# Article information:

Characterization of concrete shrinkage induced strains in internally-restrained RC structures by distributed optical fiber sensing - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S095894652100127X>

# Article summary:

1. This paper presents the results of an experimental investigation on concrete shrinkage induced strains on embedded rebars instrumented with Distributed Optical Fiber Sensors (DOFS).

2. The tested specimens were Reinforced Concrete (RC) tensile members differing in their geometry, DOFS employed and fiber/rebar bonding techniques.

3. The DOFS-reported combined effect of concrete shrinkage and creep on the embedded rebars is compared with the Model Code 2010's predictions and employed to extract conclusions on the residual performance of the RC members at the end of their drying phase.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article provides a detailed overview of an inter-university experimental investigation into concrete shrinkage induced strains on embedded rebars instrumented with Distributed Optical Fiber Sensors (DOFS). The article is well written and provides a comprehensive overview of the research conducted, as well as its findings. However, there are some potential biases that should be noted. For example, the article does not provide any information about possible risks associated with using DOFS or other methods for monitoring concrete shrinkage induced strains. Additionally, it does not present both sides equally when discussing the Model Code 2010's predictions; instead, it focuses solely on how they can be used to extract conclusions about residual performance. Finally, there is no mention of any unexplored counterarguments or missing points of consideration that could have been included in this research.

In conclusion, while this article provides a thorough overview of an experimental investigation into concrete shrinkage induced strains on embedded rebars instrumented with DOFS, there are some potential biases that should be noted when assessing its trustworthiness and reliability.

# Topics for further research:

* Concrete shrinkage induced strain risks
* Model Code 2010 predictions accuracy
* Distributed Optical Fiber Sensors (DOFS) safety
* Residual performance of embedded rebars
* Counterarguments to Model Code 2010 predictions
* Unaddressed points of consideration in concrete shrinkage research

# Report location:

<https://www.fullpicture.app/item/54083440ad3d5cc81caac1528d639201>