

—グローバル COE 教育研究セミナー—  
スイス・日本における火災工学の現状

2009/2/12 東京理科大学野田キャンパスにて、東京理科大学火災科学研究センター、東京工業大学建築物  
理研究センターの共催により、本セミナーを開催したのでその概要を報告する。

### 1. 講演者等：

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EHT-Zurich : Prof. Mario Fontana, Dr. Markus Knobloch

清水建設（株）：池田憲一 客員准教授

ケンテック（株）：原田昌利 博士（工学）

東京理科大学：大宮喜文 准教授、鈴木淳一 助教

参加者：31名

### 2. スケジュール

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セミナープログラム

13:30～ 開会挨拶

東京理科大学 准教授 大宮喜文

13:40～ Fire Engineering in Switzerland - Design and Research Part1

Prof. Mario Fontana, Swiss Federal Institute of Technology (ETH Zurich)

14:15～ Fire Engineering in Switzerland - Design and Research Part2

Dr. Markus Knobloch, Swiss Federal Institute of Technology (ETH Zurich)

14:50～ 休憩

15:00～ The Recent Fire Accidents Which Influenced The Structural Stability

清水建設(株) 池田憲一、東京理科大学 客員准教授、博士(工学)

15:20～ Practical Estimation of RC Column Strength Under Natural Fire

ケンテック 株式会社 原田昌利 博士(工学)

15:40 ～ 質疑討論

16:00 ～ 火災研実験棟案内

### 3. 講演内容

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Prof. Fontana と Dr. Knobloch の講演内容は、スイスにおける火災工学の概要についてであった。構  
造耐火の側面から、火災安全の規制、火災外力、研究トピック等（耐火塗料、鋼材の局部座屈等）につ  
いて説明があった。

池田客員准教授からは、構造安定性に影響を及ぼす最近の火災事例について説明があった。具体的  
には①WTC1,2、②Windsor、③首都高速5号池袋線（下）のタンクローリー横転・車両火災事故、④WTC7  
④中国中央テレビの火災事例をについて説明があった。

原田博士からは、火災時におけるコンクリートの耐力推定法について説明があった。モーメント軸  
力の耐力相関を高温に拡張することによって、実験結果を穏当に推定できるとの説明があった。



図1 開会挨拶 大宮准教授



図2 セミナー会場の様子

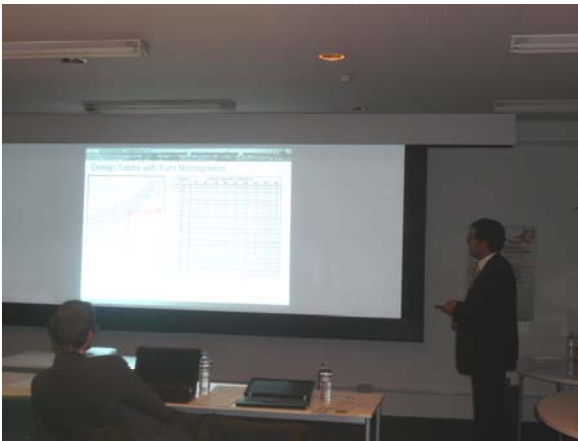


図3 Prof. Fontana



図4 Dr. Knobloch



図5 池田 客員准教授



図6 原田 博士



図7 集合写真



図8 ポスター



**Mario Fontana**

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Mario Fontana received his diploma in civil engineering from ETH Zurich in 1979. He was a researcher at the Institute for Structural Steel Design and Applied Mechanics from 1980 to 1984 and received a PhD in Technical Science from ETH in 1984. From 1984 to 1992 he was a project engineer with Geilinger Steel and Engineering Company in Winterthur (Switzerland). He was responsible for the design of steel and composite structures and head of the Fire Engineering Department at Geilinger. In 1992 he became professor for structural engineering at ETH. He is interested in steel, composite, timber construction and fire safety science. From 1998 to 2000 he was head of the Institute of Structural Engineering and from 1996 to 1999 he was dean of the Department of Civil and Environmental Engineering at ETH Zurich.

He is a member of the Swiss Society of Civil Engineers, the International Association for Bridge and Structural Engineering, the Society of Fire Protection Engineers, a vice president the International Association for Fire Safety Science and the Swiss Federal Commission on Building Products. He is past president of the Swiss Code Committee for Composite Structures, a member of the Code Committee for Steel Structures, a former member of the Eurocode Drafting Teams on Structural Fire Design of Steel and of Timber Structures.



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Markus Knobloch received his diploma in civil engineering from TU Darmstadt in 2001. He received a scholarship and studied civil engineering at ETH Zurich from 1999-2000 and 2001. He is a researcher at the Institute of Structural Engineering, Steel, Timber and Composite Structures of ETH Zurich since 2001 and received his PhD in Technical Science from ETH in 2007. He got a scholarship for excellent young ETH scientist and stayed at Tokyo Institute of Technology, Material and Structures Laboratory, Professor Ave's Laboratory in 2006.

He is interested in steel, composite, timber construction and fire safety science. He has a broad technical knowledge on stability behaviour of structures at ambient temperatures and in fire.

He is a member of the International Association for Bridge and Structural Engineering and the Society of Architects and Engineers, Frankfurt.