## Improved operation of fusion plasmas via innovative shaping





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The highly turbulent boundary plasma fusion of devices needs to high fusion simultaneously ensure output and a sufficiently weak interaction with the surrounding wall structures, constituting one of the main challenges for successful fusion energy production. We will present progress achieved on the TCV tokamak at the EPFL to tackle these challenges with experiments in innovative magnetic topologies and with optimized wall geometries, driven bv new experimental measurement tools and modelling of increasing complexity. Our strategy to converge towards a viable future boundary solution through a combination of experiments, validated modelling, and future TCV upgrades, will be described.