



# Fibre Reinforced Polymer reinforced concrete

By Marta Baena

LAP Lambert Academic Publishing Jul 2012, 2012. Taschenbuch. Condition: Neu. Neuware - The differences in mechanical and bond properties of Fiber Reinforced Polymers (FRP) bars when compared to those of traditional steel reinforcement for reinforced concrete (RC) structures may affect the cracking and deformability behaviour of FRP RC members. This study investigates the bond behaviour between FRP reinforcement and concrete through experimental and numerical analysis. Experimental results on pull-out tests and direct tension tests are presented and discussed. A general procedure, derived from a cracking analysis based on slip and bond stresses, is used to study the deformability of FRP RC elements under tension. The tension stiffening effect is included via experimental nonlinear bond-slip law obtained from a laboratory pull-out test. The comparison between experimental data and numerical predictions of the reinforcement strain profile along the reinforcing bar during a tensile test confirms that the bond-based model adequately reproduces the redistribution of stresses after crack formation. Because the numerical model is flexible enough to include any user-defined bond-slip law and variable materials properties, a parametric study is conducted. 340 pp. Englisch.



**READ ONLINE**  
[ 2.12 MB ]

## Reviews

*This composed book is excellent. it was actually writtern very perfectly and valuable. I found out this book from my i and dad advised this book to learn.*

-- **Maymie O'Kon**

*Here is the finest ebook i have got read until now. It really is simplistic but excitement within the 50 percent in the book. Once you begin to read the book, it is extremely difficult to leave it before concluding.*

-- **Lupe Connelly**