## American Concrete Institute

## Deflection and Stiffness Issues in FRC and Thin Structural Elements 2007

at the ACI Fall 2007 Convention

ACI Special Publications Series SP-248

October 14 – 18, 2007 Fajardo, Puerto Rico

Printed from e-media with permission by:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571 www.proceedings.com

ISBN: 978-1-60423-869-3

Some format issues inherent in the e-media version may also appear in this print version.

First printing, September 2007

DISCUSSION of individual papers in this symposium may be submitted in accordance with general requirements of the ACI Publication Policy to ACI headquarters at the address given below. Closing date for submission of discussion is March 2008. All discussion approved by the Technical Activities Committee along with closing remarks by the authors will be published in the July-August 2008 issue of either ACI Structural Journal or ACI Materials Journal depending on the subject emphasis of the individual paper.

The Institute is not responsible for the statements or opinions expressed in its publications. Institute publications are not able to, nor intended to, supplant individual training, responsibility, or judgment of the user, or the supplier, of the information presented.

The papers in this volume have been reviewed under Institute publication procedures by individuals expert in the subject areas of the papers.

Copyright © 2007 American Concrete Institute 38800 Country Club Drive Farmington Hills, MI 48333 USA

All rights reserved, including rights of reproduction and use in any form or by any means, including the making of copies by any photo process, or by any electronic or mechanical device, printed or written or oral, or recording for sound or visual reproduction or for use in any knowledge or retrieval system or device, unless permission in writing is obtained from the copyright proprietors.

Printed in the United States of America

Editorial production: Lindsay K. Kennedy

Library of Congress catalog card number: 2007936438

## **TABLE OF CONTENTS**

<u>SP-248—1</u> Numerical Simulation of Thin Steel Fiber Self-Compacting Concrete Structures
<u>SP-248—2</u> Deflection Calculation Using an Effective Moment Inertia for FRC
<u>SP-248—3</u> Numerical Simulation of FRC Round Panel Tests and Full-Scale Elevated Slabs
<u>SP-248—4</u> Effect of Synthetic Macro-Fibers on Shear Behavior of Concrete Beams
<u>SP-248—5</u> Deflection-Softening and Deflection-Hardening FRC Composites: Characterization and Modeling53 by A.E. Naaman
<u>SP-248—6</u> Effect of Open-Loop or Closed-Loop Deflection Control on Measured Toughness of FRC
<u>SP-248—7</u> The Role of Fiber Dispersion on Toughness and Deflection Stiffness Properties of SFRCs