



**International Union of Laboratories and Experts in Construction Materials,  
Systems and Structures**

# **RILEM Technical Committee 206 - ATB**

## **Task Group 2: Mixture Design & Compaction**

**Aaron Coenen, Enad Mahmoud, M. Emin Kutay & Hussain Bahia**

**January 12, 2010**  
**Washington, D.C.**



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# Update on LCPC Field Images vs. Laboratory Compaction Methods

**Aaron Coenen, Enad Mahmoud, M. Emin Kutay & Hussain Bahia**

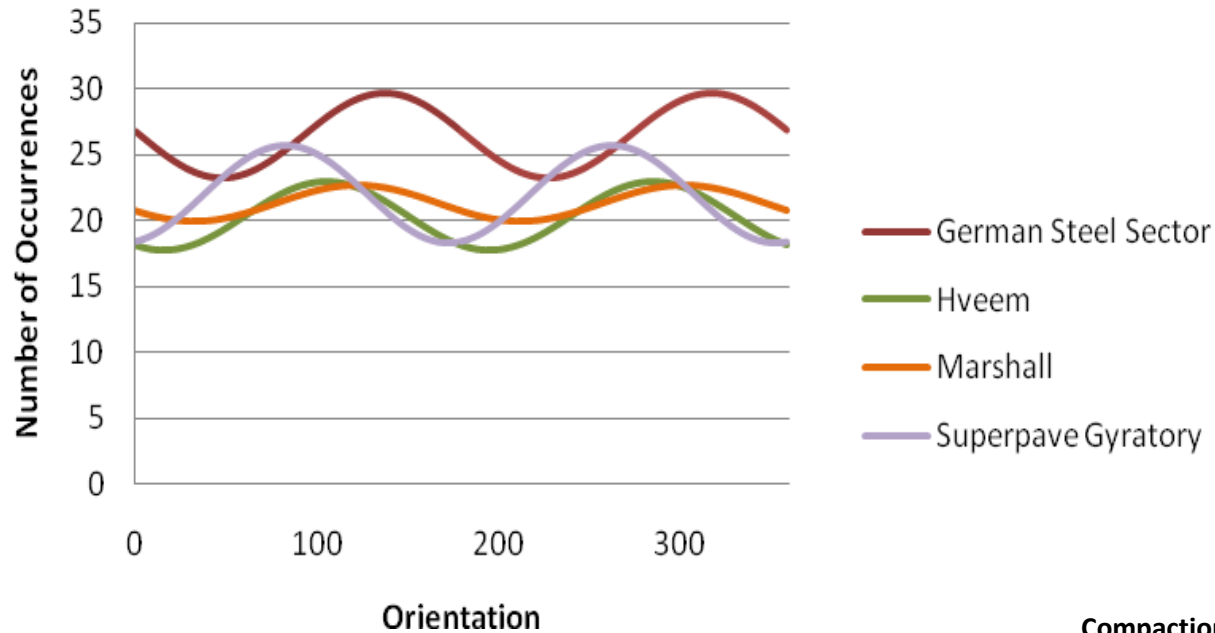
**January 12, 2010  
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# Updates since last Meeting

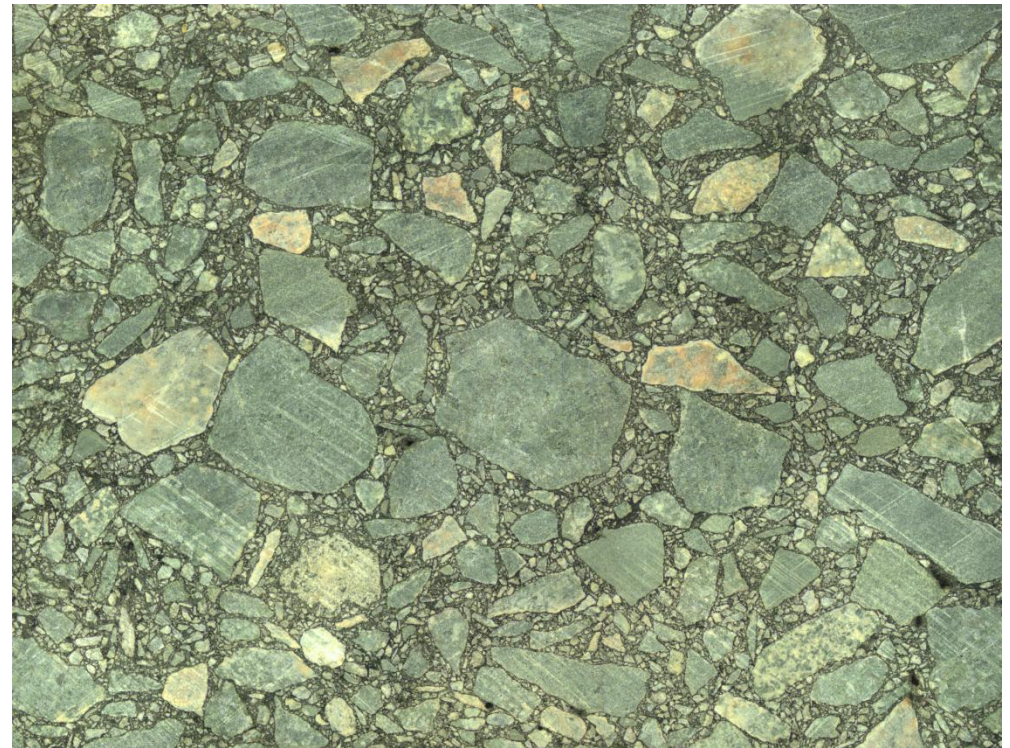
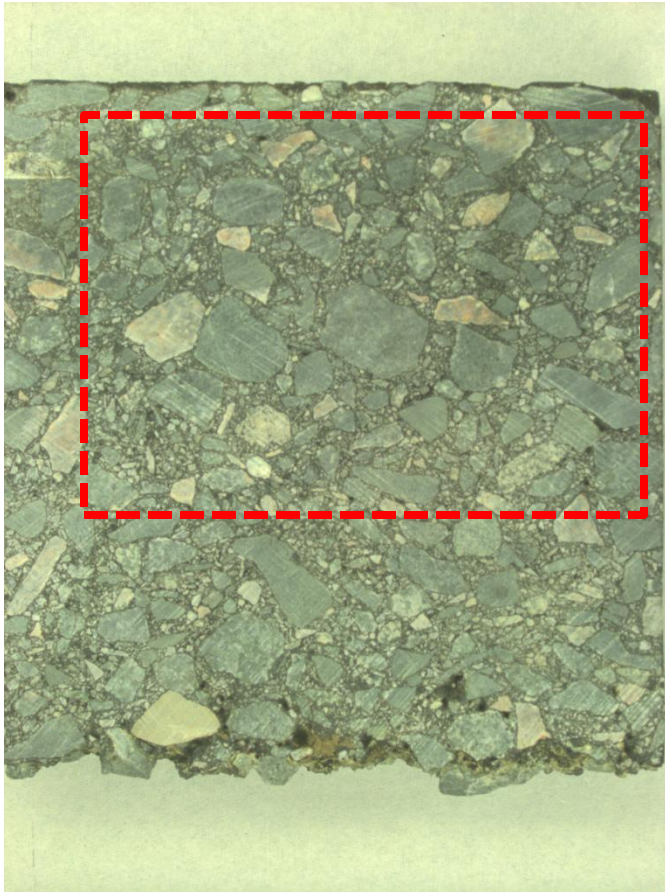
- **Additional images of laboratory compacted specimens examined**
- **Severity and predominant angle of aggregate orientation determined for each compaction method**
- **LCPC field images analyzed and compared to results of laboratory compaction methods**

# Laboratory methods

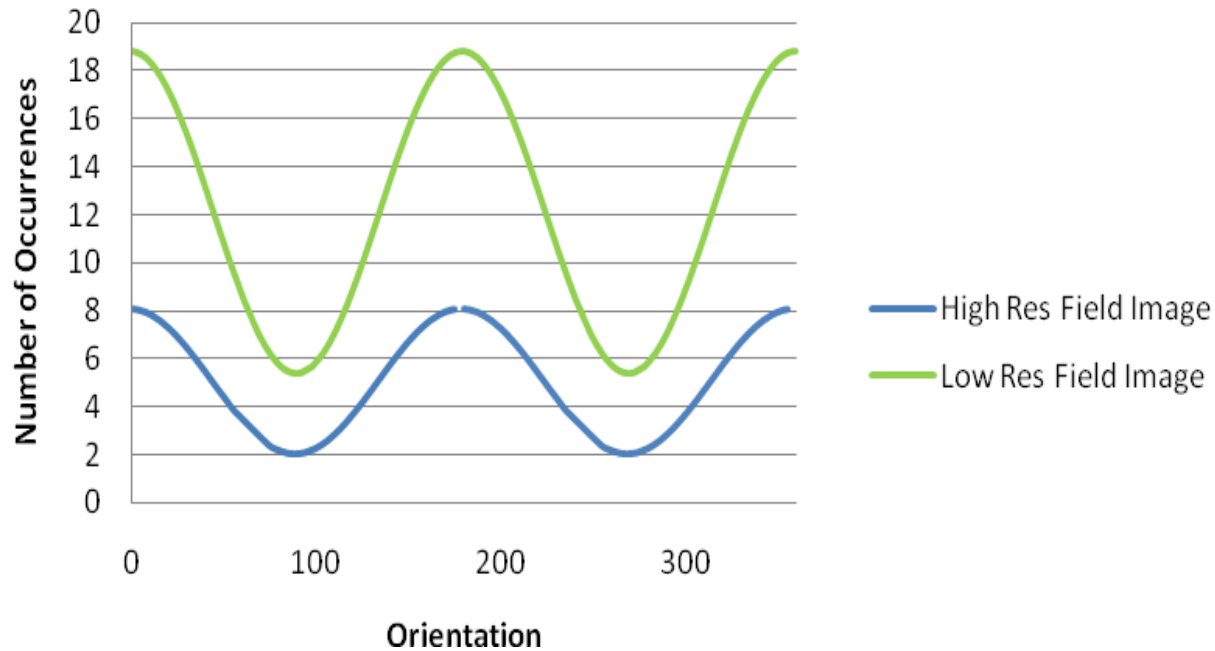


| Compaction Method   | $\delta$ | A    |
|---------------------|----------|------|
| Hveem               | 106      | 5.14 |
| Marshall            | 122      | 2.78 |
| German Steel Sector | 138      | 6.38 |
| Superpave Gyratory  | 83       | 7.3  |

# Field Images

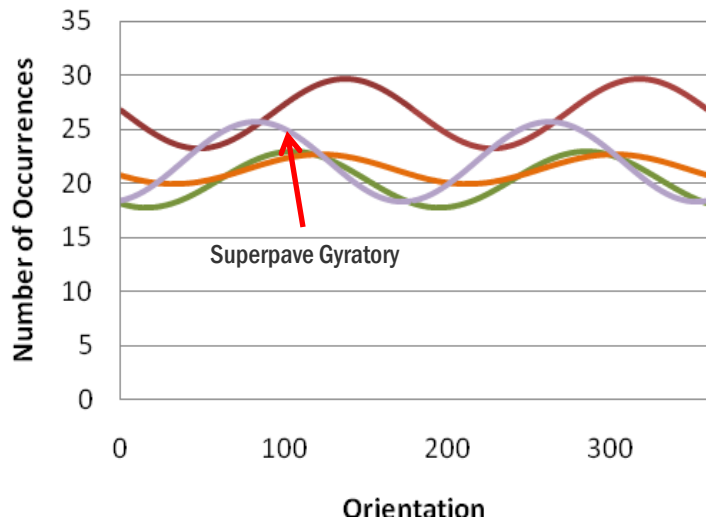


# Field Images

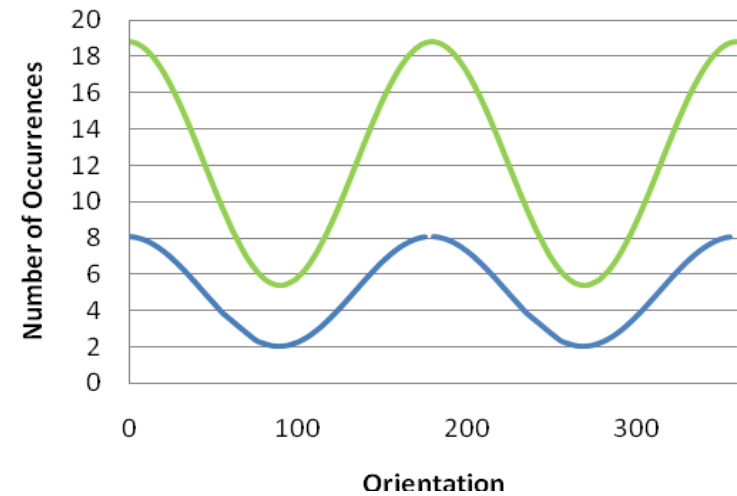


| Compaction Method | $\delta$ | A     |
|-------------------|----------|-------|
| High Resolution   | 180      | 6.05  |
| Low Resolution    | 179      | 13.38 |

# Comparison: Lab vs. Field



| Compaction Method   | $\delta$ | A    |
|---------------------|----------|------|
| Hveem               | 106      | 5.14 |
| Marshall            | 122      | 2.78 |
| German Steel Sector | 138      | 6.38 |
| Superpave Gyratory  | 83       | 7.3  |



| Compaction Method | $\delta$ | A     |
|-------------------|----------|-------|
| High Resolution   | 180      | 6.05  |
| Low Resolution    | 179      | 13.38 |

# Thank you!

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- **Questions?**
- **For more information, please contact Mr. Aaron Coenen:**
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