Resume

NAME	**Karel Hermann Thoma**
ADDRESS	Feldhofweg 7a, CH-6038 Gisikon, Switzerland
DATE OF BIRTH	07/26/1968
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EDUCATION

08.1984 – 07.1988	apprenticeship as iron-concrete- and underground construction draftsman (first education)
08.1990 – 07.1993	**University of Applied Sciences Lucerne** Bachelor in Civil Engineering
11.1994 – 01.1999	**Swiss Federal Institute of Technology ETH Zurich** Master of Science in Civil Engineering, specializing in Structural Engineering and Mechanics
07.1999 – 07.2004	**Swiss Federal Institute of Technology ETH Zurich** PhD in Structural Engineering Advisor: Prof. Dr. P. Marti, ETH Zurich

WORK EXPERIENCE

11.1988 – 07.1999	Ing. Büro K. Amrhein Ägeristrasse 84 6300 Zug (draftsman)
08.1993 – 10.1994	University of Applied Science Lucerne (Teaching Assistant for Structural Engineering)
09.1995 – 12.1995	Calatrava Valls SA Parkring 11 8002 Zürich (Project Engineer)
10.2004 – 08.2008	Flückiger + Bosshard AG Räffelstrasse 32 8045 Zürich (Project Engineer, Project Manager)

09.2008 – 09.2010	suisseplan Ingenieure AG Hohlgasse 45 5001 Aarau (Project Manager)
Nov. 2011 to present	Thoma Bauingenieurberatung AG Feldhofweg 7a 6038 Gisikon (Registered Holder, Consulting Engineer)

TEACHING AND RESEARCH EXPERIENCE

March 2007 to present — **Professor of Structural Engineering and Mechanics**

University of Applied Sciences and Arts Lucerne

Program:

- Structural Engineering
  (Bachelor in Engineering / Master in Engineering)
- Mechanics and Materials
  (Bachelor in Engineering / Master in Engineering)

Research Summary

- Nonlinear Finite Element Analysis
  (Structural Concrete; Soil-Structure Interaction; Masonry)
- Plasticity Theory
- Stress Field Models for Structural Concrete

January 2020 to present — **Senior Researcher at Institute of Structural Engineering**

Swiss Federal Institute of Technology ETHZ

Research Summary

- Nonlinear Finite Element Analysis
  (Structural Concrete, Soil-Structure-Interaction, Masonry, nlfe-Analysis of Large Structures)
- NCCR Digital Fabrication Phase 2: COMPAS

ADDITIONAL SKILLS

10.2007 – 06. 2008	Swiss Federal Institute of Technology ETH Zurich Certificate in Basic Management Skills
10.2007 – 06. 2008	University of Applied Sciences and Arts Certificate in University Didactic

LITERATUR (most important)

Reviewed Paper

Thoma, K., Roos, P., Weber, M., „Finite Elemente Analyse von Stahlbetonbauteilen im ebenen Spannungszustand“, Beton- und Stahlbetonbau, Ernst & Sohn, Nr. 109, Heft 4, 2014, pp. 275-283.

Amsler, M., Thoma, K., Heinzmann, D., „Mit Aufbeton verstärkte Durchstanzplatte“, Beton- und Stahlbetonbau, Ernst & Sohn, Nr. 109, Heft 6, 2014, pp. 394-402.

Borkowski, G., Thoma, K., Lehmann, R., Müller, F., „Entwicklung schlaufenartiger Stahlseilverankerungen in Stahlbetondecken“, Beton- und Stahlbetonbau, Ernst & Sohn, Nr. 109, Heft 9, 2014, pp. 597-605.

Thoma, K., Roos, P., Borkowski, G., „Finite Elemente Analyse von Stahlbetonplatten“, Beton- und Stahlbetonbau, Nr. 109, Heft 12, Ernst & Sohn, 2014, 9 pp.

Borkowski, G, Thoma, K., Brühwiler, E., Rupp, Ch., „Experimentelle Validierung einer Plattenbalken- Bahnbrücke aus bewehrtem UHFB“, Beton- und Stahlbetonbau, Beton- und Stahlbetonbau, Ernst & Sohn, Nr. 112, Heft 6, 2017, pp. 320-328.

Thoma, K., “Finite element analysis of eperimentally tested RC and PC beams using the cracked membrane model”, Engineering Structures, 167, 2018, pp. 592-607.

Thoma, K., Malisia, F., “Compressive Membrane Action in RC One-way Slabs”, Engineering Structures, 171, 2018, pp. 395-404.

Conference Paper (reviewed)

Thoma, K, Büeler, Ch., „Indirectly Supported Bridges – Risk of Brittle Failure?“, Proceeding, third fib-congress 2010, Washington DC, Bridges and Transportation, ID: 150, Mai 2010, 10 pp.

Büeler, Ch., Thoma K., „Indirectly Supported Bridges – Large-Scale Experiment“, 34th IABSE Symposium, Venice, Sept. 2010, 8 pp.

Borkowski, G., Thoma, K., „Full-scale testing of concrete deck slab under fatigue-causing axle loads“, Research and Applications in Structural Engineering, Mechanics and Computation – Zingoni (Ed.), Taylor & Francis Group, London, 2013, pp. 741-746.

Borkowski, G., Thoma, K., Roos, P., „Large-Scale Fatigue Testing of Concrete Hollow Box Girder Deck Slaps Under Axle Loads“, 9th International Conference on Short and Medium Span Bridges, Calgary, Canada, July 2014, 10 pp.

Research Reports

Thoma K., Seelhofer, B., Büeler Chr., „Indirekte Lagerung von Betonbrücken - Sachstandbericht“, Bundesamt für Strassen ASTRA (AGB), Schweizer Verband der Strassen- und Verkehrsfachleute, Bericht, Nr. 660, 2014, 93 pp.

Thoma K., Kenel, A., Borkowski, G., „Ermüdung von vorwiegend auf Biegung beanspruchter Fahrbahnplatten“, Bundesamt für Strassen ASTRA (AGB), Schweizer Verband der Strassen- und Verkehrsfachleute (in Review).