



# *International Forum*

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## *Recent Progress and Events of KCI*

*Oct. 15, 2017*

*Chang-Sik Choi* Ph.D., P.E.

*President of Korea Concrete Institute*

*Professor of Hanyang University*

# Current <sup>15<sup>th</sup></sup> President of KCI Founded in June 1989

- **Current** (2017.1-2018.12, 2 years)

President **Chang-Sik Choi**

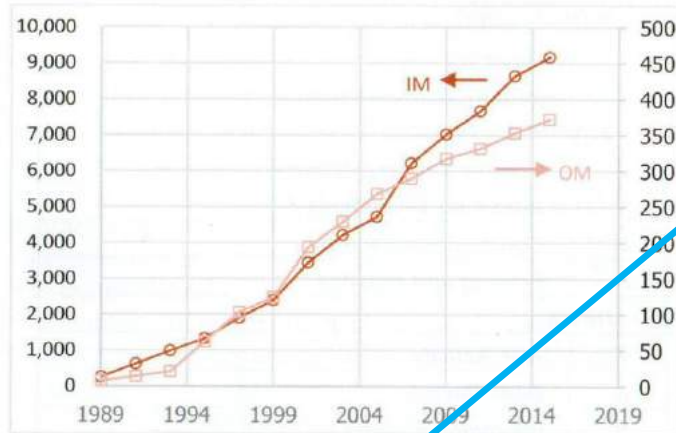
Vice President **JS Kim, HS Kim,  
YJ Kim, SH Bae,  
SY Seo**



## History of KCI

1989	KCI founded by 256 members on June 24, 1989
1990	Published "Standard Spec. & Commentary for High Speed Rail Const."
1993	Signed cooperation agreement with JCI
1995	Selected as a Supervising institution of "Standard Spec. for Conc. Const."
1996	Signed cooperation agreement with ACI
1999	Published "Unified Design Code for Concrete Structures".
2002	Asian Concrete Forum in Seoul
2003	4th CONSEC in Seoul
2006	1st Int. Symposium on Advancement of Cement Industries
2007	KCI-JCI Joint Committee on the Assessment of Existing Structures
2009	20th KCI anniversary
2010	KCI Code Attestation by ISO TC 71
2012	IJCSM Record of National Research Foundation of KOREA
2014	IJCSM Record of SCOPUS & SCIE
2014	ACF Conference in Seoul

# Current Status of KCI in 2017

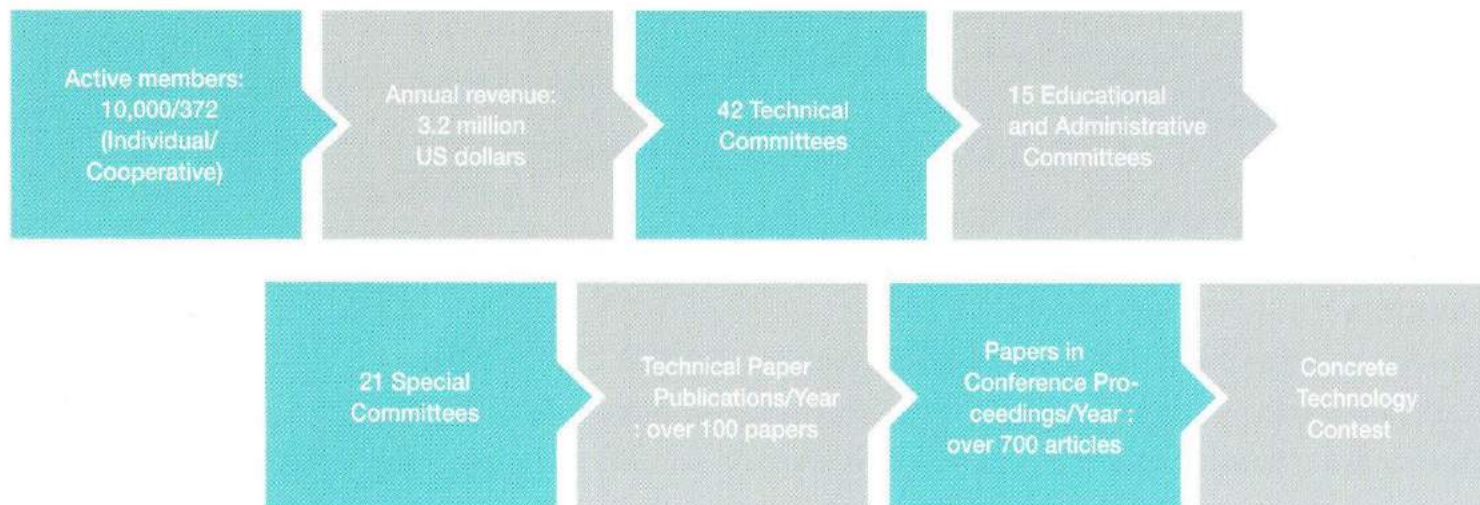
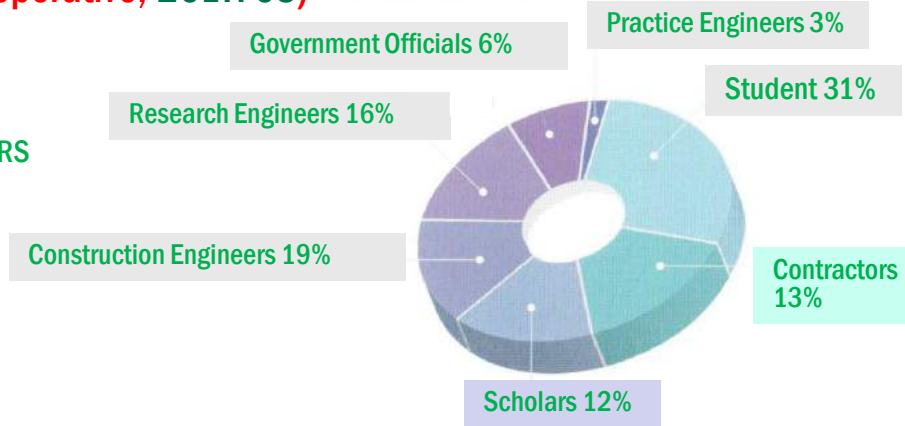


**Active members: over 10,000/372 (Individual/Cooperative, 2017. 03)**

**40 TIMES , 28 YEARS**

**256 Initiating members (1989. 6)**

**Distribution by Professional Sectors**





# Cooperation with International Organizations

<i>MOU</i>	2011.11	MOU with IIEM
	2012.04	MOU with TCA
	2014.09	MOU with RILEM
<i>Agreement of Collaboration (AOC)</i>	1996.01	AOC with ACI
	1993.05	AOC with JCI
	2006.11	AOC with TCI
<i>Joint Committee (JC) Meeting</i>	2006.09	1 <sup>st</sup> KCI-JCI JC Meeting
	2007.11	2 <sup>nd</sup> KCI-JCI JC Meeting
	2007.11	1 <sup>st</sup> KCI-ACI JC Meeting
<i>International Conference</i>	2000.09	1 <sup>st</sup> KCI-ACI Int. Conf.
	2003.12	4 <sup>th</sup> CONSEC, Seoul
	2009.12	2 <sup>nd</sup> Asia-Pacific Conf. FRP (APFIS), Seoul
	2010.05	7 <sup>th</sup> Conf. Fracture Mechanics (FraMCoS),
	2014.09	6 <sup>th</sup> ACF 2014 Int. Conf., Seoul
<i>Symposium</i>	2006.11	1 <sup>st</sup> Int. Sym. on Adv. of Cement Industry
	2008.11	1 <sup>st</sup> KCI-JCI-TCI Symposium, Seoul
	2010.11	2 <sup>nd</sup> KCI-JCI-TCI Symposium, Taiwan
	2012.07	3 <sup>rd</sup> KCI-JCI-TCI Symposium, Japan
<i>Seminar Forum Workshop</i>	2000.11	3 <sup>rd</sup> KCI-JCI Joint Seminar, Gyeongju
	2002.11	2 <sup>nd</sup> ACF (Asian Concrete Forum), Seoul
	2004.07	4 <sup>th</sup> KCI-JCI Joint Seminar, Japan
	2005.05	2 <sup>nd</sup> KCI-SCI (Spain) Joint Seminar, Muju
	2005.12	1 <sup>st</sup> KCI-ACI Joint Session
	2007.01	3 <sup>rd</sup> KCI-SCI (Spain) Joint Seminar
	2009.05	Workshop KOSEF-CSIC on Conc. Tech.



MOU with RILEM (2014.9)



FraMCoS-7 (2010.5)



# KCI Conventions

- **Korea Concrete Institute (KCI) Convention :**  
**Spring and Fall every year**
  - **2017** Spring Convention : **1003** participants, **511** papers
  - 2016 Fall Convention : 711 participants, 371 papers  
Spring Convention : 801 participants, 373 papers
  - 2015 Fall Convention : 805 participants, 371 papers  
Spring Convention : 775 participants, 373 papers
  - 2014 Fall Convention : 793 participants, 376 papers  
Spring Convention : 919 participants, 497 papers
- **Next KCI Fall Convention will be held in Andong (w/ well-preserved Korean traditional town) for Nov. 1<sup>st</sup> ~3<sup>th</sup>, 2017**
  - International members are most welcome!  
(contact [kci@kci.or.kr](mailto:kci@kci.or.kr)      [www.kci.or.kr](http://www.kci.or.kr))



# KCI Conventions

- **Korea Concrete Institute (KCI) Convention : 2017 Spring**

- Opening ceremony and opening session for invited speech & awards
- General sessions : Research/practice papers
- Student sessions : Research papers



General session



Student session



Opening ceremony



Invited speech





# KCI Conventions

## ● Korea Concrete Institute (KCI) Convention : 2017 Spring

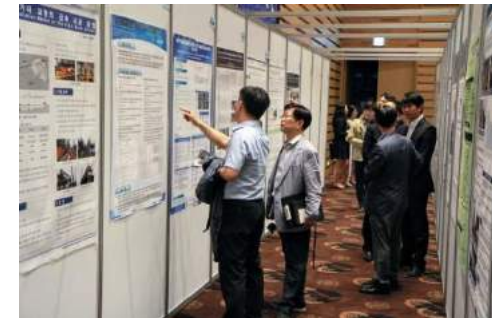
- Special sessions : Organized by KCI's Technical Committees
- Technical Committee meetings
- Poster sessions : Research/practice posters



Special sessions



Committee Meeting



Poster session



# KCI Conventions

## ● Korea Concrete Institute (KCI) Convention : 2017 Spring

- Exhibits : Contractors, designers, concrete producers, software, etc.
- Student Competition : Performance of concrete materials & elements
- Banquet
- Social Programs



Student award programs

Banquet & musical performance



Social programs  
(Mountain climbing team)





# KCI's International Journal

- **International Journal of Concrete Structures and Materials(IJCSM)**

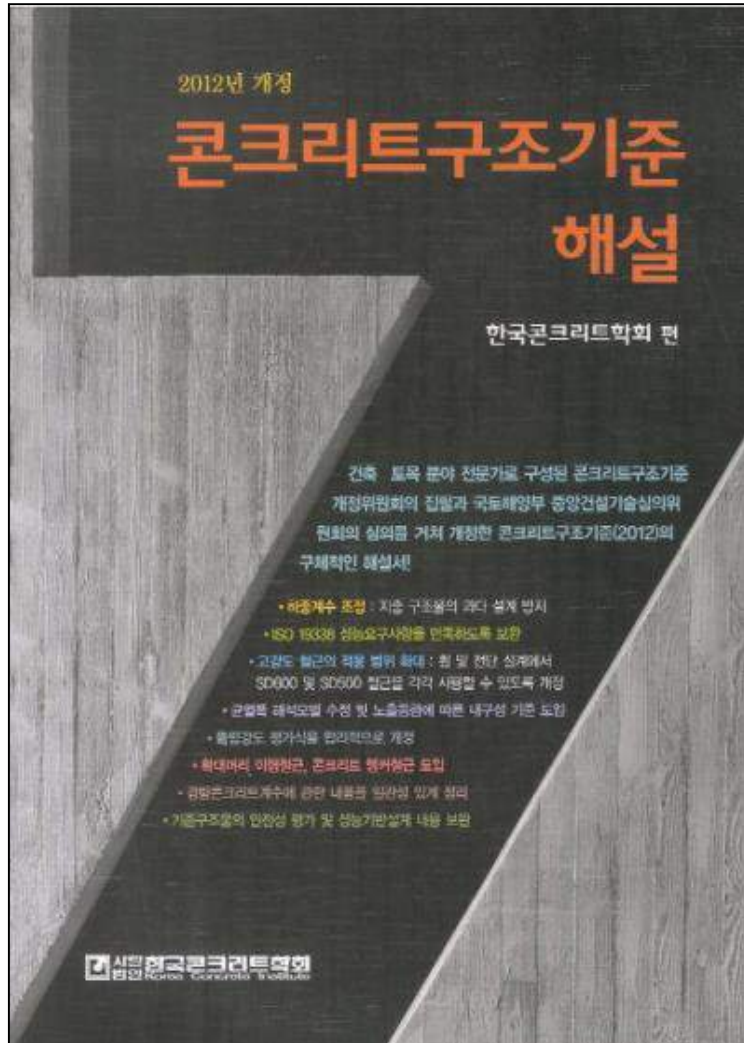
- Quarterly Journals (2017)
- **SCI(E), SCOPUS Journal(2014)**
- Impact Factor **2.031** (2016)
- In 2012, 48 papers submitted, 28 published.  
In 2013, 115 papers submitted, 28 published.  
In 2014, 136 papers submitted, 28 published.  
In 2015, 297 papers submitted, 36 published.  
**In 2016, 548 papers submitted, 50 published.**
- Plan to publish bi-monthly journal from 2018



**First published in December 2007**

# Korea Structural Concrete Design Code 2012

## Bi-lingual(Korean & English)



## Korea Structural Concrete Design Code 2012

Published by  
Structural Concrete Design Code Committee

Korea Concrete Institute (KCI)  
Room 1009, The Korea Science & Technology Center, New Building,  
Teheran-ro 7-gil 22, Gangnam-gu, Seoul, 06130, Rep. of Korea

July 2017

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KCI2012 Code approved as a standard deemed to satisfy ISO 19338



# Recent KCI Research Programs

- One of the KCI Research : Application of High-Strength Steel
  - KCI Code : Up to date, 600 MPa (85 ksi) steel is used for flexure, 500 MPa (71 ksi) steel for shear.
  - Too much steel has been required in Nuclear Power Plant, since the KEPIC Code (Korean NPP Design Code) allows to use up to 420 MPa (Grade 60) steel.
  - Research project funded by Korean government through KHNP (Korea Hydro & Nuclear Power Co.) Research Institute
  - 8 years (2012~2019) project, KCI research fund = \$ 5 Million
  - Experimental tests with 550 MPa (Grade 80) steel







# Recent KCI Research Programs

Wall Test (Cyclic Loading)



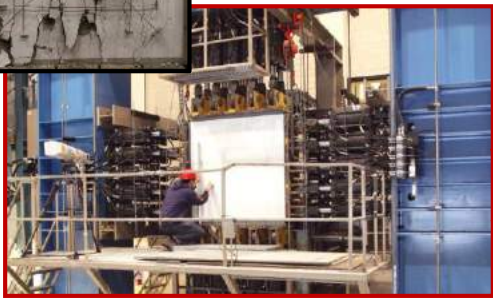
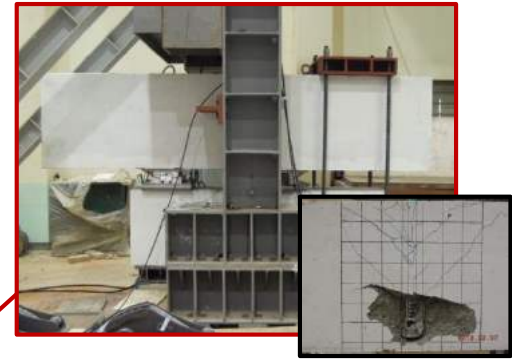
Beam Shear Test



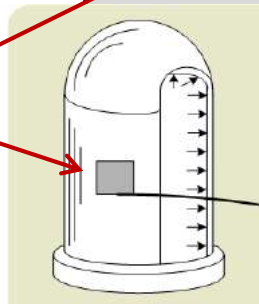
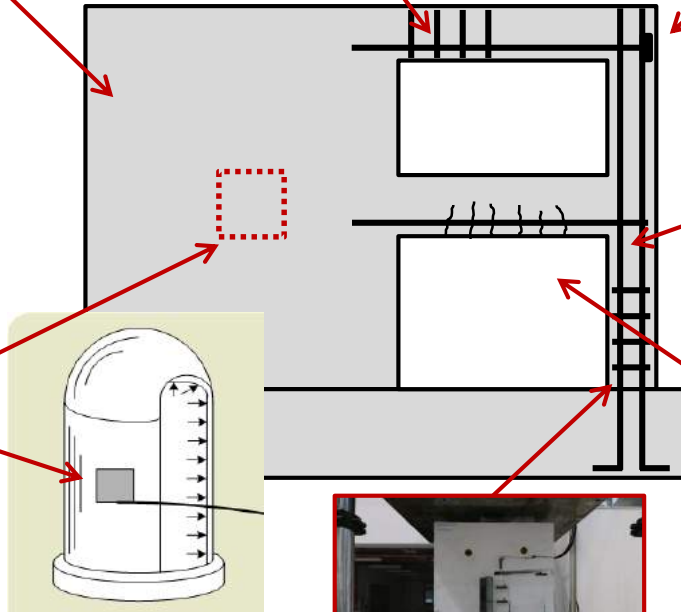
Beam Torsion Test



Headed Bar & Hooked Bar Test



Panel Test



Development Length Test



Crack Behavior Test



Shear Friction Test



# Recent KCI Research Programs

- **One of the KCI Research : Application of High-Strength Steel**
  - **Eight Universities** participated in this project.
  - **Design Codes** : re-evaluation and development of code provisions
- **Activities in ACI and Relationship with ACI Experts**
  - **ACI 349 Committee** : KCI attended and collaborated with 349
  - **ACI 359 Committee** : KCI attended and collaborated with 359
  - **Invited ACI experts** 5 times to have relevant in-depth discussions:  
Dr. Munshi, Dr. Adediran, Prof. Darwin, Prof. Whittaker & Dr. N-H Lee
- **New 5-yr project** being prepared : Research on 700 MPa (100 ksi) steel





# KCI Research Programs

- **One of the KCI Research** : Blast-Resistant Structures Using HPFRCC
  - Recently, the **blast-resistance design** of the infrastructures has been required due to the increase in global terrorist attacks and the need to use the explosive materials in the industry.
  - Research project funded by Korean government through KAIA(Korea Agency for Infrastructure Technology Advancement)
  - **3 year** (2017~2019) project, **Total 1 million**
  - Blast-Resistance Test of HPFRCC





# *Thank you!*

Reaching for the sky in Seoul



*Please let us know if you plan to visit KCI.  
([kci@kci.or.kr](mailto:kci@kci.or.kr))*