



DSC 2020 EUROPE VR

Driving Simulation & Virtual Reality Conference & Exhibition

Conference Opening

Pr. Andras Kemeny

Driving Simulation Association

Arts et Métiers Institute of Technology

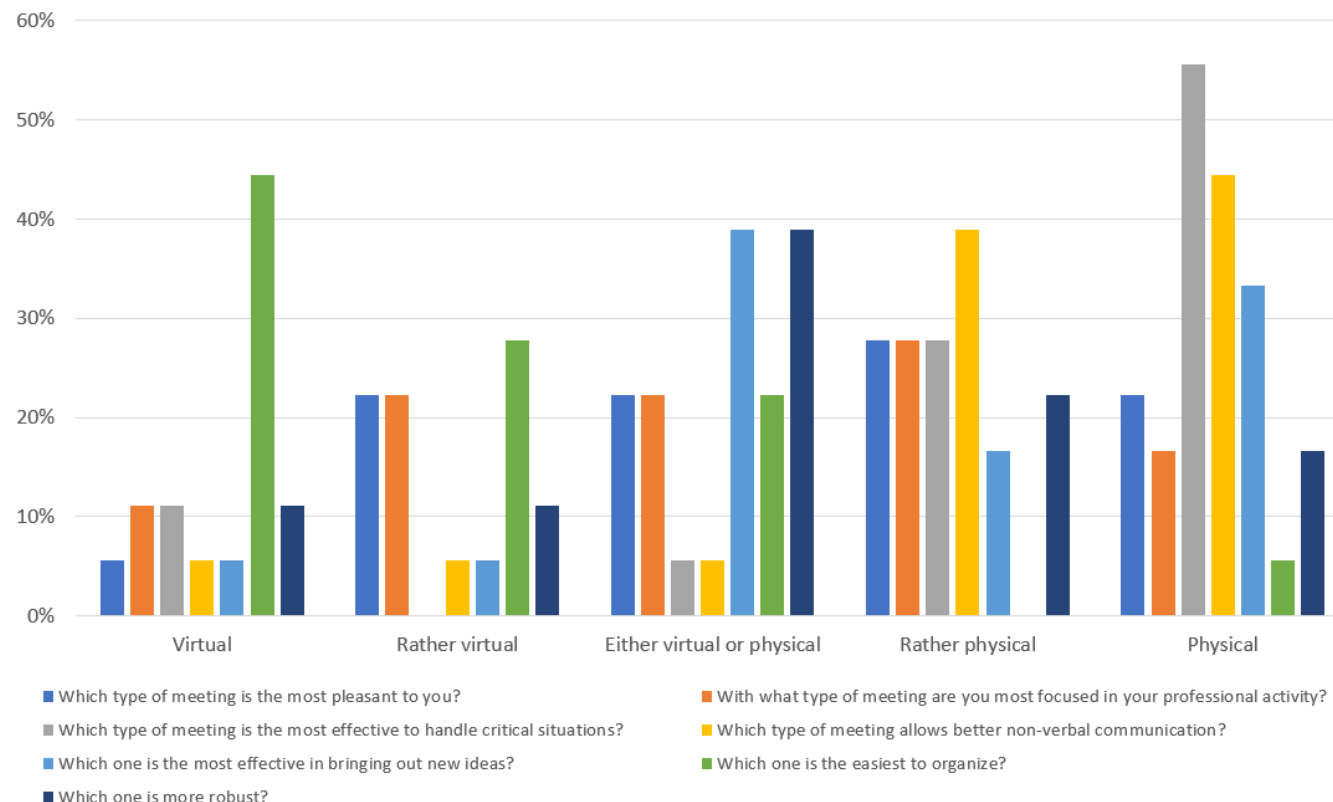
Renault, VR & Immersive Simulation

Palais des Congrès - Antibes

September 9, 2020

Social communication with Covid – DSA study

- Virtual vs. physical communication
 - New ideas – physical
 - Easiness – virtual
 - Organization of DSC Europe 2020 VR
 - Not to wipe out all by the sanitary reality
- (J. M. Blanquer, France)



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9-11 September 2020 | Antibes



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DSC 2020 Europe^{VR} conference

- A scientific conference and exhibition since 1995
 - Hybrid in 2020
- Organization by the Driving Simulation Association with
 - Arts et Métiers Institute of Technology
 - Renault
 - University of Gustave Eiffel
 - SIA
 - University of Côte d'Azur & Smart Vehicle Côte d'Azur
- Major themes
 - human factors, motion, simulation design and applications, autonomous vehicles and VR, motion sickness



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DSC 2020 Europe^{VR} organization

- Driving Simulation Association
 - a nonprofit organization to support driving simulation community and the DSC Europe VR conferences
 - [Driving Simulation Proceedings](#), an online publication site
- With the sponsorship
 - ASAM
 - Ansys, AV Simulation, Epic Games, Rexroth, VR Connection
 - Région Sud - Provence Alpes Côte d'Azur
- Onsite and remote participation, using the DSC 2020 VR online App



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DSC 2020 Europe VR online App

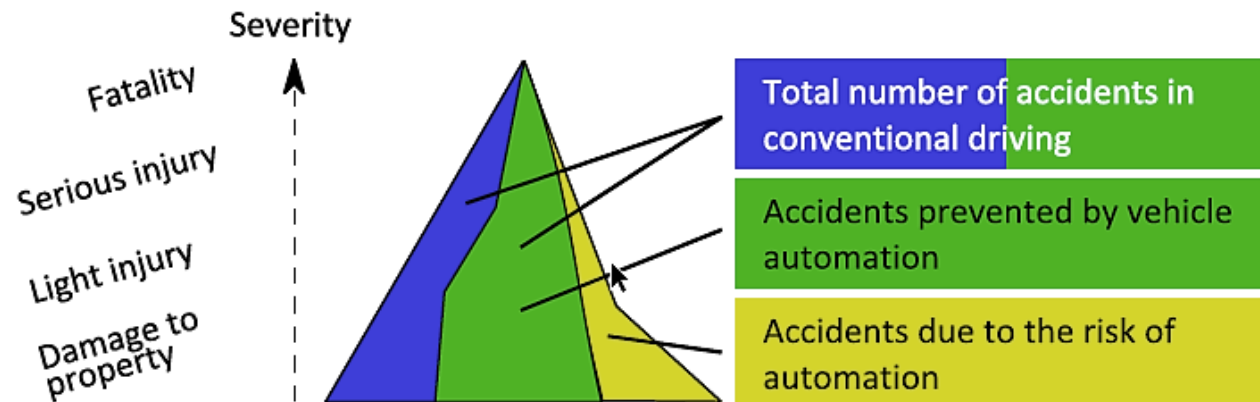


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DSC 2020 Europe^{VR} focus on new trends

- Simulation tool chain for AV testing, validation and certification
 - Massive simulation platforms (Ansys and Unreal tutorials)
- Autonomous vehicles standards
 - ADSENSE, ASAM OpenScenarios & OpenOSI projects



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DSC 2020 Europe^{VR} focus on new trends

- Perception and human factors
 - Using VR, CAVE and DIL & VIL simulators for AD & pedestrian decision analysis

Real driving



DIL Simulation



VIL Simulation



Source: IPG automotive



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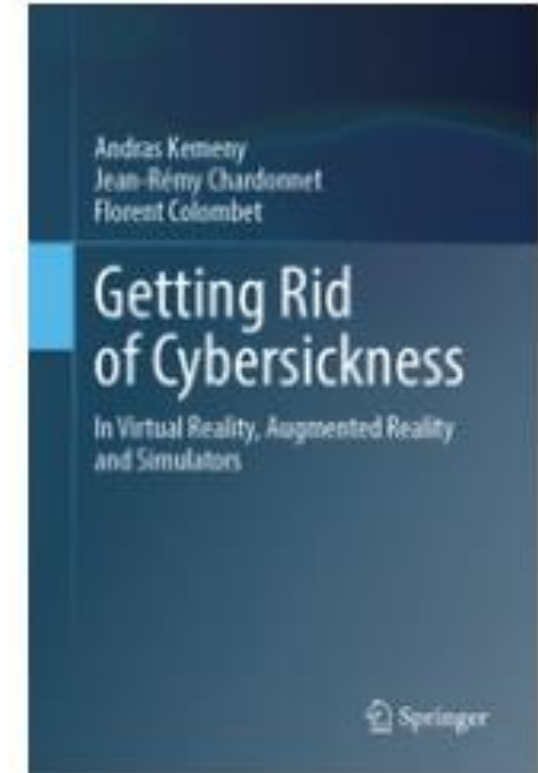


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DSC 2020 Europe^{VR} motion sickness

- Driving simulation
 - Motion platforms and motion cueing
 - High performance simulators (Daimler, Nissan, Renault, BMW)
 - Compact motion systems for face value
- VR
 - Cybersickness (VR, CAVE)
- Autonomous vehicles
 - Countermeasures
 - VR systems



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Driving Simulation & VR - in DSC 2020 scientific sessions



- **Virtual Reality**

- *computer generated imagery (CGI)*
- *interactive with sensory feedback*
- *provide physical and mental immersion*

Shermann and Craig, 2003



- **Same technologies, same difficulties**

- *VR-induced sickness effects (VRISE)*
- *Scale 1:1 perception*
- *Haptics rendering*

Kemeny, A., 2014



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THANK YOU!

Have a nice conference!



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