**Curriculum vitae with track record (for researchers)**

 **\* ROLE IN THE PROJECT** Project manager [ ]  Work package leader [ ]  Project partner [ ]
 **\* PERSONAL INFORMATION**

|  |  |
| --- | --- |
| \*Family name, First name: | Kanstad, Terje |
| \*Date of birth:  | 13.09.1957 | \*Sex:  | Male |
| \*Nationality: | Norwegian |
| Researcher unique identifier(s) (ORCID, ResearcherID, etc.): | <https://orcid.org/0000-0003-0760-2322>  |
| URL for personal website:  | <https://innsida.ntnu.no/person/kanstad>  |

**\* EDUCATION**

|  |  |
| --- | --- |
|  | Name of faculty/department, name of university/institution, country |
| 1990 | Ph.D. Division of concrete structures, The Norwegian Institute of technology, NTH, Norway |
| 1981 | Master’s, Division of concrete structures, The Norwegian Institute of technology, NTH, Norway  |

**\* POSITIONS** (academic, business, industry, public sector, national or international organisations)

**Current Position**

|  |  |
| --- | --- |
|  | Job title/name of employer/country |
| 2000- | Professor, The Norwegian University of Science and Technology, NTNU, Norway |

 **Previous positions held** (list)

|  |  |
| --- | --- |
|  | Job title/name of employer/country |
| 1982-1984 | Sivilingeniør Arne R. Reinertsen, Trondheim, Norway |
| 1985-2000 | Research fellow (stipendiat), Assistant prof, Associate prof, NTNU, Norway |

 **MOBILITY** (if applicable)

**Research stays abroad lasting more than three months**

|  |  |
| --- | --- |
|  | Name of faculty/department/centre, name of university/institution/country  |
| 1994(6 months)  | Faculty of civil engineering and geoscience, TU Delft, Delft, The Netherlands |

**PROJECT MANAGEMENT EXPERIENCE** (if applicable)

**Projects funded by Research Council of Norway, international research programmes, private or public organisations**

|  |  |
| --- | --- |
|  | Project and role, funding from |
| 2009-2014 | Project-manager sub-project: Competitive construction, and board member in SFI COIN(2007-2014). Funding from research council and industry.  |
| 2015-2019 | Project manager, DaCS. BIA-project Funding from research council and industry. |
| 2017-2021 | Sub-project manager, ARKON, A sub-project related to the structural consequences of ASR in bridges funded by NTNU and the 5-year R&D programme for bridges and quays “Better Bridge Maintenance” by the Norwegian Public Roads Administration  |
| 2018-2022 | Project manager “Ferry free E39-Research related to sustainable performance, analysis and design of large-scale advanced concrete structures in exposed environments” |
| 2021-2025 | Work-package leader, MESLA (Management and Extension of Service Life of infrastructures affected by Alkali‐silica reaction). Structural analysis.  |
| 2021-2025 | Work-package leader, Fibercon: Fibre reinforced concrete structures. BIA-project with funding from research council and industry.  |
| 2021-2022 | Project manager, “Dynamic behaviour, safety and robustness of hollow core slabs in the construction phase”. Funded by the Norwegian precast concrete industry.  |

 **SUPERVISION OF GRADUATE STUDENTS AND RESEARCH FELLOWS** (if applicable)

|  |  |  |  |
| --- | --- | --- | --- |
|  | No. of  | Master’s students/ Ph.D./Postdocs | Name of faculty/department/centre, name of university/institution/country |
| 1989-  | 350 | Master thesis (main supervisor)  | Department of structural engineering, The Norwegian University of Science and Technology, NTNU, Norway |
| 1998- | 14+7 | Ph thesis (main supervisor + co-supervisor) | Department of structural engineering, The Norwegian University of Science and Technology, NTNU, Norway |
| 2017- | 1 | Ph thesis (main supervisor) | Department of engineering science, University of Agder, Grimstad, Norway |

 **TEACHING ACTIVITIES** (The last ten years)

|  |  |
| --- | --- |
|  | Teaching position – topic, name of university/institution/country |
| 2010-2017 | TKT 4220 Concrete structures 2 (4th year of study programme) NTNU |
| 2017-  | TKT 4222 Concrete structures 3 (5th year of study programme), NTNU |
| 2010- | KT 8214 Creep and shrinkage of concrete structures (PhD-level), NTNU |
| 2017-2023 | BYG 406 Prestressed concrete (4th year of master programme, University of Agder, Grimstad. Norway |
| 2010- | Lectures and responsibilities for industrial courses (Centre for Continuing Education and Professional Development at NTNU, Tekna and the Norwegian Concrete Association) |
| 2021 | Lectures at the *fib*-supported International “Summer school for PhD-students and the industry”. Politecnico di Milano, Lecco Campus, Italy.  |

 **INSTITUTIONAL RESPONSIBILITIES** (if applicable)

**Member of a committee/graduate student advisor etc.**

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|  | Name of university/institution/country |
| 2000- | PhD evaluation committees: 21 (Sweden (Luleå, KTH, Chalmers & Lund), Denmark (DTU), Lithuania (Kaunas), Austria (TUGraz) Switzerland (ETH) & Italy (Brescia) |
| 2000- | International committees for assessment of qualifications: 8 (Sweden, Denmark and Finland) |

**COMMISSIONS OF TRUST** **IN ACADEMIC, PUBLIC OR PRIVATE ORGANISATIONS** (if applicable)

**Scientific advisory board/review board/review panel member/editorial board/scientific advisory board/reviewer/scientific evaluation/etc.**

|  |  |
| --- | --- |
|  | Name of university/institution/country – and role  |
| 2000- | Materials and structures, Engineering structures, Construction and building materials Nordic concrete research. Cement and concrete research, Structures. Reviewer of journal papers |
| 2011-2015 | Evaluation of Swedish BSc and MSc-education, Department of Quality Assurance/Swedish Higher Education Authority. [www.uka.se](http://www.uka.se) . |

**Other commissions of trust - in business, organisations or public life**

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| --- | --- |
|  | Name of board/body/country – and role  |
| 2016- | SN/K 007 (Standards Norway) The reference group for all concrete standards, Chairman. |
| 2017- | SN/K 370 (Standards Norway) Coordination group for all the Eurocodes. Member. |

**MEMBERSHIPS OF ACADEMIES / SCIENTIFIC SOCIETIES / NETWORKS** (if applicable)

|  |  |
| --- | --- |
|  | Name of academies, scientific societies, networks |
| Present memberships | *fib* TG 8.3 Fibre reinforced concrete,fib task Group 8.8 “Structural design with highly flowable concrete*fib* AG 13 Model Code 2020 Reinforced concrete properties,fib TG 4.5 Time-dependent Behavior of Concrete*fib* TG 10.1 - SAG on Fibre Reinforced Concrete in MC2020RILEM TC - Interdisciplinary approach to early age and long-term crack width analysis in RC structures: From material science to structural designCEN/TC 250/SC 2/WG 1/ (Revision of Eurocode 2) Working group Coordination and Editorial PanelCEN/TC 250/SC 2/WG 1/ (Revision of Eurocode 2) TG 7 Time-dependent effects. Main responsibility for the Annex related to evaluation of early-age and long-term cracking due to restraint CEN/TC 250/SC 2/WG 1/ (Revision of Eurocode 2), TG 2 Fibre reinforced concreteCEN/TC 250/SC 2/PT3 Project team for writing of Eurocode 2 (main responsibility for the Steel Fibre Concrete Annex)Norwegian Concrete Association committee for fibre concrete, NB 38 Norwegian Concrete Association committee for strengthening with carbon fibre reinforced polymers, NB 36 2014-2018. COST-action TU1404 Towards the next generation of standards for service life of cement-based materials and structures. Member of core group.  |

**Track record**

**The total number of publications** (April2025)**:** Total number of publications during the career: Scopus system 69, Cristin (NTNU-system): 294.

Citationsindices **:** **Scopus total citations** 796 **;** h-index: 17

**Selection of Publications (2018-2025):**

1. Terjesen, Otto; Pinto, Gianclaudio; Kanstad, Terje; Tan, Jesus Reignard Medel.
Performance study of crack width calculation methods according to Eurocodes, fib model codes and the modified tension chord model. *Structural Concrete* 2024 p. -
2. Jacobsen, Stefan; Asadi, Iman; Skjølsvold, Ola; Kanstad, Terje. Frost testing non-air entrained supplementary cementitious materials high performance concrete: salt-scaling and internal damage. University of British Columbia Press 2023 (ISBN 9780888654915)
3. Kanstad, Terje; Cantero, Daniel; Ji, Guomin; Kristoffersen, Martin; Kjeldsatad, paal; Løseth, Ole Johan. Hollow core slabs during assembly process – structural behaviour and strength during positioning of elements. Betongindustridagene 2023; 2023-01-26 - 2023-01-27
4. Kanstad, Terje; Cantero, Daniel; Kristoffersen, Martin; Ji, Guomin. Hollow core slabs in the assembly process - Structural behaviour and strength during positioning of elements. Trondheim: NTNU Department of Structural Engineering 2023 (ISBN 978-82-7482-203-0) 47
5. Lin, Chen; Kanstad, Terje; Jacobsen, Stefan; Ji, Guomin. Bonding property between fiber and cementitious matrix: A critical review. *Construction and Building Materials* 2023 ;Volume 378.(131169) p. –
6. Pérez Caldentey, Alejandro; Bellod Thomas, Juan Luis; Torres, Lluis; Kanstad, Terje.
Serviceability Limit States According to the New Eurocode 2 Proposal: Description and Justification of the Proposed Changes. *Hormigón y Acero* 2023 ;Volume 74.(299/300)
7. Stemland, Kathrine Mürer; Johansen, Håvard; Kanstad, Terje. Load Effects of ASR-induced Expansion in Reinforced Concrete and Their Consequences for Structural Assessment. *Nordic Concrete Research* 2023 ;Volume 68.(68) p. 39-63
8. Arano Barenys, Assis; Colombo, Matteo; Martinelli, Paolo; Overli, Jan Arve; Hendriks, Max; Kanstad, Terje; Prisco, Marco di. Failure characteristics of reinforced concrete circular slabs subsequently subjected to fire exposure and static load: An experimental study. *Structural Concrete* 2022 ;Volume 24.(1) p. 872-891
9. Kanstad, Terje; Jacobsen, Stefan; Klausen, Anja Birgitta Estensen; Skjølsvold, Ola.
Eco-friendly high-performance concretes: From particle packing to bridge tower design for record long suspension bridges along the ferry-free E39. XXIV Nordic Concrete Research Symposium 2022; 2022-08-16 - 2022-08-19
10. Klausen, Anja Birgitta Estensen; Kanstad, Terje; Bjøntegaard, Øyvind. The cracking risk of hardening concrete exposed to realistic curing temperature regimes and restraint conditions – Experimental investigations of important parameters. *Construction and Building Materials* 2022 ;Volume 338. p. –
11. Kongshaug, Simen Sørgaard; Hendriks, Max; Kanstad, Terje; Markeset, Gro. Toward identifying the ASR-induced stresses from displacement measurements and crack observations—Demonstration on a beam bridge in Norway. *Engineering structures* 2022 ;Volume 263. p.
12. Lindgård, Jan; Kanstad, Terje; Pedersen, Bård Magne; Rodum, Eva. Management and Extension of Service Life of infrastructures affected by Alkali‐silica reaction (MESLA). I: *XXIV Nordic Concrete Research Symposium 2022*. Stockholm, Sweden: Swedish Concrete Association 2022 ISBN 978-82-8208-056-9.
13. Menga, Antonia; Kanstad, Terje; Cantero, Daniel. Corrosion induced failures of post-tensioned bridges. Trondheim: NTNU, Department of Structural Engineering 2022 (ISBN 978-82-7482-200-9) 155 p.
14. Menga, Antonia; Kanstad, Terje; Klausen, Anja Birgitta Estensen. Effect of cement type on autogenous deformation under isothermal and realistic curing conditions. XXIV NCR Symposium; 2022-08-17 - 2022-08-19
15. Menga, Antonia; Kanstad, Terje; Klausen, Anja Birgitta Estensen. Evaluation Of Early Age Cracking Due to Restraint: Verification of the Simplified Stress Calculation Method Prposed in prEN 1992-1-1. I: *Proceedings of the 6th fib International Congress, June 12-16, 2022, Oslo, Norway*. : fib 2022 ISBN 978-2-940643-15-8. p. 2638-2647
16. Menga, Antonia; Kanstad, Terje; Klausen, Anja Birgitta Estensen. Property development and volume changes in early age concrete. XXIV NCR Symposium; 2022-08-17 - 2022-08-19
17. Osmolska, Magdalena Jadwiga; Kanstad, Terje; Hendriks, Max; Markeset, Gro.
Numerical investigation into the effects of corrosion on the shear performance of pretensioned bridge girders with cast-in-place slabs. *Structures* 2022 ;Volume 46. p. 1447-1468
18. Stemland, Kathrine Mürer; Rodum, Eva; Kanstad, Terje. Stiffness damage testing of laboratory-cast alkali-silica reactive concrete and cores drilled from an existing concrete structure. I: *Proceedings of the 16th International Conference on Alkali-Aggregate Reaction in Concrete. Volume I*. : LNEC 2022 ISBN 978-972-49-2315-4.
19. Terjesen, Otto; Kanstad, Terje; Tan, Jesus Reignard Medel. Application of NLFEA for crack width calculations in SLS. Computational Modelling of Concrete and Concrete Structures; 2022-05-23 - 2022-05-26
20. Guomin Ji, Terje Kanstad, Steinar Trygstad; Structural behavior of fiber reinforced concrete foundations, Euro-C, Vienna, May 2022.
21. Otto Terjesen, Terje Kanstad, Reignard Tan; Application of NLFEA for crack width calculations in SLS, Euro-C, Vienna, May 2022.
22. Stemland, Kathrine, Rodum, Eva, and Kanstad, Terje; Stiffness damage testing of laboratory cast alkali-silica reactive concrete and cores drilled from a real concrete structure, Lisbon, Portugal, May 2022.
23. Kanstad, Terje, Jacobsen, Stefan, Klausen, Anja; Eco-friendly high-performance concretes: From particle packing to bridge tower design for record long suspension bridges along the ferry-free E39. Fib-congress, Oslo 2022.
24. Menga, Antonia, Klausen, Anja, & Kanstad, Terje; Evaluation of early age cracking due to restraint: verification of the simplified stress calculation method proposed in prEN 1992-1-1 . Fib-congress, Oslo 2022.
25. Cantero, Daniel; Kanstad, Terje. Numerical investigations of damaged post-tension systems and their structural effect on bridges. Trondheim: NTNU, Department of Structural Engineering 2022 (ISBN 978-82-7482-202-3) 75 p.
26. Menga, Antonia; Kanstad, Terje; Cantero, Daniel. Corrosion induced failures of post-tensioned bridges. Trondheim: NTNU, Department of Structural Engineering 2022 (ISBN 978-82-7482-200-9) 155 p.
27. Kongshaug, Simen Sørgaard; Larssen, Rolf Magne; Hendriks, Max; Kanstad, Terje; Markeset, Gro. Load effects in reinforced concrete beam bridges affected by alkali–silica reaction—Constitutive modelling including expansion, cracking, creep and crushing. Engineering structures 2021 ;Volum 245. s. 1-17
28. Kanstad, Terje. Mechanical characterization and classification of fibre-reinforced materials. Structural design approach according to Eurocode 2020 (4 lectures). Summer school for PhD-students and the industry; 2021-07-02 - 2021-07-07
29. Kanstad, Terje; Jacobsen, Stefan. Green Concrete mix design: Robust Eco-friendly C100 concrete from particle packing to bridge tower analysis in the «Ferry-free E39-project». Konferanse Nordisk Vegforum (NVF) - Bru; 2021-05-19 - 2021-05-19
30. Arano Barenys, Assis; Colombo, Matteo; Martinelli, Paolo; Øverli, Jan Arve; Hendriks, Max; Kanstad, Terje; Prisco, Marco di. Material Characterization Approach for Modelling High-Strength Concrete after Cooling from Elevated Temperatures. *Journal of materials in civil engineering* 2021 ;Volume 33.(5) p. –
31. Colombo, Matteo; Martinelli, Paolo; Arano Barenys, Assis; Øverli, Jan Arve; Hendriks, Max; Kanstad, Terje; Prisco, Marco di. Experimental investigation on the structural response of RC slabs subjected to combined fire and blast. *Structures* 2021 ;Volume 30. p. 1017-1030
32. Klausen, Anja Birgitta Estensen; Kanstad, Terje. The effect of shrinkage reducing admixtures on drying shrinkage, autogenous deformation, and early age stress development of concrete. *Structural Concrete* 2021 ;Volume 22.(51) p. E596-E606
33. Azenha, Miguel; Kanavaris, Fragkoulis; Schlicke, Dirk; Jędrzejewska, Agnieszka; Benboudjema, Farid; Honorio, Tulio; Šmilauer, Vít; Serra, Carlos; Forth, John; Riding, Kyle; Khadka, Binod; Sousa, Carlos; Briffaut, Matthieu; Lacarrière, Laurie; Koenders, Eduardus; Kanstad, Terje; Klausen, Anja Birgitta Estensen; Torrenti, Jean-Michel; Fairbairn, Eduardo M. R..
Recommendations of RILEM TC 287-CCS: thermo-chemo-mechanical modelling of massive concrete structures towards cracking risk assessment. *Materials and Structures* 2021 ;Volum 54.(4) s.
34. Menga, Antonia; Kanstad, Terje; Cantero, Daniel; Bathen, Lise; Hornbostel, Karla.
Review of corrosion-induced failures of post-tensioned bridges. CACRCS DAYS 2021 Capacity Assessment of Corroded Reinforced Concrete Structures: from Research to Daily Engineering Evaluation; 2021-11-30 - 2021-12-03
35. Kongshaug, Simen Sørgaard; Oseland, Oddbjørn Wathne; Kanstad, Terje; Hendriks, Max; Rodum, Eva; Markeset, Gro. Experimental investigation of ASR-affected concrete – The influence of uniaxial loading on the evolution of mechanical properties, expansion and damage indices. *Construction and Building Materials* 2020 ;Volume 245. p. –
36. Kanstad, T. (on behalf of CEN/TC250/SC2 Project Team T3): Background document to prEN1992-1-1 D4 Rev 6 Annex L Steel Fibre Reinforced Concrete (SFRC)). 2020.
37. Kanstad, T., Døssland, Å.L., Sandbakk, S., Bjøntegaard, Ø., Sæter, Ø., Mathisen, A.E., Leirud, N., Brå, H., Sandaker,T.: Norsk Betongforening's Publikasjon nr. 38 "Fiberarmerte betongkonstruksjoner" (NB38), 2020.
38. Osmolska, Magdalena Jadwiga; Hornbostel, Karla; Kanstad, Terje; Hendriks, Max; Markeset, Gro. Inspection and assessment of corrosion in pretensioned concrete bridge girders exposed to coastal climate. *Infrastructures* 2020 ;Volume 5.(9) p. 1-25
39. Klausen, Anja Birgitta Estensen; Kanstad, Terje; Bjøntegaard, Øyvind; Sellevold, Erik Johan.
The effect of curing temperature on autogenous deformation of fly ash concretes. *Cement & Concrete Composites* 2020 ;Volume 109. p. –
40. Tan, Jesus Reignard Medel; Hendriks, Max; Geiker, Mette Rica; Kanstad, Terje. A numerical investigation of the cracking behaviour of reinforced-concrete tie elements. Magazine of Concrete Research 2020 ;Volum 72.(3) s. 109-12
41. Tan, Jesus Reignard Medel; Hendriks, Max; Geiker, Mette Rica; Kanstad, Terje.
Analytical Calculation Model for Predicting Cracking Behavior of Reinforced Concrete Ties. Journal of Structural Engineering 2020 ;Volum 146.(2) s. –
42. Arano Barenys, Assis; Øverli, Jan Arve; Hendriks, Max; Colombo, Matteo; Martinelli, Paolo; Kanstad, Terje; Prisco, Marco di. Heated Reinforced Concrete Slabs Subjected to Blast Load: Experimental and Numerical Results. fib Symposium on Concrete Structures for Resilient Society; 2020-11-22 - 2020-11-24
43. Paciorek, Magdalena Jadwiga; Kanstad, Terje; Hendriks, Max; Hornbostel, Karla; Markeset, Gro. Durability of pretensioned concrete girders in coastal climate bridges: Basis for better maintenance and future design. *Structural Concrete* 2019 ;Volume 20.(6) p. 2256-2271
44. Klausen, Anja Birgitta Estensen; Kanstad, Terje; Bjøntegaard, Øyvind. Hardening Concrete Exposed to Realistic Curing Temperature Regimes and Restraint Conditions: Advanced Testing and Design Methodology. *Advances in Materials Science and Engineering* 2019 ;Volume 2019. p. -
45. Tan, Jesus Reignard Medel; Hendriks, Max; Geiker, Mette Rica; Kanstad, Terje.
Modified cracked membrane model for consistent crack width predictions of reinforced concrete structures subjected to in-plane loading. *Engineering structures* 2019 ;Volum 196.
46. Basteskår, Mikael; Engen, Morten; Kanstad, Terje; Fosså, Kjell Tore. A review of literature and code requirements for the crack width limitations for design of concrete structures in serviceability limit states. *Structural Concrete* 2019 ;Volume 20.(2) p. 678-688
47. Basteskår, Mikael; Engen, Morten; Kanstad, Terje; Johansen, Håvard; Fosså, Kjell Tore.
Serviceability limit state design of large concrete structures: Impact on reinforcement amounts and consequences of design code ambiguity. *Engineering structures* 2019 ;Volume 201.
48. Larsen, Ingrid Lande; Terjesen, Otto; Thorstensen, Rein Terje; Kanstad, Terje. Use of Concrete for Road Infrastructure: A SWOT Analysis Related to the three Catchwords Sustainability, Industrialisation and Digitalisation.. *Nordic Concrete Research* 2019 ;Volume 60. p. 31-50
49. Kanstad, Terje; Klausen, Anja Birgitta Estensen. Background for a new Eurocode 2-annex: Evaluation of early-age and long-term cracking due to restrained deformations. I: *Proceedings of SynerCrete'18: Interdisciplinary Approaches for Cement-based Materials and Structural Concrete: Synergizing Expertise and Bridging Scales of Space and Time. Vol 1*. Rilem publications 2018 ISBN 978-2-35158-211-4. p. 85-90
50. Tan, Jesus Reignard Medel; Eileraas, Kristoffer; Opkvitne, Ola; Zirgulis, Giedrius; Hendriks, Max; Geiker, Mette Rica; Brekke, Dan-Evert; Kanstad, Terje. Experimental and theoretical investigation of crack width calculation methods for RC ties. *Structural Concrete* 2018
51. Klausen, Anja Birgitta Estensen; Kanstad, Terje; Bjøntegaard, Øyvind; Sellevold, Erik Johan.
The effect of realistic curing temperature on the strength and E-modulus of concrete. *Materials and Structures* 2018 ;Volum 51.(6) s. 1-14
52. Ji, Guomin; Kanstad, Terje; Bjøntegaard, Øyvind. Calibration of material models against TSTM test for crack risk assessment of early-age concrete containing fly ash. *Advances in Materials Science and Engineering* 2018 ;Volume 2018:1069181. p. 1-11
53. Ji, Guomin; Kanstad, Terje; Bjøntegaard, Øyvind. Crack risk evaluation of submerged concrete tunnel during hardening phase. *Advances in Civil Engineering* 2018 ;Volume 2018. p. –
54. Ji, Guomin; Kanstad, Terje; Bjøntegaard, Øyvind. Numerical modelling of field test for crack risk assessment of early age concrete containing fly ash. *Advances in Materials Science and Engineering* 2018 ;Volume 2018:1058170. p. 1-16