Name **Viviane Timmermann**
Institution: Institute for Molecular Medicine and Cell Research & Institute of Physics
Contact: Phone:0761 203 5792, Email: Viviane.timmermann@uniklinik-freiburg.de
Position: Junior Group Leader

Academic education including academic degrees, Scientific graduation, Employment

Stages	Periods and Details
Degree programme	**10/2008 – 10/2014: Studies in Mathematics** | Technical University Kaiserslautern (GER) > *B.Sc. Mathematics, ERASMUS Study Semester at University of Nantes (FRA)* Thesis on Wavelets at Lufthansa Technik AG. > *M.Sc. Mathematics International;* Dual Degree at National University of Singapore (SGP) Thesis on Differential Algebraic Equations.
Doctorate	**01/2015 – 06/2019: Ph.D. Biomedical Sciences** | awarded 15.09.2019 (Prof. J. Sundnes) > *Simula Research Laboratory (Oslo, NOR), University of California San Diego (San Diego, USA), and University of Oslo (Oslo, NOR) Research Ph.D. [SUURPh] Programme* > Dissertation on: 'A Computational Study on Mechano-Electric Feedback Mechanisms'.
Stages of academic/ professional career	**since 02/2024: Junior Group Leader** combining experiments and simulations to investigate mechano-electric feedback in filamin C (FLNC)-induced arrhythmias; Institute of Molecular Medicine and Institute of Physics | University Freiburg (GER) **03/2024: Visiting Researcher** learning cell culture techniques for FLNC myopathy; Institute for Cell Biology | University of Bonn (GER) **07/2023 – 01/2024: Part-Time Postdoctoral Researcher** developing theoretical models to link mechanical structure to cardiac dysfunction; IEKM | University Hospital Freiburg (GER) **01/2021 – 01/2024: Head of IT**, IEKM | University Hospital Freiburg (GER) > *Responsible for a part-time and, in 2023, an additional full-time IT-coordinator;* > *IT-user support, budget planning, IT- and SAP-management of 50 employees;* > *Support of IEKM researchers with data analysis and analysis tools.* **07/2019 – 12/2020: Postdoctoral Researcher** studying mechanics of FLNC-deficient mice; Prof. McCulloch, Institute of Engineering in Medicine | University of California San Diego (USA) **2017 – 2019: Visiting Researcher** joining murine experiments during short-term visits; Institute of Engineering in Medicine | University of California San Diego (USA) **10/2016: Visiting Researcher** working on simulations of human cardiac mechanics; Prof. Niederer, School of Biomedical Imaging Sciences | King's College London (UK) **01/2016 – 09/2016: Visiting Researcher** simulating human mechano-electrics of myocytes;

	Institute of Engineering in Medicine | University of California San Diego (USA) **01/2015: Visiting Researcher** working on a computational model of myofilament kinetics; the late Dr. Rice TJ Watson Research Center | IBM New York (USA) **09/2013 – 10/2014: Student Research Assistant** modelling tire deformation with obstacles; Institute for Industrial Mathematics | Fraunhofer (GER)

Other activities, awards and honours

2024 – 2027	**Postdoctoral Fellowship**, Marie Skłodowska-Curie Actions | European Commission call HORIZON-MSCA-2023-PF-01-01; Research Funding (€ 265,000; Starting Date 01.09.2024).
2024 – 2025	**Associated Junior Investigator Funding**, CRC1381 | University Freiburg (GER) Research Funding (€ 20,000 p.a.; Starting Date 01.02.2024).
2024-2025	**Hans A. Krebs Medical Scientist Fellowship**, Forschungskommission | University Freiburg (GER) Research Funding (€ 40,000 p.a.; Starting Date 01.02.2024).
2023	**Conference Funding**, International Scientific Events | Deutsche Forschungsgesellschaft (GER) > Conference Funding for Cardiac Physiome Workshop (€ 20,000).
since 2023	**9 Awards of Supervised Ph.D.**, IEKM | University Freiburg (GER) > Prizes at and fellowships for various national and international conferences.
since 2022	**Funding for Research Assistant**, Forschungskommission | University Freiburg (GER) 6-months funding for a research engineer (100% E13 TV-L; € 32,600; Starting Date 01.06.2023).
2021	**Seal of Excellence**, Marie Sklodowska-Curie Actions | European Commission call H2020-MSCA-IF-2020 (reserve list; score >90%).
2021	**IT Support Position**, CRC 1425 | University Freiburg (GER) IT support for CRC-Associated IEKM members (own position in CRC service project; € 56,000).
2019	**Research Mobility Program**, INTPART | Norwegian Research Foundation (NOR) Research visits at UCSD (€ 5,500).
2016	**Research Mobility Program**, Center of Cardiological Innovation | University Hospital Oslo (NOR) Research visits at King's College London (€ 3,000).
2012 – 2013	**Scholarship for International Master Studies** | Deutscher Akademischer Austauschdienst (GER) Studies at National University of Singapore (€ 16,000).

Ten most important publications

2021	**Passive Myocardial Mechanical Properties: Meaning, Measurement, Models**; Emig R, Zgierski-Johnston CM, Timmermann V, Taberner AJ, Nash MP, Kohl P, and Peyronnet R *Biophysical Reviews*: *1-24; doi:10.1007/s12551-021-00838-1*.
2020	**Mechano-Electric Coupling and Arrhythmogenic Current Generation in a Multi-Scale Computational Model of Coupled Myocytes**; Timmermann V and McCulloch AD *Frontiers in Physiology 11*: *1573; doi:10.3389/fphys.2020.519951*.
2019	**Arrhythmogenic Current Generation by Myofilament-Triggered Ca^{2+} Release and Sarcomere Heterogeneity**; Timmermann V, Edwards AG, Wall ST, Sundnes J, and McCulloch AD *Biophysical Journal 117.12*: *2471-2485; doi:10.1016/j.bpj.2019.11.009*.
2019	**An Integrative Appraisal of Mechano-Electric Feedback Mechanisms in the Heart**;

Timmermann V, Dejgaard LA, Haugaa KH, Edwards AG, Sundnes J, McCulloch AD, and Wall ST
Progress in Biophysics and Molecular Biology 130: *404-417; doi:10.1016/j.pbiomolbio.2017.08.008*.

2023 **An In-Silico Study on Integrated Mechanisms of Mechano-Electric Feedback in Ischemic Arrhythmia**; Timmermann V, Sundnes J, Lawen T, Baumeister PA, Quinn TA, McCulloch AD, and Edwards AG; *doi:10.48550/arXiv.2312.06535*.

2023 **Quaternion-Aligned Electroanatomical Models of the Murine Atria from Standard-Output Functional and Structural Imaging**; Tumlinson G, Chleilat E, Madl J, Kohl P, and Timmermann V; *doi:10.48550/arXiv.2312.02922*.