

## ROAD SAFETY / TRANSPORTION SPECIALIST – Prof Marion Sinclair

### CURRICULUM VITAE

<b>Position Title:</b>	Associate Professor in Transportation Engineering and Road Safety
<b>Name:</b>	<b>Prof Marion Sinclair</b>
<b>Country of Citizenship / Residence:</b>	South Africa
<b>Contact:</b>	<b>Telephone:</b> +27 (0)21 8083838/ 8839174/ 0724869709 <b>Email:</b> <a href="mailto:msinclair@sun.ac.za">msinclair@sun.ac.za</a>

#### **Overview: A road safety professional and academic specialising in human factors associated with crashes.**

With over nineteen years working in road safety; spread between international road safety planning and implementation, and within research and teaching of Road Safety in South Africa, Prof. Marion Sinclair has unique exposure to the causes and solutions of road crashes in developed and developing economies. At a national level within South Africa she was appointed to the South African National Advisory Council for Road Safety and has been involved in developing the latest national road safety strategy for South Africa, as well as the Road Safety Implementation Plan for the Western Cape Province. She is responsible for teaching road safety to undergraduate and postgraduate civil engineering students, and for multiple research projects and commercial contracts in the state and private sector. An effective communicator, she has a sound record of publications both in peer reviewed journals and books, as well as conference proceedings.

#### **Education:**

**PhD:** September 1992 to June 2001: *University of Washington, USA, Interdisciplinary Program in Urban Design and Planning.*

**Masters Degree:** 1990 - 1991 M(Urban Design) - *University of the Witwatersrand, Johannesburg, South Africa.*

**Undergraduate Education:** 1983 - 1986: BSc.TRP (Town and Regional Planning) - *University of the Witwatersrand*

#### **Employment Record:**

<b>Period</b>	<b>Employing Organization and Position</b>	<b>Roles and Responsibilities</b>
<b><u>Current employment:</u></b> July 2009 to present	University of Stellenbosch, Department of Civil Engineering	<b>Position held:</b> Associate Professor in Transportation Engineering and Road Safety. Since October 2014: Division Head: <i>Transportation, Geotechnical Engineering and Construction Management.</i>  <b>Duties:</b> <ol style="list-style-type: none"><li>1. Coordination of multi-disciplinary road safety projects across US Faculties and Departments.</li><li>2. Teaching of short and academic courses on road safety-related topics.</li><li>3. Supervision of research projects at undergraduate and postgraduate levels.</li><li>4. Development of community engagement road safety projects.</li><li>5. Engagement in road safety research.</li><li>6. Engagement with policy-makers and development of road safety solutions for local and regional problems.</li><li>7. Fundraising and coordination of publicity initiatives for the Road Safety unit.</li><li>8. Planning of workshops and international conferences.</li><li>9. Management and admin associated with Division Head portfolio.</li></ol> <b>Projects: Academic:</b>

		<ol style="list-style-type: none"> <li>1. Status of road risks facing construction workers through roadworks sites in SA.</li> <li>2. Evaluation of national crash database held by Road Traffic Management Corporation (RTMC).</li> <li>3. Integration of traffic and casualty databases to enable statistical queries</li> <li>4. Seatbelt audit of car occupants in Cape Metropole area.</li> <li>5. Assessment of relationship between injury severity and seatbelt use, Western Cape</li> <li>6. Assessment and comparison of South African legislation for child seatbelt use</li> <li>7. Comparative study on attitudes and behaviour of young drivers in Sweden and South Africa.</li> <li>8. The comparative incidence of taxi aggression on South African roads</li> <li>9. Risks associated with yellow line driving</li> <li>10. Pedestrian crossing behavior and gap acceptance</li> </ol> <p><b>Projects: Commercial:</b></p> <ol style="list-style-type: none"> <li>1. The development of a model for community engagement around road safety (PGWC) (2011)</li> <li>2. The analysis of the effectiveness of high visibility backpacks for school children as an aid to road safety (Global Road Safety Partnership/ BP South Africa (2013)</li> <li>3. Research into alcohol use and representations around alcohol among young people in the Western Cape and Mpumalanga(2012-2016)</li> <li>4. (Evaluation of national processes of offence surveys and development of revised methodology (RTMC) 2013-2014)</li> <li>5. GRSP: Education of Traffic Officers into Seatbelt utility (2011-2012)</li> <li>6. GIZ- National Liberia Road Safety Study (2013-2014).</li> <li>7. PGWC: Development of GIS based search tool for crash clusters (2013-2014)</li> <li>8. RTIRN: Study into roundabout safety in three African countries (2014).</li> <li>9. Study of pedestrians’ motivations for crossing at-grade on Cape Freeways (SANRAL) (2015)</li> <li>10. Member of consortium developing the National Road Safety Strategy for RTMC (2015-2016).</li> <li>11. International comparison of readability of traffic signs (international academic group led by United Nations (2016 - current)).</li> <li>12. Development of a Road Safety Implementation Programme for the Western Cape (2016-2017) (PGWC/CHEC).</li> <li>13. ITS/ Namibian Department of Transport - Analysis of Road Safety Situation on Namibian Roads. Sept 2019 - ongoing</li> </ol> <p><b>Postgraduate courses:</b></p> <ol style="list-style-type: none"> <li>1. “Traffic Safety Engineering”.</li> <li>2. “Road Safety Audit”</li> <li>3. ‘Human Factors in Traffic Collisions”</li> </ol> <p><b>Contribution to road safety structures</b></p> <ul style="list-style-type: none"> <li>• Member of the National Road Safety Advisory Council</li> <li>• Member of RTMC/SARF Safer Roads and Mobility Sub-Committee at a national level.</li> <li>• Advisor to the Global Road Safety Partnership (GRSP), South</li> </ul>
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		<p>Africa.</p> <ul style="list-style-type: none"> <li>• Representative of the University at the Provincial Road Traffic Management committee meetings.</li> <li>• Member of the Research Development &amp; Information Technical Committee of the PRMTCC.</li> </ul> <p><b>Contribution to academic content of publications:</b></p> <p>Member of the Editorial board and reviewer; Transport Research part F.</p> <p>Reviewer for the SAICE Journal, the African Journal of Disability, the Intelligent Transport Conference and the SA Transportation Conference.</p>
April 2002 – Feb 2010	Hampshire Constabulary, United Kingdom	<p><b>Position held:</b> Programme Manager for Safer Roads Partnership for Hampshire and the Isle of Wight</p> <p><b>Duties:</b></p> <ol style="list-style-type: none"> <li>1. To provide overall management of the Safer Roads Partnership through coordinating the road safety activities of the nine Partner organizations.</li> <li>2. To manage and direct Partnership staff, specifically the teams of police officers dedicated by Hampshire Police to traffic law enforcement, as well as road safety education staff from Highways authorities.</li> <li>3. To lead the development of specific educational initiatives for identified groups of road users, including young / novice drivers, offenders (excess speed, seatbelts and mobile phones), older drivers and fleet drivers.</li> <li>4. To manage the daily operation of Partnership, including: <ul style="list-style-type: none"> <li>▪ Supervising the work undertaken by Partnership teams and external consultants</li> <li>▪ Identifying and analysing specific casualty problems on Hampshire roads and developing proactive and intelligence-led solutions in response to these.</li> <li>▪ Working with local government officials to ensure ongoing political and financial support for core work</li> <li>▪ Overseeing the collection, analysis and dissemination of data and ensuring methodology remains current and appropriate</li> <li>▪ Compiling regular progress reports for a variety of audiences and representing the Partnership at national and international levels</li> <li>▪ Setting and monitoring targets and evaluating effectiveness of initiatives.</li> </ul> </li> <li>5. To devise, monitor and manage capital and revenue budgets.</li> <li>6. To function as a central source of communication for all Partners and affiliates.</li> <li>7. Liaising with the public and the media.</li> </ol>
January 1996 – March 2002	Centre for Southern African Studies (CSAS), School of Government, University of the Western Cape, South Africa	<p><b>Position held:</b> Manager of the CSAS Migration Programme and Senior Research Fellow</p> <p><b>Duties:</b></p> <ol style="list-style-type: none"> <li>1. Development of the CSAS Migration Programme, conducting and promoting research and teaching into issues of human population movements in the SADC region.</li> <li>2. Securing of funding for Programme from international organisations and establishing and maintaining links with academic programmes world-wide.</li> <li>3. Senior researcher for the Programme's research projects.</li> <li>4. Advising government and NGOs on policy related to urban social</li> </ol>

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		<p>conditions.</p> <ol style="list-style-type: none"> <li>5. Delivery of research presentations at national and international conferences</li> <li>6. Teaching of post-graduate courses on social issues of the Southern African region and supervision of Masters' students.</li> <li>7. Preparation of annual reports on achievements and financial accountability.</li> <li>8. Overseeing and coordinating work by other members of the team, as well as international collaborators.</li> </ol>
April 1995 -December 1995	Town Planning Department, University of KwZulu-Natal, South Africa	<p><b>Position held:</b> Lecturer in Urban Design and Urban Planning</p> <p><b>Duties:</b> Lecturing to Masters' students on aspects of urban planning and design including:</p> <ul style="list-style-type: none"> <li>▪ Land use and Transportation Planning</li> <li>▪ Law, land and the environment</li> <li>▪ Research methodology</li> <li>▪ Stakeholders and community participation</li> </ul>
January 1988 - March 1992	Urban Planning Department, Johannesburg City Council, Johannesburg	<p><b>Position held:</b> Urban Designer: Urban Design Section</p> <p><b>Duties:</b> Part of a team of planners responsible for the generation of urban design schemes related to the growth and management of the city of Johannesburg.</p>
January 1987 -December 1987	Cape Town City Council, Cape Town	<p><b>Position held:</b> Graduate Urban Designer</p> <p><b>Duties:</b> Part of a team of planners responsible for the generation of low-income urban design schemes in Pelican Park, Seekoeivlei and Mitchells Plain</p>

**Other details**

**Computer skills:** Use of Geographic Information Systems and relational databases in research including Microsoft Access, Buchanon Accsmap and AutoCAD based Key Accident Software. Regular use of Microsoft Office, Microsoft Project, and Corel Office suites on Microsoft and Apple Macintosh operating systems. Use of SPSS, Atlas Ti and Dreamweaver. Regular use of internet and email.

**Languages:** English mother tongue, good understanding of Afrikaans, learning Xhosa.

**Driving License:** Full driving license with no penalties or endorsements.

**Language Skills:**

Language	Speaking	Reading	Writing
English	Excellent	Excellent	Excellent
Afrikaans	Excellent	Excellent	Excellent

**Publications**

**Journal articles**

1. Sinclair, M., 1998. "Community, identity and gender in migrant communities of Southern Africa; emerging epistemological challenges." *International Affairs*, 74, 2 , pp.1-15
2. Sinclair, M., 1999. "I know of a place that is softer than this... Emerging migrant communities in post-apartheid South Africa." *International Migration Quarterly*, Issue II.
3. Sinclair, M. 2013, "Attitudes, norms and driving behaviour: A comparison of young drivers in South Africa and Sweden", *Transportation Research Part F: Traffic Psychology and Behaviour*, vol. 20, no. 0, pp. 170-181. #Van Hoving, D., Sinclair, M., Wallis, L. 2013, "Patterns of seatbelt use in different socioeconomic communities in the Cape Town Metropole, South Africa", *South African Medical Journal*, vol. 103, no. 9.
4. Sinclair, M., 2013. "The promotion of road safety by healthcare professionals in South Africa." *South African Medical Journal* 2013;103(9):614-615.
5. Sinclair, M. 2013. "Seatbelt legislation in South Africa - failing to uphold the rights of children". *Stellenbosch Law Review*, 2013,3, 24.
6. Akoku Ebot Eno Akpa N, Booysen MJ, Sinclair MD. *A comparative evaluation of the impact of average speed enforcement (ASE) on passenger and minibus taxi vehicle drivers on the R61 in South Africa*. Journal of the South African Institution of Civil Engineering 2016; 58(4):2-10.
7. Akoku Ebot Eno Akpa N, Booysen MJ, Sinclair MD. *Auditory intelligent speed adaption for long distance informal public transport in South Africa*. IEEE Intelligent Transportation Systems Magazine 2016; 8(2):53-64.
8. Sinclair MD, Zuidgeest DR. *Investigations into pedestrian crossing choices on Cape Town freeways*. *Transportation Research Part F: Traffic Psychology and Behaviour* 2016; 42(1369-8478):479-494.
9. Tamar Ben-Bassat, David Shinar, Raquel Almqvist, Jeff K. Caird, Robert E. Dewar, Esko Lehtonen, Paul M. Salmon, Marion Sinclair, Heikki Summala, Lidia Zakowska & Gabriel Liberman (2019) *Expert evaluation of traffic signs: conventional vs. alternative designs*, *Ergonomics* 62:6,734-747
10. Ambunda, R & Sinclair, M. 632 Published By: Blue Eyes Intelligence Engineering & Sciences Effect of Two-Lane Two-Way Rural Roadway Design Elements on Road Safety. *International Journal of Innovative Technology and Exploring Engineering (IJITEE)* ISSN: 2278-3075, Volume-8 Issue-4, February 2019
11. Ben-Bassat, T. Shinar, D. Caird, J.K. Dewar, R.R. Lehtonen, E. Sinclair, M. Zakowska, L. Simmons S. Liberman, G. Pronin, M., *Ergonomic Design Improves Cross-Cultural Road Sign Comprehension*, *Transportation Research Part F: Traffic Psychology and Behaviour*, 78, 2021, 267-279, ISSN 1369-8478
12. Ambunda, R. and Sinclair, M. *Understanding the road environment and road safety: The impact of combined roadway conditions on crash incidences*. Journal of the South African Institution of Civil Engineering December 2022.

**Chapters in Books**

1. Sinclair, M (2003). Population Migration within the Southern African Development Community". *The Global Encyclopedia of Migration*, Matthew Gibney (ed.), Refugee Studies Centre, University of Oxford, 2003.
2. Sinclair, M, Bester, C and Van Dyk, E. (2012). Chapter 11: Transport and sustainability. In Swilling, M (ed.): *Sustainable Stellenbosch by 2030 – Opening Dialogues*, pp 160-162. African SUN Media.
3. Sinclair, M (2021): Age and Gender as Factors in Road Safety. In: Vickerman, Roger (eds.) *International Encyclopedia of Transportation*. vol. 2, pp. 11-16. UK: Elsevier Ltd.
4. Sinclair, M (2021): Sleep-related Issues and fatigue,. In: Vickerman, Roger (eds.) *International Encyclopedia of Transportation*. vol. 2, pp. 611-616. UK: Elsevier Ltd.

**Peer Reviewed Conference papers**

1. Sinclair, M. "Road worker vulnerability at Road Construction Sites, South Africa". Presented at Southern African Transport Conference, Aug 2010.
2. Sinclair, M "Road Injury Data in South Africa - An assessment of the national road collision database". Presented at Southern African Transport Conference, July 2011.
3. Sinclair, M., Liebenberg, C. "User behavior at a four way stop, Presented at Southern African Transport Conference, July 2011. Presented at Southern African Transport Conference, July 2011.
4. Donald, I., Sinclair, M. "Assessing vertical curve design for safety; Case study on the N1/R300 Stellenberg interchange, Western Cape". Presented at Southern African Transport Conference, July 2011.
5. Sinclair, M., Murdoch, M. "Driver compliance with traffic signals in Stellenbosch." Presented at Southern African Transport Conference, July 2011.
6. Ackerman, T. Sinclair, M. "Speed limits around schools." Presented at Southern African Transport Conference, July 2013

7. Nteziyemeye, P., Sinclair, M “ Modeling Pedestrian crossing behaviour.”, Presented at Southern African Transport Conference, July 2013
8. Sinclair, M., Skinner D. and Toefy, Y. “Patterns of Patterns of Alcohol Consumption and Road Safety Awareness in two communities in South Africa. Presented Southern African Transport Conference, July 2013
9. Sinclair, M. Louw, P. “Driving on the hard shoulder – a safety assessment”. Presented at Southern African Transport Conference, July 2014.
10. Steunenbergh, I., Sinclair, M. “An assessment of the readiness of South African roads authorities to reduce urban limits in line with international trends”. Presented at Southern African Transport Conference, July 2014.
11. Swart, E. Sinclair, M. “Fatigue Management – Lessons from international legislation and practice “. Presented at Southern African Transport Conference, July 2015.
12. Venter, K. Sinclair, M “Review of Research to inform the Development of a Hazard Perception Test for Novice Drivers in South Africa. Presented at Southern African Transport Conference, July 2014.
13. Sinclair, M., Imaniranzi, I. “Aggressive Driving Behaviour: The case of minibus taxi drivers in Cape Town, South Africa”. Presented at Southern African Transport Conference, July 2014.
14. Akoku Ebot Eno Akpa N, Booysen MJ, Sinclair M. “Efficacy of interventions and incentives to achieve speed compliance in the informal public transport sector”. 2015 IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2015), Cape Town, South Africa, IEEE 2015: 30-37.
15. Khan MY, Sinclair M.” Importance of Safety Features to New Car Buyers in South Africa. 35th Southern African transport Conference (SATC 2016), Pretoria, South Africa, Southern African Transport Conference 2016: 468-480.
16. Sinclair, M., Dennysen G. “Evaluation of the Safety Benefits of the Exclusive and Concurrent Green Man phasings for Pedestrians in Cape Town”. Presented at Southern African Transport Conference, July 2018
17. Sinclair, M, Dollie, T “The Use of Hard Shoulders as a Turning Lane: A Safety Assessment”. Presented at Southern African Transport Conference, July 2019
18. Venter, K., Sinclair, M., Lennox, L.: “Novice Driver Training Within the South African NRSS 2016-2030” Presented at Southern African Transport Conference, July 2019
19. Sinclair, M., Bruwer, M., “The Impact of prior transport-based experiences on academic interest and performance – as case study of undergraduate students in Transport Science modules at Stellenbosch University”. REES Conference, Cape Town, July 2019
20. Govender, K., Sinclair, M, “Supporting Densification through the Planning and Implementation of Road Infrastructure in South Africa”. International Journal of Social and Business Sciences, 12(1), 2020. World Academy of Science, Engineering and Technology.
21. Sinclair, M & Ambunda, R, 2021: Influence of Road Geometric and Traffic Features on Road Safety: South African Transportation Conference June 2021
22. Sinclair, M & Cavanagh, C. Analysis of iRAP for rural road safety assessments. South African Transport Conference, June 2021
23. Sinclair, M and Nkulisi, S., The impact of hard shoulders on urban freeways. South African Transportation Conference, June 2021.
24. Naicker, D. and Sinclair, M. The Effectiveness of Sidewalks on Pedestrian Safety in a Township Environment. South African Transport Conference, July 2022.
25. De Villiers, S. and Sinclair, M. Regulation of e-Scooters in South Africa. South African Transport Conference, July 2023.
26. Carstens, R. and Sinclair, M. Investigating the impact of HCD principles in the desirability and operational success of public transport in Gauteng. South African Transport Conference, July 2023.
27. Heyns, M. and Sinclair, M. Greening our Road Construction – Views From The Transportation Industry In South Africa. South African Transport Conference, July 2023.

**Other significant conference presentations**

1. “UK Speed Enforcement 2002 to 2009; the Safety Camera Story”. Presentation at the RTMC International Conference on Road Safety, Cape Town, August 2009. (Awarded RTMC prize for ‘Best paper at conference’.)
2. “Road workers’ as Vulnerable Road Users in the SA context”. Presentation to PIARC International Conference on Road Safety, Oct 2009.
3. “Habits that kill... Seatbelt usage in the Cape Metropolitan area”. Paper Presented to SARF Road Safety Conference, June 2011.

4. “Legal representations around traffic officials; a comparative study”. Paper presented at the International Conference of Transport and Traffic psychologists, The Netherlands, September 2012.
5. Understanding the challenges of implementing the Safe System approach to Road Safety in the South African context. Presentation to the SU-CUGH African Global Health Conference, Cape Town, Oct 2022.