In 2019, I defended my PhD thesis entitled “Transport in ultra-scaled Ge quantum dots embedded in Al-Ge-Al nanowire heterostructures” at the Institute of Solid State Electronics, TU Wien with distinction. Several research visits within my PhD at the CNRS Grenoble in the group of Olivier Buisson led to the first experimental observation of proximity-induced superconductivity in intrinsic Ge nanowires with monolithically integrated single-crystalline Al contacts. In 2018, I gave an invited talk at the EMRS Strasbourg, which was awarded the ”Young Scientist Award” of my session for my contributions to the field of ultra-scaled group-IV nanoelectronic devices. In 2020, I joined the emerging nanoelectronic devices group of Prof. Walter M. Weber as a postdoctoral researcher at the Institute of Solid State Electronics, TU Wien. My current research is focused on Si, Ge and GeSn based nanoscale Schottky barrier field-effect transistors based on monolithic metal-semiconductor heterostructures for “Beyond CMOS” applications. Enabling functional diversification and alternative computing based on multi-valued logic, I am currently investigating nanoscale Ge based devices with the goal of fusing the concept of reconfiguration and programmable negative differential resistance. Presenting the first implementation of this concept, I gave a talk on “Programmable Negative Differential Resistance in Ge Nanowire Transistors” at the GADEST-19 2022, which was awarded the Young Scientist Award.