

# Curriculum Vitae

## Personal Data

Name: Paulo António Alves Pereira  
Birthday: 10, January, 1955  
Address: University of Minho – School of Engineering  
Campus de Azurém  
4800-058 Guimarães – Portugal  
E-mail: [ppereira@civil.uminho.pt](mailto:ppereira@civil.uminho.pt)  
Telephone: +351 253 510 200



## Present Position

Professor and Researcher of Transportation at the Department of Civil Engineering and research centre Centre for Territory, Environment and Construction, University of Minho.

Member of General Council of the University of Minho.

Coordinator of the Interdisciplinary Platform UM-Cities of the University of Minho.

Director of the research centre Centre for Territory, Environment and Construction (CTAC).

## Education and Degrees

Aggregation, University of Minho, 1999.

PhD in Civil Engineering, 1988, University of Minho.

BSc in Civil Engineering, 1980, University of Porto.

## Topics of Research

Highway Engineering; Road Management Systems; Road Pavements Design; Asphalt Pavement Materials; Road Surface Characteristics; Road Safety; Urban Mobility.

## Lectures

Highway Engineering; Road Pavements; Road Pavements Management.

## Master and PhD supervision

Supervisor of 12 Master students and 12 PhD students.

## Research Projects

- SAFESPEED – Strategies of speed management.
- NOISELESS – Noise perception, modelling and abatement using Innovative and durable pavement surface layers.
- Effect of traffic overloads in the road pavements performance and in their life-cycle costs.
- NanoEcoBuild – Nanotechnology applied to innovative and eco-sustainable materials.
- SustIMS – Sustainable infrastructure management system.
- Tropical – PAV: Road pavement solutions for tropical climates.
- Evaluation of the integration of skid resistance in a road network rehabilitation strategy.

## Positions in Career

Full Professor of the Civil Engineering Department of the University of Minho, since 2001.

Member of General Council of the University of Minho, since 2018.

Coordinator of the Interdisciplinary Platform UM-Cities of the University of Minho, since 2018.

Representative of the University of Minho in the Executive Council of Municipality Association Quadrilátero Urbano.

Director of the research Centre for Territory, Environment and Construction (CTAC), University of Minho, from 2009 to 2010 and since 2013.

Dean of the School of Engineering of the University of Minho, from 2010 to 2013.

Member of the Scientific Council of the Doctoral Programme in Civil Engineering of the University of Minho, since 2009.

Director of the Department of Civil Engineering of the University of Minho, from 1989 to 1999 and from 2001 to 2003.

Director of MSc course in Roads Engineering of the University of Minho and University of Coimbra, from 2001 to 2008.

Head of the Highways Group of the Civil Engineering Department of the University of Minho, from 1988 to 2010.

## Professional Service

Expert in Transportation and Highways by the *Board of Engineers*, since 2001.

Project Coordinator of the Portuguese Pavement Management System project, developed for the national road administration, from 1988 to 1990.

Founder and past President of the *International Society for Maintenance and Rehabilitation of Transport Infrastructures* (iSMARTi), from 2004 to 2012.

Founder of the Highways Laboratory of the University of Minho, in 1988.

Pavement Expert for many years of the Portuguese road administration as well as for road construction companies, from 1988 onwards.

Member of the *American Society of Civil Engineers* (ASCE), since 2007.

National Member of the Road Management Committee of the *World Road Association* (AIPCR), from 1992 to 2010.

Coordinator of the CT 129/SC5, *EU Standardization Committee*, and National Representative at the CEN TC227/W5, from 2000 to 2010.

Coordinator of the cooperation between the University of Minho and the Portuguese motorway concessionaire Ascendi in the field of Construction, Management and Exploring of Road Infrastructure.

## **Publications, Conferences and Editorial Boards**

Author and co-author of several books and presentations at national and international meetings; work and lectures on transportation engineering and management and technology transfer around the world. Two hundred and fifty papers and publications in international and national Journals and in international and national Conferences.

Chair and co-chair of several international and national Conferences on Pavements and Transport Infrastructures, among which: MAIREPAV 2003, EPAM 2003, ICTI 2010, SACSP 2008, ICSC2019.

Member of Editorial Board of the following journals: *International Journal of Pavements*; *International Journal of Pavement Engineering*; *International Journal of Road Materials and Pavement Design*; *Bulletin des Laboratoires des Ponts et Chaussées*.

## **International Journal Papers**

Delanne, Y., Pereira, P., 2001. *Advantages and Limits of Different Road Roughness Profile Signal-Processing Procedures Applied in Europe*. Transportation Research Board Annual Meeting: Proceedings, n° 1764, pp. 254 to 259.

Cachim, P., Figueiras, J., Pereira, P., 2002. *Numerical Modelling of Fibre-Reinforced Concrete Fatigue in Bending*. International Journal of Fatigue, Elsevier, vol. 24, n° 2-4, p. 381-387.

Pais, J., Pereira, P., Picado-Santos, L., 2002. *Variability of Laboratory Fatigue Life Tests of Asphalt Mixes Using Four Point Bending Results*. International Journal of Pavements, n° 2, vol. 1, pp. 48-58.

Oliveira, J., Pereira, P., Picado-Santos, L., 2004. *Mechanical Characterisation of Hot Mix Recycled Materials*. International Journal of Pavements Engineering, n° 5, vol. 4, pp. 211-220.

Freitas, E., Pereira, P., Picado-Santos, L., Papagiannakis, T., 2005. *Construction quality, temperature and rutting effect on top-down cracking initiation*. Transportation Research Board Annual Meeting: Proceedings.

Neto, S.A.D., Farias, M.M., Pais, J.C., Pereira, P., 2006. *Influence of Crumb Rubber and Digestion Time on the Asphalt Rubber Binders*, International Journal of Road Materials and Pavement Design, vol 7, n° 2, pp. 131-148.

Neto, S.A.D., Farias, M.M., Pais, J.C., Pereira, P., 2006. *Dense Graded Hot Mixes using Asphalt-Rubber Binders with High Rubber Contents*, International Journal of Road Materials and Pavement Design, vol 7, n° 1, pp. 29-46.

Minhoto, M.J.C., Pais, J.C., Pereira, P., Picado-Santos, L.G., 2005. *Predicting Asphalt Pavement Temperature with a Three- Dimensional Finite Element Method*, Journal of the Transportation Research Board, n° 1919, pp. 96-110.

Minhoto, M., Pais, J., Pereira, P., 2008. *Influence of Temperature Variation on the Reflective Cracking Behaviour of Asphalt Overlays*. International Journal of Road Materials and Pavement Design, vol 9, n° 4, pp. 615-633.

- Freitas, E., Pereira, P., Picado-Santos, L., Santos, A., 2009. *Traffic Noise Changes Due to Water on Porous and Dense Asphalt Surfaces*, International Journal of Road Materials and Pavement Design, Vol. 10 n° 3, July-September, pp. 587-608.
- Fontes, L., Trichês, G., Pais, J.C., Pereira, P., 2010. *Evaluating permanent deformation in asphalt rubber mixtures*. *Construction and Building Materials* 24, pp. 1193-1200 DOI information: 10.1016/j.conbuildmat.2009.12.021.
- Peralta, J., Silva, H., Machado, A., Pais, J.C., Pereira, P., Sousa, J.B., 2010. *Changes in Rubber Due to its Interaction with Bitumen When Producing Asphalt Rubber*, International Journal of Road Materials and Pavement Design, vol. 11, issue 4.
- Neves, J., Ribeiro, J., Pereira, P., Alves, V., Machado, J., Abelha, A., Novais, P., Analide, C., Santos, M., Fernández-Delgado, M., 2012, *Evolutionary intelligence in asphalt pavement modeling and quality-of-information*, Journal Progress in Artificial Intelligence, Springer, January 2012, DOI: <http://dx.doi.org/10.1007/s13748-011-0003-5>.
- Oliveira, J.R.M., Silva, H.M.R.D., Abreu, L.P.F., Pereira, P., 2012. *Effect of different production conditions on the quality of hot recycled asphalt mixtures*, Procedia - Social and Behavioural Sciences, Vol. 53, pp. 266-275.
- Thives, L., Pais, J.C., Pereira, P., Trichês, G., Amorim, S., 2013. *Assessment of the digestion time of asphalt rubber based on microscopy analysis*. *Construction and Building Materials*, Volume 47, October 2013, Pages 431-440. DOI: <http://dx.doi.org/10.1016/j.conbuildmat.2013.05.087>.
- Brovelli C., I. Hilliou, Hemar Y., Pais, J., Pereira P., and Crispino M., 2013. *Rheological characteristics of EVA modified bitumen and their correlations with bitumen concrete properties*, *Construction and Building Materials*.
- Brovelli C., Crispino M., Pais, J., and Pereira P., 2014. *Assessment of fatigue resistance of additivated asphalt concrete incorporating fibers and polymers*, *JOURNAL OF MATERIALS IN CIVIL ENGINEERING*, issue 26, pp. 554-558, DOI: [http://dx.doi.org/10.1061/\(ASCE\)MT.1943-5533.0000837](http://dx.doi.org/10.1061/(ASCE)MT.1943-5533.0000837).
- Brovelli C., Crispino M., Pais, J., and Pereira P., 2015. *Using polymers to improve the rutting resistance of asphalt concrete*, *Construction and Building Materials*, vol. 77, pp. 117-123, DOI: <http://dx.doi.org/10.1016/j.conbuildmat.2014.12.060>.
- Costa J. O., Jacques M. A. P., Pereira P., Freitas, E.F., and Francisco S., 2015. *Portuguese two-lane highways: modelling crash frequencies for different temporal and spatial aggregation of crash data*, *Transport*, DOI: <http://dx.doi.org/10.3846/16484142.2015.1073619>.
- Pasandín A. R., Pérez I., Oliveira J. R. M., Silva H. M. R. D., and Pereira P., 2015. *Influence of ageing on the properties of bitumen from asphalt mixtures with recycled concrete aggregates*, *Journal of Cleaner Production*, vol. 101, pp. 165-173, DOI: <http://dx.doi.org/10.1016/j.jclepro.2015.03.069>.
- Freitas, E.F., Tinoco J., Soares F., Costa J. O., Cortez P., and Pereira P., 2015. *Modelling tyre-road noise with data mining techniques*, *Archives of Acoustics*, vol. 40, issue 4, DOI: <http://dx.doi.org/10.1515/aaa-2015-0054>.
- Pereira P., and Pais, J., 2017. *Main flexible pavement and mix design methods in Europe and challenges for the development of an European method*, *Journal of traffic and transportation engineering (English Edition)*, vol. 4, issue 4, pp. 316-346, DOI: <http://dx.doi.org/10.1016/j.jtte.2017.06.001>.
- Hamdi H., Hadiwardoyo S., Correia G. A., and Pereira P., 2017. *Pavement Maintenance Optimization Strategies for National Road Network in Indonesia Applying Genetic Algorithm*, *Procedia Engineering*, vol. 210, pp. 253-260, DOI: <http://dx.doi.org/10.1016/j.proeng.2017.11.074>.
- Pereira, P., Pais, J., 2017. *Main flexible pavement and mix design methods in Europe and challenges for the development of an European method*. *Journal of Traffic and Transportation Engineering*.

Pais, J., Santos, C., Pereira, P., Kaloush, K., 2018. *The adjustment of pavement deflections due to temperature variations*. International Journal of Pavement Engineering. doi: 10.1080/10298436.2018.1557334 (2018).

Rodriguez, A., Pérez, I., J., Pereira, P., 2019. *Use of lignin biopolymer from industrial waste as bitumen extender for asphalt mixtures*. Journal of Cleaner Production. <https://doi.org/10.1016/j.jclepro.2019.02.082>.