Ruding Lou

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EDUCATION

PhD, Computer-Aided Design,   2011
co-tutelle: Arts et Meiers ParisTech, Aix en Provence, France,
         Universita degli studi di Genova, Genoa, Italy.

Master, Science of Information and System (Product design and production system),   2007
Arts et Meiers ParisTech, Aix en Provence, France.

Master, Computer Science (Distributed systems, networks and parallelism),   2006
University of Bordeaux, France.

Bachelor, Computer Science,   2003
Southwest Science and Technology University, China.

ACADEMIC POSITIONS

Assistant professor at Arts et Meiers ParisTech (Campus Cluny)	Since Sept.2012
Teaching assistant at Arts et Meiers ParisTech (Campus Aix-en-Provence)	Oct.2010 - Aug.2012
Teaching fellow at Arts et Meiers ParisTech (Campus Aix-en-Provence)	Oct.2007 - Sept.2010

RESEARCH INTERESTS

Geometric processing for virtual reality and engineering simulation
Mitigating motion sickness in virtual reality by geometric processing
Multi-user visualization and interaction with multi-representation of Digital Mock-Up
Virtual reality and augmented reality applications

PhD thesis supervision

Defended PhD theses

2017	Bo LI	https://www.theses.fr/2017ENAM0065
2019	Barnabé FALUI	https://www.theses.fr/s171321
2020	Pierre RAIMBAUDI	https://www.theses.fr/2020HESAE012
2024	Tingcheng LI	https://www.theses.fr/s251993
2025	Eloise MINDER (partial)	https://theses.fr/s353453
2025	Noé WATIEZ	https://labomap.ensam.eu

Ongoing PhD theses

2026	Romain GUILLAUME	https://www.theses.fr/s268423
2026	Jinxue CUI	https://theses.fr/s353755
2026	Abdualrhman ABDALHADI	https://institutchalon.ensam.eu
2028	Jin YANG	https://theses.fr/s428574
2029	Xinyu LIU	https://theses.fr/s417884

PUBLICATIONS

International Journals

- **R. Lou**, A. Mikchevitch, J-P. Pernot, P. Veron, Merging enriched Finite Element triangle meshes for fast prototyping of alternate solutions in the context of industrial maintenance, *Computer-Aided Design*, 2010

- **R. Lou**, F. Giannini, J-P. Pernot, A. Mikchevitch, B. Falcidieno, P. Veron, R. Marc, Direct modification of semantically-enriched Finite Element Meshes, *Shape Modeling*, 2010

- **R. Lou**, J-P. Pernot, F. Giannini, P. Veron, B. Falcidieno, Filleting sharp edges of multi-partitioned volume finite element meshes, *Engineering Computations*, 2015

- B. Li, **R. Lou**, F. Segonds, F. Merienne, Multi-user interface for co-located real-time work with digital mock-up: a way to foster collaboration, *International Journal on Interactive Design and Manufacturing*, 2016

- B. Li, H. Zhang, **R. Lou**, Study of Efficiency of Multi View System in Multi-Disciplinary Collaboration Task, *Research and Science Today*, 2017

- B. Li, F. Segonds, C. Mateev, **R. Lou**, F. Merienne, Design in context of use: An experiment with a multi-view and multi-representation system for collaborative design, *Computers in Industry*, 2018

- P. Raimbaud, **R. Lou**, F. Danglade, P. Figueroa, T. Hernandez, F. Merienne, A Task-Centred Methodology to Evaluate the Design of Virtual Reality User Interactions: A Case Study on Hazard Identification, *Buildings* , 2021

- T. Li , **R. Lou**, A. Polette, Z. Shao, D. Nozais, J-P. Pernot, On the Use of Quality Metrics to Characterize Structured Light-based Point Cloud Acquisitions, *Computer-Aided Design and Applications*, 2023

- J. Cui , **R. Lou**, F. Mantelet, F. Segonds, Integration of additive manufacturing and augmented reality in early design phases: a way to foster remote creativity, *International Journal on Interactive Design and Manufacturing*, 2024

- T. Li , A. Polette, **R. Lou**, M. Jubert, D. Nozais, J-P. Pernot, Machine learning-based 3D scan coverage prediction for smart-control applications, *Computer-Aided Design*, 2024

- T. Li , **R. Lou**, A. Polette, M. Jubert, D. Nozais, J-P. Pernot, As-scanned point cloud generation using structured-light simulation and machine learning-based coverage prediction, *Advances in Engineering Software*, 2025

- J. Cui , F. Mantelet, **R. Lou**, F. Segonds, Exploring the usability and creativity enhancement of augmented reality in additive manufacturing-based product design, *Computers in Human Behavior Reports*, 2025

- A. Abdalhadi, N. Koundal, M. S. Moosavi, **R. Lou**, M. Z. Yusoff, F. Merienne, N. M. Saad, Enhancing User Experience in Virtual Reality Through Optical Flow Simplification with the Help of Physiological Measurements: Pilot Study, *Sensors*, 2026

International Conferences

- **R. Lou**, A. Mikchevitch, J-P. Pernot, P. Veron, Direct merging of triangle meshes preserving simulation semantics for fast modification of numerical models, *Tools and Methods of Competitive Engineering* (TMCE), vol.1, pp.119-131, Turkey, 2008

- **R. Lou**, F. Giannini, J-P. Pernot, A. Mikchevitch, P. Veron, B. Falcidieno, R. Marc, Towards CAD-less Finite Element analysis using group boundaries for enriched meshes manipulation, *ASME Int. Design Eng. Tech. - Computers and Information in Eng. Conf.* San Diego, USA, 2009

- **R. Lou**, F. Giannini, J-P. Pernot, A. Mikchevitch, P. Veron, B. Falcidieno, R. Marc, Towards semantic-based 3D mesh modeling, *FOCUS-K3D Conference on Semantic 3D Media and Content*, Sophia Antipolis, France, 2010

- **R. Lou**, F. Giannini, J-P. Pernot, A. Mikchevitch, P. Veron, B. Falcidieno, R. Marc, Direct modification of FE meshes preserving group information, *Tools and Methods of Competitive Engineering* (TMCE), vol.1, pp.303-315, Ancona, Italy, April 2010

- **R. Lou**, F. Giannini, J-P. Pernot, A. Mikchevitch, P. Veron, B. Falcidieno, R. Marc, Semantic-preserving mesh direct drilling, *Shape Modeling International* (SMI) pp.68-77, Aix-en-Provence, France, 2010

- **R. Lou**, J-P. Pernot, F. Giannini, A. Mikchevitch, P. Veron, B. Falcidieno, R. Marc, Sharp edge filleting of enriched finite element meshes, *Tools and Methods of Competitive Engineering* (TMCE), vol.1, pp.650-659, Karlsruhe, Germany, 2012

- Z. Li, **R. Lou**, Subdivision surface generation from network of curves, *Tools and Methods of Competitive Engineering* (TMCE), vol.1, pp.673-684, Budapest, Hungary, May 2014

- B. Li, **R. Lou**, F. Segonds, F. Merienne, A Multi-view and Multi-interaction System for Digital Mock-up's collaborative environment, *European Association for Virtual Reality and Augmented Reality* (EuroVR), Lecco, Italy, 2015

- B. Li, **R. Lou**, F. Segonds, F. Merienne, Multi-user Interface for Co-located Real-time Collaborative Work with Digital Mock-up, *Virtual Concept Workshop – Major Trends in Product Design*, Bordeaux, France, 2016

- B. Li, **R. Lou**, J. Posselt, F. Segonds, F. Merienne, A. Kemeny, Multi-view VR system for co-located multidisciplinary collaboration and its application in ergonomic design, *23rd ACM Symposium on Virtual Reality Software and Technology* (VRST), ACM, New York, NY, USA, 2017

- P. Raimbaud, F. Merienne, F. Danglade, **R. Lou**, T. Hernandez, P. Figueroa, Smart adaptation of BIM for virtual reality, depending on building project actors' needs: the nursery case, *IEEE Conference on Virtual Reality and 3D User Interfaces* (IEEE VR), pp. 667–668, Reutlingen, Germany, March 2018

- B. Faliu, A. Siarheyeva, **R. Lou**, F. Merienne, Design and Prototyping of an Interactive Virtual Environment to Foster Citizen Participation and Creativity in Urban Design, *Lecture Notes in Information Systems and Organisation, Springer*, 2019

- **R. Lou**, J-R. Chardonnet, Reducing Cybersickness by Geometry Deformation, *IEEE Conference on Virtual Reality and 3D User Interfaces* (IEEE VR), pp. 1058-1059, Osaka, Japan, 2019

- P. Raimbaud, **R. Lou**, F. Merienne, F. Danglade, P. Figueroa, T. Hernandez, BIM-based mixed reality application for supervision of construction, *IEEE Conference on Virtual Reality and 3D User Interfaces* (IEEE VR) Workshop on Smart Work Technologies, Osaka, Japan, 2019

- P. Raimbaud, M. B. Palacios, J. P. R. Cortes, P. Figueroa, **R. Lou**, F. Danglade, F. Merienne, J.-T. Hernandez, A Virtual Reality and BIM Approach for Clash Resolution, *European Association for Virtual Reality and Augmented Reality* (EuroVR), TALLINN, ESTONIA, 2019

- A. Scalas, Y. Zhu, F Giannini, **R. Lou**, K. Lupinetti, M. Monti, M. Mortara, M. Spagnuolo, A first step towards cage-based deformation in Virtual Reality, *Smart Tools and Applications in Graphics* (STAG), pp. 119-130, Italy, 2020

- **R. Lou**, R.H.Y. So, D. Bechmann,, Geometric Deformation for Reducing Optic Flow and Cybersickness Dose Value in VR, *Eurographics*, France, 2022

- T. Li , **R. Lou**, A. Polette, Z. Shao, D. Nozais, J-P. Pernot, On the Use of Quality Metrics to Characterize Structured Light-based Point Cloud Acquisitions, *International CAD Conference* (CAD), pp. 344-349, China, 2022

- R. Guillaume , J. Pailhès, **R. Lou**, E. Gruhier, X. Laville, Y. Baudin, Intention detection for virtual reality architectural design, *Advances in Information and Communication Technology, Springer*, 2023

- N. Watiez, A. Besnard, P. Moskovkin, **R. Lou**, J. Outeiro, H. Birembaux, S. Lucas, Finite element mesh generation for nano-scale modeling of tilted columnar thin films for numerical simulation, *Advances in Information and Communication Technology, Springer*, 2023

- M. Sawiros, **R. Lou**, NEXT-GEN E-COMMERCE in the METAVERS, *IEEE International Symposium on Mixed and Augmented Reality Adjunct* (ISMAR-Adjunct), pp. 30-35, Singapore, 2022

- **R. Lou**, F. Mérienne, R.H.Y. So, T-T Chan, D. Bechmann, Geometric Simplification for Reducing Optic Flow in VR, *IEEE International Symposium on Mixed and Augmented Reality Adjunct* (ISMAR-Adjunct), pp. 682-685, Singapore, 2022

- **R. Lou**, F. Mérienne, D. Bechmann, General framework of geometric simplification for mitigating cybersickness, *IEEE International Conference on Future Trends in Smart Communities* (ICFTSC), pp. 1-5, Malaysia, 2022

- N. Watiez, D. Cotton, A. Besnard, **R. Lou**, H. Birembaux, J. Outeiro, Augmented reality representation for the investigation of simulated inclined chromium thin films, *PLATHINIUM*, France, 2023

- A. Abdalhadi, N. Koundal, F. Merienne, **R. Lou**, M. Moosavi, M. Z. Yusoff, N. M. Saad, Development Of Virtual Environment to Enhance User Experience with the help of Electroencephalography, *Lecture Notes in Electrical Engineering, Springer*, 2024

- A. Besnard, **R. Lou**, "Virtual PVD": A Virtual Reality approach to explore PVD Magnetron sputtering, *Lecture Notes in Computer Science, Springer*, 2025

- **R. Lou**, A. Besnard, F. VIPREY, Virtual Reality for Surface Topography Analysis, *Communications in Computer and Information Science, Springer*, 2025

- P. Chacon, K. Alzein, C. Jean, **R. Lou**, Leveraging Augmented Reality for Enhanced Smart and Connected Product Design: An Experimental Approach, *Communications in Computer and Information Science, Springer*, 2025

National Conferences
- **R. Lou**, F. Giannini, J-P. Pernot, A. Mikchevitch, P. Veron, B. Falcidieno, R. Marc, Perçge de maillage préservant la sémantique, *Journées du Groupe de Travail en Modélisation Géométrique*, Dijon, France 2010

- P. Raimbaud, **R. Lou**, F. Danglade, F. Mérienne, J. T. Hernandez, P. Figueroa, Smart Adaptation of BIM for Virtual Reality, Depending on Building Project Actors' Needs, *1st Workshop CATAÏ*, Lyon, France, 2018

- P. Raimbaud, F. Mérienne, P. Figueroa, F. Danglade, **R. Lou**, J. T. Hernandez, BIM-based mixed reality environments to improve AEC task performance, *2nd Workshop CATAÏ*, Bogota, Colombia, 2019

- **R. Lou**, Geometry deformation for reducing cybersickness in VR, *Journées Françaises d'Informatique Graphique et de Réalité Virtuelle*, Marseille, France, 2019

- Y. Jin, L. Joblot, **R. Lou**, F. Merienne, Utilisation du BIM dans une application RV à des fins de maintenance d'un bâtiment, *eCONFERE*, France, 2020

- R. Guillaume, X. Laville, Y. Baudin, R. Guillaume, J. Pailhès, E. Gruhier, **R. Lou**, Détection d'Intention dans un Environnement de Conception en Réalité Virtuelle, *S.mart*, France, 2021

- T. Li , A. Polette, **R. Lou**, J-P. Pernot, M. Jubert, D. Nozais, Estimation de la couverture de configurations de numérisation 3D à l'aide de techniques d'apprentissage machine, *S.mart*, France, 2023

- M. Airault, A. Besnard, **R. Lou**, F. Viprey, LEVELNESS : une approche innovante et immersive pour l'analyse métrologique des surfaces, *S.mart*, France, 2025

- A. Besnard, **R. Lou**, « PVD Virtuel » : apprentissage des dépôts sous vide par la réalité virtuelle, *S.mart*, France, 2025