraw Hill.
- Collop, A.C., Al-Hakim, B., Thom, N.H. & Lloyd, W.G. (1998), 'The use of WIM Data in Traffic Assessment', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 303-312.
- Craig, R.R.Jr. (1981), *Structural Dynamics*, John Wiley & Sons.
- Crémone, C. & Carracilli, J. (1998), 'Evaluation of Extreme Traffic Load Effects in Cable Stayed and Suspension Bridges', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 243-252.
- COST323 (1996), *Terminology of WIM (Glossary of Terms)*, Draft 1.2, EUCO_COST/323/8/96, ed. B. Jacob, LCPC, Paris, August.
- COST323 (1997), *European Specification on Weigh-In-Motion of Road Vehicles*, Draft 2.2, EUCO_COST/323/6/97, ed. B. Jacob, LCPC, Paris, June.
- Dempsey, A.T. (1997), 'The Accuracy of Bridge Weigh-In-Motion Systems', Ph.D. Thesis, Trinity College Dublin, Ireland.
- Dempsey, A.T., Jacob, B. & Carracilli, J. (1998a), 'Orthotropic Bridge Weigh-In-Motion for Determining Axle and Gross Vehicle Weights', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 435-444.

- Dempsey, A.T., Žnidarič, A. & O'Brien, E.J. (1998b), 'Development of a Dynamic Bridge Weigh-In-Motion Algorithm' in *Proceedings of the 5th International Symposium on Heavy Vehicles Weights and Dimensions*, Maroochydore, Australia.
- Dempsey, A.T. & Brady, S.P. (1999), 'Verification of Assumptions in the Dynamic Multiple Sensor Bridge Weigh-In-Motion Algorithm – The Effect of Superposition of Moving Constant Loads on Simply Supported Beams', *Departmental Report 1999-01*, Department of Civil Engineering, University College Dublin, Dublin.
- Dempsey, A.T., Jacob, B. & Carracilli, J. (1999a), 'Orthotropic Bridge WIM for determining Axle and Gross Vehicle Weights', in *Proceedings of the Final Symposium of the project WAVE*, Ed. B. Jacob, Hermes Science Publications, Paris, France, pp. 227-238.
- Dempsey, A., Žnidarič, A., Brady, S., González, A., O'Brien, E. & Lavric, I. (1999b), 'A Free Axle Detection Bridge Weigh In Motion System', presented in *Fifth Series of Vehicle-Infrastructure Interaction Conferences*, Cracovia, Poland, September.
- Dempsey, A., Keogh, D. & Jacob, B. (2000) 'Orthotropic Steel Bridges: Management Tools for Live Load and Fatigue Assessment', *Bridge Management Four*, Edited by M.J. Ryall, G.A.R. Parker and J.E. Harding, Thomas Telford, University of Surrey, UK, pp. 592-600.
- Dijk, R.V. (1999), 'Enforcement of Regulations concerning Overloading by the Introduction of a WIM-VID Network on the Motorways in the Netherlands', in *Proceedings of the Final Symposium of the project WAVE*, Ed. B. Jacob, Hermes Science Publications, Paris, France, pp. 69-72.
- Dolcemascolo, V. & Jacob, B. (1998), 'Multiple Sensor Weigh-In-Motion: Optimal Design and Experimental Study', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 129-138.
- Dolcemascolo, V., Jacob, B., Boutillier, B. & Reversat-Brulant, L. (1998), 'Accuracy Assessment of a Low Speed Weigh-In-Motion System', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 345-354.

- Dolcemascolo, V. (1999), 'Performance of Multiple-Sensor WIM Systems by Testing', in *Proceedings of the Final Symposium of the project WAVE*, Ed. B. Jacob, Hermes Science Publications, Paris, France, pp. 195-202.
- Dolcemascolo, V. & Jacob, B. (1999), 'Use of Multiple Sensor WIM for Enforcement and Road Pricing', in *Proceedings of the Final Symposium of the project WAVE*, Ed. B. Jacob, Hermes Science Publications, Paris, France, pp. 33-44.
- Dunmill, I.R. (1998), 'The Development of an OIML International Recommendation for Automatic Instruments for Weighing Road Vehicles in Motion', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 185-192.
- Fertis, D.G. (1995), *Mechanical and Structural Vibrations*, John Wiley & Sons, Inc.
- Flanigan, C.C. (1994), 'Accurate Enforced Motion Analysis using MSC/NASTRAN Superelements', in *1994 MSC/NASTRAN World Users Conference*, Orlando, Florida, June 20-24.
- Fryba, L. (1972), *Vibration of Solids and Structures under Moving Loads*, Noordhoff International Publishing, Groningen, The Netherlands.
- Gagarin, N., Flood, I. & Albrecht, P. (1994), 'Computing Truck Attributes with Artificial Neural Networks', *Journal of Computing in Civil Engineering*, ASCE, Vol. **8**, No. 2, April, pp. 179 – 200.
- Gangarao, H.V.S. & Vali, A. (1990), 'Truck-tire Steel Grid Deck Contact Pressure Distribution', *Journal of Structural Engineering*, ASCE (US), Vol. **116**, No. 3, March, pp. 791 – 808.
- George, L.-A. (1999), 'User's Remaining Needs for WIM', in *Proceedings of the Final Symposium of the project WAVE*, Ed. B. Jacob, Hermes Science Publications, Paris, France, pp. 141-146.
- Ghosn, M. & Xu, Q., 'Estimating Bridge Dynamics Using the Weigh-In-Motion Algorithm' in *Transportation Research Record 1200, Department of Civil Engineering, The City College of New York*, New York.
- González, A. (1996), 'Bridge Weigh In Motion for Horizontal Loading', M.Sc. Thesis, Trinity College Dublin, Ireland.

- González, A. & O'Brien, E.J. (1998), 'The Development of a Dynamic Bridge Weigh-In-Motion Algorithm', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 445-453.
- González, A. Brady, S.P. & O'Brien, E.J. (1999), 'A Dynamic Multi-Sensor Bridge Weigh-In-Motion Algorithm', in *Proceedings of the Final Symposium of the project WAVE*, Ed. B. Jacob, Hermes Science Publications, Paris, France, pp. 209-216.
- Green, M. & Cebon, D. (1994), 'Dynamic Response of Highway Bridges to Heavy Vehicle Loads: Theory and Experimental Validation', *Journal of Structural Engineering*, ASCE, Vol. **121**, No. 2, February, pp. 272–282.
- Green, M., Cebon, D. & Cole D.J. (1995), 'Effects of Vehicle Suspension Design on Dynamics of Highway Bridges', *Journal of Structural Engineering*, ASCE, Vol. **121**, No. 2, February, pp. 272–282.
- Hambly, E.C. (1991), *Bridge Deck Behaviour*, 2nd Edition, Chapman & Hall.
- Hallström, B. (1999), 'Durability Implications of Cold Climates on WIM System', in *Proceedings of the Final Symposium of the project WAVE*, Ed. B. Jacob, Hermes Science Publications, Paris, France, pp. 93-100.
- Henau, A.D. (1998), 'Weigh In Motion of Road Vehicles in Belgium', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 419-428.
- Henau, A.D. & Jacob, B. (1998), 'European Test Programme of WIM Systems: Cold Environmental Test and Continental Motorway Test', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 381-388.
- Henny, R. (1997), 'Quality Assurance of WIM Data', in *Proceedings of the WAVE Mid-Term Seminar*, Published by the Laboratoire Central des Ponts et Chaussées (LCPC), Delft, Holland, pp. 37-44, September.
- Henny, R.J. (1999), 'Experimental Use of WIM with Video for Control of Overloading', in *Post-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 37-46.

- Hoose, N. & Kunz, J. (1998), 'Implementation and Tests of a Quartz Crystal Sensor WIM System', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 461-466.
- Huhtala, M., Halonen, P. & Miettinen, V. (1998), 'Cold Environmental Test at Luleå: Calibration of WIM Systems using an Instrumented Vehicle', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 409-418.
- Huhtala, M. (1999), 'Factors affecting Calibration Effectiveness', in *Proceedings of the Final Symposium of the project WAVE*, Ed. B. Jacob, Hermes Science Publications, Paris, France, pp. 297-306.
- Hwang, E-S. & Nowak, A.S. (1991), 'Simulation of Dynamic Load for Bridges', *Journal of Structural Engineering*, ASCE, Vol. **117**, No. 5, May, pp. 1413-1434.
- Jacob, B. & O'Brien, E.J. (1997), 'European Specification on Weigh-In-Motion of Road Vehicles', in *Proceedings of the WAVE Mid-Term Seminar*, Published by the Laboratoire Central des Ponts et Chaussées (LCPC), Delft, Holland, pp. 19-36, September.
- Jacob, B. (1998a), 'Action COST 323: Weigh-In-Motion of Road Vehicles', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 25-33.
- Jacob, B. (1998b), 'Application of Weigh-In-Motion Data to Fatigue of Road Bridges', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 219-230.
- Jacob, B. & Dolcemasclo, V. (1998), 'Spatial Repeatability of Dynamic Loading on a Pavement', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 291-302.
- Jacob, B. & O'Brien E.J. (1998), 'European Specification on Weigh-In-Motion of Road Vehicles (COST323)', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 171-184.
- Jacob, B. (1999), 'WAVE – European Research Project on WIM', in *Proceedings of the Final Symposium of the project WAVE*, Ed. B. Jacob, Hermes Science Publications, Paris, France, pp. 15-30.

- Jacob, B. & Stanczyk, D. (1999), 'Calibration of Highly Accurate WIM Systems for Legal Applications', in *Proceedings of the Final Symposium of the project WAVE*, Ed. B. Jacob, Hermes Science Publications, Paris, France, pp. 55-68.
- Jacob, B., O'Brien E.J. & Stanczyk, D. (2000), *WAVE Final Report*, Ed. B. Jacob, Hermes Science Publications, Paris, France.
- Jehaes, S. & Hallström, B. (1998), 'Accuracy Analysis of WIM systems for the Cold Environmental Test: Final Results', in *Post-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 63-72.
- Jehaes, S. (1999a), 'European Test Programme of WIM Systems', in *Proceedings of the Final Symposium of the project WAVE*, Ed. B. Jacob, Hermes Science Publications, Paris, France, pp. 81-92.
- Jehaes, S. (1999b), 'Test of WIM Systems in Cold Climates', in *Proceedings of the Final Symposium of the project WAVE*, Ed. B. Jacob, Hermes Science Publications, Paris, France, pp. 285-296.
- Kealy, N.J. (1997), 'The Development of a Multiple Longitudinal Sensor Location Bridge Weigh-In-Motion System', M.Sc. Thesis, Trinity College Dublin, Ireland.
- Kealy, N.J. & O'Brien, E.J. (1998), 'The Development of a Multi-sensor Bridge Weigh-In-Motion System', *5th International Symposium on Heavy Vehicle Weights and Dimensions*, Maroochydore, Australia, March/April, pp. 222-235.
- Kessler, K. (1997), 'Analysis of Measured and Simulation Data with respect to Truck Load Identification', Diploma Work, Technische Universität München Lehrstuhl für Baumechanik.
- Kirkegaard, P.H, Nielsen, S.R.K. & Enevoldsen, I. (1997), 'Heavy vehicles on minor highway bridges – Dynamic modelling of vehicles and bridges', Department of Building Technology and Structural Engineering, Aalborg University, ISSN 1395-7953 R9721, December.
- Lutzenberger, S. & Baumgärtner, W. (1999), 'Interaction of an Instrumented Truck crossing Belleville Bridge', in *Proceedings of the Final Symposium of the project WAVE*, Ed. B. Jacob, Hermes Science Publications, Paris, France, pp. 239-252.

- Lutzenberger, S. & Baumgärtner, W. (2000) 'Evaluation of Measured Bridge Responses due to an Instrumented Truck and Free Traffic', *Bridge Management Four*, Edited by M.J. Ryall, G.A.R. Parker and J.E. Harding, Thomas Telford, University of Surrey, UK, pp. 72-80.
- Major, A. (1980), *Dynamics in Civil Engineering IV*, Akademiai Kiado, Budapest.
- Marchadour, Y. (1998), 'Weighing of Road Vehicles in France for Enforcement ', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 339-344.
- McNulty, P. (1999), 'Testing of an Irish Bridge Weigh In Motion System', M.Sc. Thesis, University College Dublin, Ireland.
- Michaltsos, G., Sophianopoulos, D. & Kounadis, A.N. (1996), 'The Effect of a Moving Mass and other Parameters on the Dynamic Response of a Simply Supported Beam', *Journal of Sound and Vibration*, ASCE, Vol. **191**, No. 3, pp. 357–362.
- Missen, R. (1998), 'European Legislation on the Maximum Weights and Dimensions of Motor Vehicles', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 3-12.
- Moses, F. (1979), 'Weigh-In-Motion System using Instrumented Bridges', *Transportation Engineering Journal*, ASCE, **105**, TE3, pp. 233-249.
- MSC/NASTRAN for Windows (1997a), *User's Guide*, The MacNeal-Schwendler Corporation, USA.
- MSC/NASTRAN for Windows (1997b), *Command Reference Guide*, The MacNeal-Schwendler Corporation, USA.
- MSC/NASTRAN for Windows (1997c), *Basic Dynamic Analysis User's Guide Version 69*, The MacNeal-Schwendler Corporation, USA.
- MSC/NASTRAN for Windows (1997d), *Advanced Dynamic Analysis User's Guide Version 70*, The MacNeal-Schwendler Corporation, USA.
- MSC/NASTRAN for Windows (1998), *Quick Reference Guide Version 70.5*, The MacNeal-Schwendler Corporation, USA.
- MSC/NASTRAN for Windows (1999), *Quick Start Guide*, The MacNeal-Schwendler Corporation, USA.

- Narayanan R. & Roberts T.M. (1991), *Structures Subjected to Dynamic Loading, Stability and Strength*, Elsevier Science Publishers LTD.
- Nashif, A.D., Jones, D.I.G. & Henderson, J.P. (1985), *Vibration Damping*, John Wiley & Sons, Inc.
- National Instruments (1993), *SCXI-1321 Offset-Null and Shunt-Calibration Terminal Block Installation Guide*, Part Number 320622-01, National Instruments Corporation, August.
- National Instruments (1994), *SCXI-1121 User Manual*, National Instruments Corporation.
- National Instruments (1996), *SCXITM Chassis User Manual*, National Instruments Corporation.
- Newton, W.H. (1998), 'Enforcement Applications of Weigh-In-Motion', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 331-338.
- Newton, W. (1999), 'Use and Applications of WIM Data', in *Proceedings of the Final Symposium of the project WAVE*, Ed. B. Jacob, Hermes Science Publications, Paris, France, pp. 123-130.
- O'Brien, E.J., Dempsey, A.T., Žnidarič, A. & Baumgärtner, W. (1997), 'Development of Bridge WIM Systems and Procedures', in *Proceedings of the WAVE Mid-Term Seminar*, Published by the Laboratoire Central des Ponts et Chaussées (LCPC), Delft, Holland, pp. 101-110, September.
- O'Brien, E.J., Bailey, S.F., O'Connor A.J., Enevoldsen, I. & Žnidarič, A. (1998a), 'Bridge Applications of Weigh-In-Motion', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 209-218.
- O'Brien, E., O'Connor, A. & González, A. (1998b), 'Eurocode for traffic loads on bridges (EC1.3) - Calibration for Irish conditions', *Research Report No. 98-001*, Department of Civil, Structural & Environmental Engineering, Trinity College, March.
- O'Brien, E., Dempsey, A., Žnidarič, A. & Baumgärtner, W. (1999a), 'High-Accuracy Bridge-WIM Systems and future Applications', in *Proceedings of the Final*

Symposium of the project WAVE, Ed. B. Jacob, Hermes Science Publications, Paris, France, pp. 45-54.

- O'Brien, E., Žnidarič, A. & Dempsey, A.T. (1999b), 'Comparison of Two independently Developed Bridge Weigh-In-Motion Systems', *Heavy Vehicle Systems, Int. J. of Vehicle Design*, Vol. **6**, Nos 1/4, pp. 147-162.
- O'Brien, E. & Keogh, D. (1999), *Bridge Deck Analysis*, E&FN Spon, London.
- O'Connor, A.J., Jacob, B., O'Brien E.J. & Prat, M. (1998), 'Effect of Traffic Loads on Road Bridges – Preliminary Studies for the Re-Assessment of the Traffic Load Model for Eurocode 1, Part 3', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 231-242.
- O'Connor, C. & Chan, T.H.T. (1988a), 'Dynamic Wheel Loads from Bridge Strains', *Journal of Structural Engineering*, ASCE, Vol. **114**, No. 8, August, pp. 1703–1723.
- O'Connor, C. & Chan, T.H.T. (1988b), 'Wheel Loads from Bridge Strains: Laboratory Studies', *Journal of Structural Engineering*, ASCE, Vol. **114**, No. 8, August, pp. 1724–1740.
- O'Connor, J.M. (1994), 'The Development of a Weigh In Motion System in Ireland', M.Sc. Thesis, Trinity College Dublin, Ireland.
- O'Connor, T. (1996), 'Spatial Repeatability of Vehicle Impact Forces on Road Pavements', M.Sc. Thesis, Trinity College Dublin, Ireland.
- O'Connor, T., O'Brien, E.J. & Jacob, B. (1999), 'An Experimental Investigation of Spatial Repeatability', *Heavy Vehicle Systems, Int. J. of Vehicle Design*, Vol. **7**, No 1, pp. 64-82.
- OECD (1997), 'Dynamic Interaction of Heavy Vehicles with Roads and Bridge', Final Report of the Committee, *DIVINE Project*, Ottawa, Canada, June.
- Ojio, T., Yamada, K. & Shinkai, H. (2000) 'BWIM Systems using Truss Bridges', *Bridge Management Four*, Edited by M.J. Ryall, G.A.R. Parker and J.E. Harding, Thomas Telford, University of Surrey, UK, pp. 378-386.
- Peters, R.J. (1984), 'AXWAY – A System to Obtain Vehicle Axle Weights', in *Proceedings 12th ARRB Conference*, **12**(1), pp. 17-29.
- Peters, R.J. (1986), 'An Unmanned and Undetectable Highway Speed Vehicle Weighing System', in *Proceedings 13th ARRB Conference*, **13**(6), pp. 70-83.

- Peters, R.J. (1998), 'Low Cost Calibration Management', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 153-160.
- Rao, S.S. (1984), *Optimization: Theory and Applications*, 2nd Edition, John Wiley & Sons.
- Sainte-Marie, J., Argoul, P., Jacob, B. and Dolcemascolo, V. (1998), 'Multiple Sensor WIM Using Reconstruction Algorithms of the Dynamic Axle Loads', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 109-118.
- Sainte-Marie, J. (1999), 'Multiple Sensors WIM and Vehicle-Pavement Interaction', in *Proceedings of the Final Symposium of the project WAVE*, Ed. B. Jacob, Hermes Science Publications, Paris, France, pp. 169-176.
- Schaeffer, H.G. (1977), *NASTRAN Primer: Static and Normal Modes*, Schaeffer Analysis, College Park, Maryland.
- Scheuter, F. (1998), 'Evaluation of Factors Affecting WIM System Accuracy', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 371-380.
- Siffert, F. & Žnidarič, A. (1998), 'Multilingual Glossary of Weigh In Motion', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 91-96.
- Snyder, R.E. (1992), 'Field Trials of Low-Cost Bridge WIM' in *Publication FHWA-SA-92-014*, Washington DC.
- Stanczyk, D. (1999), 'New Calibration Procedure by Axle Rank', in *Proceedings of the Final Symposium of the project WAVE*, Ed. B. Jacob, Hermes Science Publications, Paris, France, pp. 307-316.
- Stanczyk, D. & Jacob, B. (1999), 'Continental Motorway Test of Weigh-In-Motion Systems: Final Results', in *Post-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 51-62.
- Stergioulas, L.K., Cebon, D. & Macleod, M.D. (1998), 'Enhancing Multiple-Sensor WIM Systems', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 119-128.

- Tierney, O.F., O'Brien, E.J. & Peters, R.J. (1996) 'The Accuracy of Australian and European Culvert Weigh-in-Motion Systems', *National Traffic Data Acquisition Conference (NATDAQ '96)*, Vol. II, ed. G. Knoebel, Alliance for Transportation Research, Albuquerque, New Mexico, pp. 647-656.
 - Wong, J.Y. (1993), *Theory of ground vehicles*, John Wiley & Sons.
 - Yang, Y.-B. & Lin, B.-H. (1995), 'Vehicle-Bridge Interaction Analysis by Dynamic Condensation Method', *Journal of Structural Engineering*, ASCE, Vol. **121**, No. 11, November, pp. 1636-1643.
 - Žnidarič, A. & Baumgärtner, W. (1998), 'Bridge Weigh-In-Motion Systems – An Overview', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 139-152.
 - Žnidarič, A., Lavric, I. & Kalin, J. (1998), 'Extension of Bridge WIM systems to Slab Bridges', in *Pre-proceedings of the 2nd European Conference on Weigh-In-Motion*, eds. E.J. O'Brien & B. Jacob, Lisbon, Portugal, pp. 263-272.
 - Žnidarič, A., Dempsey, A., Lavric, I. & Baumgärtner, W. (1999a), 'Bridge WIM Systems without Axle Detectors', in *Proceedings of the Final Symposium of the project WAVE*, Ed. B. Jacob, Hermes Science Publications, Paris, France, pp. 101-110.
 - Žnidarič, A., Lavric, I. & Kalin, J. (1999b), 'Bridge WIM Measurements on Short Slab Bridges', in *Proceedings of the Final Symposium of the project WAVE*, Ed. B. Jacob, Hermes Science Publications, Paris, France, pp. 217-226.
-
- ¹ Airport Weigh-In-Motion Home Page <<http://www.airport-corp.com/saepaper>>. Accessed 1999 September.
 - ² Transportation Research Board. 2000 August 15. Long-term Pavement Performance. <http://www4.nationalacademies.org/trb/dive.nsf/web/ltpa_studies.htm>. Accessed 2000 October.
 - ³ Žnidarič A. 2000 October 4. European Weigh-In-Motion Pages <<http://www.zag.si/wim>>. Accessed 2000 October.
 - ⁴ Laboratoire Central des Ponts et Chaussées. 2000 May 7. WAVE. <<http://www.lcpc.fr/LCPC/English/Collaboration/wave>>. Accessed 2000 October.

- ⁵ COST – Transport. 1998 September 11. COST323 Publications. <http://www.cordis.lu/cost-transport/src/pub-323.htm>. Accessed 2000 October.
- ⁶ Žnidaric A. 1999 May 11. http://www.zag.si/wim/general_WIM/photos. Accessed 2000 October.
- ⁷ Žnidaric A. 2000 July 4. EUCO-COST/323/6/97 (WIM-LOAD) <http://www.zag.si/wim/reports/zurich>. Accessed 2000 October.
- ⁸ Jank. <http://www.zag.si/wimgloss>. Accessed 2000 October.
- ⁹ International Road Dynamics Inc. Home Page. 2000 October 18. <http://www.ird.ca>. Accessed 2000 October.
- ¹⁰ Australian Road Research Board Home Page. <http://www.arrb.org.au/products/culway.htm>. Accessed 2000 October.
- ¹¹ Texas Measurements, Inc. Home Page. <http://www.straingage.com/strain>. Accessed 2000 October.
- ¹² Golden River Traffic Home Page. <http://www.grt.co.uk>. Accessed 2000 October.
- ¹³ National Instruments Home Page. <http://www.ni.com/daq>. Accessed 2000 October.
- ¹⁴ National Instruments Home Page. <http://www.ni.com/labview>. Accessed 2000 October.
- ¹⁵ Borland Inprise Corporation Home Page. 2000 June 29. <http://www.borland.com/borlandcpp>. Accessed 2000 October.
- ¹⁶ Press W.H., Teukolsky S.A., Vetterling W.T. & Flannery B.P. 1992. Numerical Recipes in C, 2nd Edition. Published by the Press Syndicate of the University of Cambridge. <http://math1.unice.fr/~hassold/Mirror/recipes>. Accessed 2000 October.
- ¹⁷ Sayers M.W. & Karamihas S.M. 1998 September. The Little Book of Profiling. University of Michigan Transportation Research Institute. <http://www.umtri.umich.edu/erd/roughness/litbook.html>. Accessed 2000 October.
- ¹⁸ The MacNeal-Schwendler Corporation Home Page. MSc Software. Mechanical Solutions. <http://www.mechsolutions.com/products/nas4win>. Accessed 2000 October.