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Mineral Based Materials and Mechanics  
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## Qualifications

Doctoral degree, Engineering and Technology, Aalto University  
Award Date: 20 Jun 2013

Licentiate degree, Engineering and Technology, Helsinki University of Technology  
Award Date: 17 Dec 2007

Master's degree, Engineering and Technology, Helsinki University of Technology  
Award Date: 16 Dec 1996

## Employment

### Staff Scientist

Staff Scientist  
Department of Civil Engineering  
Aalto University  
1 Jun 2016 → present

### Staff Scientist

Staff Scientist  
Mineral Based Materials and Mechanics  
Aalto University  
1 Jan 2019 → present

## Research output

### **Determining the Location of Steel Reinforcement in Thick Concrete Walls by Non-Destructive Inspection**

Al-Neshawy, F. & Puttonen, J., 1 Dec 2023, In: Nordic Concrete Research. 69, 2, p. 55-71 17 p.

### **Investigation of the Internal Structure of Hardened 3D-Printed Concrete by X-CT Scanning and Its Influence on the Mechanical Performance**

Chen, Y., Kuva, J., Mohite, A., Li, Z., Rahier, H., Al-Neshawy, F. & Shu, J., Mar 2023, In: Materials. 16, 6, 26 p., 2534.

### **Assessment procedure of determining compressive strength of hardened reinforced concrete structures**

Wallenius, A., Al-Neshawy, F. & Punkki, J., 2023, *Proceedings of the International Conference on Non-destructive Evaluation of Concrete in Nuclear Applications - NDE NucCon 2023*. Aalto-yliopisto, p. 127-136 10 p. (Aalto University publication series SCIENCE + TECHNOLOGY; vol. 2023, no. 3).

### **Combined NDT methods to determine the variations in compressive strength throughout concrete structures**

Al-Neshawy, F., Ferreira, M. & Puttonen, J., 2023, *Proceedings of the International Conference on Non-destructive Evaluation of Concrete in Nuclear Applications - NDE NucCon 2023*. Aalto-yliopisto, p. 368-376 9 p. (Aalto University publication series SCIENCE + TECHNOLOGY; vol. 2023, no. 3).

### **Comprehensive state-of-the-art report for long-term behaviour of concrete structures in repository environment**

Al-Neshawy, F., Ba Ragaa, A. & Punkki, J., 2023, Aalto-yliopisto. 85 p. (Aalto University publication series SCIENCE + TECHNOLOGY; vol. 2023, no. 4)

**Laboratory study on corrosion of steel rebars in anoxic environments - Deliverable 2.2: ConLoT project – Long-term testing of the durability of concrete at final disposal conditions**

Al-Neshawy, F., Ba Ragaa, A. & Punkki, J., 2023, Aalto-yliopisto. 68 p. (Aalto University publication series SCIENCE + TECHNOLOGY; vol. 2023, no. 5)

**Proceedings of the International Conference on Non-destructive Evaluation of Concrete in Nuclear Applications - NDE NucCon 2023**

Al-Neshawy, F. (ed.), Ferreira, M. (ed.), Bohner, E. (ed.), Kekäläinen, P. (ed.), Oey, T. (ed.), Lay, V. (ed.) & Niederleithinger, E. (ed.), 2023, Aalto-yliopisto. 393 p. (Aalto University publication series SCIENCE + TECHNOLOGY; vol. 2023, no. 3)

**Reduction of CO<sub>2</sub> Emission by Using Low Carbon Concretes with Accelerating Admixtures**

Illarionova, E., Antonova, A., Al-Neshawy, F. & Punkki, J., 2023, *International RILEM Conference on Synergising Expertise towards Sustainability and Robustness of Cement-based Materials and Concrete Structures. SynerCrete 2023*. Springer, p. 65-75 11 p. (RILEM Bookseries; vol. 44).

**The Effect of Heat Curing on the Early-Strength Development of Low-Carbon Concrete**

Antonova, A., Illarionova, E., Al-Neshawy, F. & Punkki, J., 2023, *International RILEM Conference on Synergising Expertise towards Sustainability and Robustness of Cement-based Materials and Concrete Structures. SynerCrete 2023*. Springer, Vol. 2. p. 809-819 11 p. (RILEM Bookseries; vol. 44).

**Using non-destructive testing methods for locating the steel reinforcement in reinforced concrete structures**

Al-Neshawy, F., Ba Ragaa, A. & Puttonen, J., 2023, *Proceedings of the International Conference on Non-destructive Evaluation of Concrete in Nuclear Applications - NDE NucCon 2023*. Aalto-yliopisto, p. 335-344 10 p. (Aalto University publication series SCIENCE + TECHNOLOGY; vol. 2023, no. 3).

**Investigation on the effect of entrained air on pore structure in hardened concrete using MIP**

Chen, Y., Al-Neshawy, F. & Punkki, J., 19 Jul 2021, In: *Construction and Building Materials*. 292, 13 p., 123441.

**Characteristics of Entrained Air Voids in Hardened Concrete with the Method of Digital Image Analysis Coupled with Schwartz-Saltykov Conversion**

Ojala, T., Chen, Y., Punkki, J. & Al-Neshawy, F., 1 May 2021, In: *Materials*. 14, 9, 20 p., 2439.

**Critical studies in support of the ageing management of NPP concrete infrastructure (CONAGE)**

Ferreira, M., Al-Neshawy, F., Bohner, E., Sistonen, E. & Huttunen-Saarivirta, E., 2021, *SAFIR2022 - The Finnish Research Programme on Nuclear Power Plant Safety 2019-2022*. VTT Technical Research Centre of Finland, p. 330-349 (VTT Technology; no. 383).

**Factors for compactibility and risk of segregation for concrete: Report for contract research project "Compact Air"**

Ojala, T., Ahmed, H., Vehmas, T., Chen, Y., Tauqir, A., Oey, T., Al-Neshawy, F., Leivo, M. & Punkki, J., 2021, Aalto-yliopisto. 126 p. (Aalto University publication series SCIENCE + TECHNOLOGY; vol. 2021, no. 5)

**Stability of Air Content in Fresh Concretes with PCE-Based Superplasticizers**

Al-Neshawy, F., Ojala, T. & Punkki, J., Jul 2019, In: *Nordic Concrete Research*. 60, 1, p. 145-158 14 p.

**Betonin koostumuksen vaikutus sen tiivistävyyteen: Raportti tilaustutkimusprojektista**

Ojala, T., Al-Neshawy, F. & Punkki, J., 30 Jan 2019, Aalto-yliopisto. 120 p. (Aalto-yliopiston julkaisusarja TIEDE + TEKNOLOGIA; vol. 2019, no. 1)

**Construction of realistic NPP containment wall mock-up for challenging NDE methods**

Ferreira, M., Bohner, E., Sjöblom, V., Al-Neshawy, F. & Ojala, T., 1 Jan 2019, *Proceedings of the fib Symposium 2019: Concrete - Innovations in Materials, Design and Structures*. Derkowski, W., Krajewski, P., Gwozdziwicz, P., Pantak, M. & Hojdis, L. (eds.). International Federation for Structural Concrete (FIB), p. 1651-1658 8 p. (Proceedings of the fib Symposium 2019: Concrete - Innovations in Materials, Design and Structures).

### **Early Age Autogenous Shrinkage of Fibre Reinforced Concrete**

Ullah, F., Al-Neshawy, F. & Punkki, J., Dec 2018, In: *Nordic Concrete Research*. 59, 2/2018, p. 59-72 5.

### **Mock-up wall for NDT&E of NPP thick-walled reinforced concrete structures**

Al-Neshawy, F., Ojala, T., Ferreira, M. & Puttonen, J., 1 Aug 2018, *12th European Conference on Non-Destructive Testing (ECNDT 2018)*. NDT.net, 10 p. (The e-Journal of Nondestructive Testing; vol. 23, no. 8).

### **Increase of Air Content of Concrete After Mixing**

Al-Neshawy, F. & Punkki, J., 2018. 12 p.

### **Influence of PCE-Superplasticizers on the Stability of Concrete Air Content**

Al-Neshawy, F., Ojala, T. & Punkki, J., 2018, *Superplasticizers and Other Chemical Admixtures in Concrete: Proceedings Twelfth International Conference*. Liu, J., Wang, Z., Holland, T. C., Huang, J. & Plank, J. (eds.). American Concrete Institute, p. 405-419

### **NPP containment wall mock-up for long -term NDE and monitoring**

Ferreira, M., Bohner, E. & Al-Neshawy, F., 23 Aug 2017, *XXIIIth Symposium on Nordic Concrete Research & Development - Proceedings*. Tange Hasholt, M. (ed.). Norsk Betongforening, p. 71 - 74 4 p. (Nordic concrete research).

### **"NDT MATRIX" - A Tool for Selecting Non-Destructive Testing Methods for NPP Concrete Structures**

Al-Neshawy, F., Ferreira, M., Bohner, E. & Puttonen, J., 20 Aug 2017, *24th International Conference on Structural Mechanics in Reactor Technology - Proceedings*. International Association for Structural Mechanics in Reactor Technology (IASMiRT), 10 p.

### **Robust Air – Tutkimus betonin ilmamäärän kohoamiseen vaikuttavista tekijöistä**

Punkki, J. & Al-Neshawy, F., 2017, In: *Betoni*. 2017, 3, p. 74-79 6 p.

### **Securing the stable protective pore system of concrete - Report for "Robust Air"**

Al-Neshawy, F. & Punkki, J., 2017, Aalto University. 105 p. (Aalto University publication series SCIENCE + TECHNOLOGY; vol. 2017, no. 10)

### **Stability of air-entrainment with PCE-superplasticizers**

Al-Neshawy, F. & Punkki, J., 2017, *Proceedings of the XXIII Nordic Concrete Research Symposium*. Tange Hasholt, M. (ed.). Norsk Betongforening, p. 149-152 4 p. (Nordic concrete research).

### **Chemical changes of cement pastes due to the effect of combined carbonation and chloride penetration**

Al-Neshawy, F., May 2016, In: *Nordic Concrete Research*. 54, 1/2016, p. 21-30 2.

### **Selection Matrix for Non-Destructive Testing of NPP Concrete Structures**

Al-Neshawy, F., Sistonen, E., Puttonen, J., Ferreira, M. & Bohner, E., 2016, *19th World Conference on Non-Destructive Testing 2016: WCNDT 2016*. NDT.net, 9 p. (NDT.net).

### **AALTO UNIVERSITY SCHOOL OF ENGINEERING, Department of Civil and Structural Engineering, FINLAND : BASIC DATA OF THE ORGANIZATION**

Al-Neshawy, F., Sistonen, E., Kari, O-P., Eik, M. & Puttonen, J., 2015, *1st Workshop of TU1404 Ljubljana, Slovenia, April 16-17, 2015*. Schlicke, D., Trtnik, G., Bosiljkov, B. V., Azenha, M. & Staquet, S. (eds.). Ljubljana: University of Ljubljana, p. 28

### **Ageing Management Platform for Finnish NPP Concrete Infrastructure**

Ferreira, M., Al-Neshawy, F. & Sistonen, E., 2015, *23rd Conference on Structural Mechanics in Reactor Technology Manchester, United Kingdom August 10-14, 2015*. UK: International Association for Structural Mechanics in Reactor Technology (IASMiRT), p. 10

### **Ageing Management Platform For NPP Concrete Structures**

Sistonen, E., Al-Neshawy, F. & Ferreira, M., 2015, *IABSE Workshop, Helsinki, Finland, February 11-12, 2015*. Kiviluoma, R. (ed.). Helsinki: International Association for Bridge and Structural Engineering, p. 280-287

### **Implementation of a Contour Crafting System to a 3-Dimensional Concrete Printer**

Nylund, J., Järf, A., Kekäle, K., Rönnskog, J., Al-Neshawy, F., Kiviluoma, P. & Kuosmanen, P., 2015, *10th International DAAAM Baltic Conference "INDUSTRIAL ENGINEERING", 12 - 13th May 2015, Tallinn, ESTONIA*. Otto, T. (ed.). Tallinn: Tallinn University of Technology, p. 168-173

### **Optimized neural network based carbonation prediction model**

Taffese, W. Z., Al-Neshawy, F., Sistonen, E. & Ferreira, M., 2015, *International Symposium Non-Destructive Testing in Civil Engineering, Berlin, Germany, September 15-17, 2015*. Herbert, W. (ed.). Berlin: Bundesanstalt für Materialforschung und -prüfung (BAM), p. 1074-1083

### **Research Projects : Recent Research Projects related to the COST Action TU1404**

Al-Neshawy, F., Sistonen, E., Kari, O-P., Eik, M. & Puttonen, J., 2015, *TU1401 COST action, 1st WORKSHOP with Focus on experimental testing of cement based materials held in Ljubljana, Slovenia, April, 16-17, 2015*. Schlicke, D., Azenha, M. & Staquet, S. (eds.). Ljubljana: University of Ljubljana, p. 34

### **SAFIR2014- The Finnish Research Programme on Nuclear Power Plant Safety 2011-2014 Final Report. 38.1 MANAGE summary report - Ageing management of concrete structures in nuclear power plants (MANAGE)**

Ferreira, M., Tuomisto, M., Stenlund, O., Sistonen, E. & Al-Neshawy, F., 2015, Kuopio, p. 592-603, (VTT Technology; no. 213).

### **von Konow Academy Database (TvK-DB). A database based on the accurate field research and laboratory studies of mortars initiated by PhD Thorborg von Konow**

Al-Neshawy, F., 2015

### **Ageing Mechanisms of Building Structures and their Management**

Al-Neshawy, F. & Sistonen, E., 2014, *1st International Conference on Ageing of Materials & Structures, AMS'14, Delft University of Technology, Delft, The Netherlands, 26-28 May 2014*, van Breugel, K. & Koenders, E. A. B. (eds.). Delft, The Netherlands: Delft University of Technology, p. 313-320

### **Development of a Database for the Restoration Mortars - von Konow DB**

Sistonen, E., Mutanen, P. & Al-Neshawy, F., 2014, *1st International Conference on Ageing of Materials and Structures 2014 AMS'14, Delft, The Netherlands, 26-28 May 2014*. p. 40-47

### **von Konow Academy Database (TvK-DB). A database based on the accurate field research and laboratory studies of mortars initiated by PhD Thorborg von Konow**

Al-Neshawy, F. & Sistonen, E., 2014

### **Inspection and Inspection Data Registering of Concrete Structures in Nuclear Power Plant**

Vesikari, E., Ferreira, M., Sistonen, E., Al-Neshawy, F. & Piironen, J., 31 Jan 2013, VTT Technical Research Centre of Finland, 52 p. (VTT Research Report; no. VTT-R-06496-12).

### **Ydinvoimaloiden betonirakenteiden käytönaikainen tarkastus ja tarkastustietojen tallentaminen**

Vesikari, E., Ferreira, M., Sistonen, E., Al-Neshawy, F. & Piironen, J., 31 Jan 2013, VTT Technical Research Centre of Finland, 52 p. (VTT Research Report; no. VTT-R-06495-12).

### **Ageing management of concrete structures in nuclear power plants (MANAGE)**

Ferreira, R. M., Vesikari, E., Tuomisto, M., Stenlund, O., Hradil, P., Al-Neshawy, F. & Sistonen, E., 2013, *SAFIR2014 - The Finnish Research Programme on Nuclear Power Plant Safety 2011-2014 - Interim Report, VTT Technology 80, Espoo 2013, 447 p.* Simola, K. (ed.). Espoo: VTT Technical Research Centre of Finland, p. 363-372

### **Computerised prediction of the deterioration of concrete building facades caused by moisture and changes in temperature**

Al-Neshawy, F., 2013, Aalto University. 226 p.

**Condition Assessments and Corrosion Measurements of Cooling Water Chambers in a Nuclear Power Plant**

Sistonen, E., Piironen, J., Al-Neshawy, F., Puttonen, J., Ferreira, M. & Vesikari, E., 2013, *22nd International Conference on Structural Mechanics in Reactor Technology, SMiRT-22, San Francisco, California, USA, August 18-23, 2013.* Ostadan, F. (ed.). USA: International Association for Structural Mechanics in Reactor Technology (IASMiRT), p. 7

**Developing a Computerized Aging Management System for Concrete Structures in Finnish Nuclear Power Plants**

Al-Neshawy, F., Piironen, J., Sistonen, E., Vesikari, E., Tuomisto, M., Hradil, P. & Ferreira, M., 2013, *International Workshop NUCPERF 2012: Long-Term Performance of Cementitious Barriers and Reinforced Concrete in Nuclear Power Plant and Radioactive Waste Storage and Disposal (RILEM Event TC 226-CNM and EFC Event 351)*. L'Hostis, V. & Gens, R. (eds.). EDP Sciences, p. 1-8 03001. (EPJ Web of Conferences ; vol. 56).

**Development of database for the in-service inspection of the concrete structures of the Finnish Nuclear Power Plants**

Al-Neshawy, F., Sistonen, E., Vesikari, E. & Ferreira, M., 2013, *IABSE Workshop on Safety, Failures and Robustness of Large Structures, Tuusula, Finland, February 14-15, 2013.* - International Association for Bridge, IABSE. & Engineering, S. (eds.). Finland: Suomen rakennusinsinöörien liitto RIL, p. 226-233

**Integral approach to service life management of NPP concrete infrastructure: From inspection database to predictive durability performance**

Ferreira, M., Vesikari, E., Al-Neshawy, F. & Sistonen, E., 2013, *22nd International Conference on Structural Mechanics in Reactor Technology, SMiRT-22, San Francisco, California, USA, August 18-23, 2013.* Ostadan, F. (ed.). USA: International Association for Structural Mechanics in Reactor Technology (IASMiRT), p. 10

**Monitoring, Evaluation and Long-term Forecasting of Hygrothermal Performance of Thick-walled Concrete Structure**

Taffese, W. Z., Al-Neshawy, F., Piironen, J., Sistonen, E. & Puttonen, J., 2013, *OECD-NEA, CSNI Working Group on the Integrity and Ageing of Components and Structures (WGIAGE), Workshop on "Non-destructive Evaluation of Thick Walled Concrete Structures" organized by ÚJV Rež, a. s.* p. 13

**Analysis of the moisture performance of wall structures at the zero-energy Luukku-house**

Al-Neshawy, F., Lylykangas, K., Piironen, J., Peittola, M. & Puttonen, J., 2012, *IABSE CONFERENCE SHARM EL SHEIKH, EGYPT 7-9th May 2012.* Egypt: International Association for Bridge and Structural Engineering

**Effect of different Repair Techniques on the Hygrothermal Performance of Concrete Façades**

Al-Neshawy, F., Piironen, J., Sistonen, E. & Puttonen, J., 2012, *V International PhD Student Workshop on Durability of Reinforced Concrete From Composition to Service Life Design, Espoo, Finland, February 9-10, 2012.* Ferreira, R. M., Gulikers, J. & Andrade, C. (eds.). Espoo: VTT Technical Research Centre of Finland, p. 107-121

**Working Plan for the Aging Management System of Concrete Structures in Finnish Nuclear Power Plants**

Vesikari, E., Tuomisto, M., Hradil, P., Calonius, K., Al-Neshawy, F. & Sistonen, E., 2012, Espoo, p. 63.

**Computerized assessment of the moisture and thermal originated deterioration of concrete facades**

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**Effect of interacted deterioration parameters on service life of concrete structures in cold environments, Laboratory test results 2009 - 2010**

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**Effect of NaCl and different CO2 concentrations on the mineral compositions of a hardened cement paste**

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**Monitoring System for Tracking the Hydrothermal Behaviour of the Building Structures**

Mäkitalo, M., Al-Neshawy, F. & Laurila, T., 2011, *World Sustainable Building Conference, SB11, Helsinki.* Huovila, P. (ed.). Helsinki: Suomen rakennusinsinöörien liitto RIL

**Network system for assessing the moisture and thermal behaviour of repaired concrete building facades**

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**The Effect of Cracking on Chloride Migration in Concrete**

Piironen, J., Sistonen, E., Kari, O-P., Puttonen, J. & Al-Neshawy, F., 2011, *21st Nordic Research Symposium, Hämeenlinna, Finland, 30.5-1.6.2011*. Nordic Concrete Federation, p. 259-264

**Wireless Monitoring Sensor System for Tracking the Hydrothermal Behaviour and Deterioration of Building Structures**

Mäkitalo, M., Al-Neshawy, F. & Laurila, T., 2011, *Nordic Concrete Research Symposium, Hämeenlinna, 2011*. Mattila, J. (ed.). Norsk Betongforening, p. 447-451

**Accounting for coupled deterioration mechanisms for durable concrete containing mineral by-products**

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**Measuring the bowing of marble panels in building facades using terrestrial laser scanning technology**

Al-Neshawy, F., Piironen, J., Peltola, S., Erving, A., Heiska, N., Nuikka, M. & Puttonen, J., 2010, In: *Electronic Journal of Information Technology in Construction*. 15, p. 64-74

**The use of ICT for monitoring the hygrothermal behavior of building structures**

Al-Neshawy, F., Laurila, T., Vuorinen, V. & Mäkitalo, M., 2010, *CIB W78 2010, Kairo, Egypti, 16.-19.11.2010*. Professor Peter Barret, P. D. A. & Dr Richard Haig, D. K. K. (eds.). International Council for Research and Innovation in Building and Construction (CIB), p. '

**Assessment of the moisture and thermal performance of repaired building facades**

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**Monitoring Relative Humidity and Temperature for Life-Time Assessment of Sandwich-Type Concrete Structures**

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**The Potential of Terrestrial Laser Scanning for Detecting the Deterioration of Building Facades**

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**The potential of the terrestrial laser scanning for geometrical building facades inspection**

Al-Neshawy, F., Piironen, J., Peltola, S. & Puttonen, J., 2009, In: *Rakenteiden Mekaniikka (Journal of Structural Mechanics)*. 42, 4, p. 235-245

**Detecting the Deterioration of Building Facades Using Terrestrial Laser Scanning Technique**

Al-Neshawy, F., Pöntinen, P., Erving, A., Salo, P., Heiska, N., Kukko, A., Kaartinen, H. & Puttonen, J., 2008, *The IABSE Conference 'Information and Communication Technology (ICT) for Bridges, Buildings and Construction Practice' in Helsinki, Finland, June 4 6, 2008*. IABSE Finnish Group

**KT-tietokanta (the database software) Tietokantaohjelma, johon kerätään kuntotutkimusten tiedot.**

Al-Neshawy, F., Piironen, J., Sistonen, E. & Puttonen, J., 2008

**Case Study of Using Self-Compacting Concrete in Balcony Repairs**

Sistonen, E., Al-Neshawy, F., Piironen, J. & Huovinen, S., 2007, *CONSEC'07, Concrete under severe conditions: Environment and loading, Tours, France, June 4-6, 2007*. Toutlemonde et al., E. . (ed.).

#### **Desing of database based on condition survey of concrete facades**

Al-Neshawy, F., Sistonen, E., Piironen, J. & Huovinen, S., 2007, *CONSEC'07, Concrete under severe conditions: Environment and loading, Tours, France, June 4-6, 2007*. Toutlemonde et al, E. . (ed.). p. 1799

#### **Korjatun julkisivurakenteen kosteusteknisen toiminnan seuranta**

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#### **New Method for Monitoring the Hygrothermal Condition of Repaired Facades**

Al-Neshawy, F., Sistonen, E., Piironen, J. & Huovinen, S., 2007, *CONSEC'07, Concrete under severe conditions: Environment and loading, Tours, France, June 4-6, 2007*. Toutlemonde et al., E. . (ed.). p. 1807-1812

#### **Ohjeistus 1960- ja 1970- luvuilla rakennettujen betonijulkisivujen ja -parvekkeiden kunnostamisesta**

Sistonen, E., Al-Neshawy, F. & Puttonen, J., 2007, Espoo, p. 42, (Talonstrukturiteknikan laboratorion julkaisusarja; no. 132).

#### **Balcony Repair with Pumped Self-compacting Concrete**

Sistonen, E., Piironen, J., Al-Neshawy, F. & Huovinen, S., 2006, *2nd International RILEM Symposium on Advances in Concrete through Science and Engineering, Quebec City, Canada, September 11-13, 2006*,. p. 14

#### **Development of Database for Concrete Facades' Condition Survey**

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#### **Intergrated management of Condition Survey Database for Concrete Facades**

Al-Neshawy, F. & Piironen, J., 2006, p. 1, (2nd International RILEM Symposium on Advances in Concrete through Science and Engineering, Quebec City, Canada, September 11 - 13.2006).

#### **Monitoring the Hygrothermal Performance of Repaired Concrete Facades**

Al-Neshawy, F., Sistonen, E., Piironen, J. & Huovinen, S., 2006, *European Symposium on Service Life and Serviceability of Concrete Structures, ESCS-2006, Proceedings, Helsinki, Finland, June 12 - 14. 2006*.

#### **The Development of a Condition Survey Database Management System and Hygrothermal Monitoring Method for Concrete Facades**

Al-Neshawy, F., Sistonen, E., Piironen, J. & Huovinen, S., 2006, *Concrete Solutions 2006, Proceedings of the Second International Conference on Concrete Repair, St-Malo, Brittany, France, June 27-29, 2006*. p. 561

#### **Using Self-compacting Concrete in Repairs**

Sistonen, E., Al-Neshawy, F., Piironen, J. & Huovinen, S., 2006, *Concrete Solutions 2006, Proceedings of the Second International Conference on Concrete Repair, St-Malo, Brittany, France, June 27-29, 2006*.

#### **Effect of Maintenance Measures on Service Life of Concrete Facades.**

Sistonen, E., Al-Neshawy, F., Piironen, J. & Huovinen, S., 2005, *XIX Symposium on Nordic Concrete Research & Development - A meeting place for research and practice; Norway, Sandefjord: 12.-15.6.2005*. p. 217-219

#### **RH and temperature Measurement (the communication software) Tietokoneohjelma, joka mittaa, kerää ja tallentaa kosteusmonitoriointin tiedot**

Al-Neshawy, F., 2005

#### **Itsetiivistyvien betonien suhteitus, valmistustekniikka ja perusominaisuudet**

Mannonen, P., Al-Neshawy, F. & Räsänen, V., 2004, Espoo, p. 123, (Teknillinen korkeakoulu Rakennusmateriaalitekniikka; no. Julkaisu 16).

#### **Internal and surface deterioration of concrete due to frost action**

Penttala, V., Al-Neshawy, F., Lehtinen, T. & Räsänen, V., 2003, *15. Internationale baustofftagung, Weimar, Germany 2003*. Fisher, H. B. (ed.). Weimar, Germany: Bauhaus-Universität Weimar, p. 2-0601

#### **Ice Formation and Pore Water Redistribution During 2-Cycle Freezing and Thawing of Concrete Mortars**

Penttala, V. & Al-Neshawy, F., 2002, *Frost Damage in Concrete, Minneapolis, USA 28-30 June 1999*. Janssen, D. J., Setzer, M. J. & Snyder, M. B. (eds.). France: RILEM - International Union of Laboratories and Experts in Construction Materials, Systems and Structures, p. 115-126 (RILEM Proceedings; no. PRO 25).

#### **Stress and strain state of concrete during freezing and thawing cycles**

Penttala, V. & Al-Neshawy, F., 2002, In: *Cement and Concrete Research*. 32, 9, p. 1407-1420

#### **Sementtimäärällä ja vesisementtisuhteella merkittävä vaikutus betonin kuivumisnopeuteen**

Al-Neshawy, F., 1997, In: *Rnet*. 1, p. 51

## **Activities**

### **Ernst Niederleithinger**

Fahim Al-Neshawy (Host)  
24 Oct 2018 → 26 Oct 2018

### **NDT&E Advanced Training Workshop**

Fahim Al-Neshawy (Member)  
27 Jun 2018 → 3 Jul 2018

### **Stability of air-entrainment with PCE-superplasticizers**

Fahim Al-Neshawy (Contributor) & Jouni Punkki (Speaker)  
25 Aug 2017

### **Mapei AS**

Fahim Al-Neshawy (Visiting researcher) & Jouni Punkki (Visiting researcher)  
2017

### **IABSE Workshop, Helsinki, Finland, February 11-12, 2015, Finland**

Fahim Al-Neshawy (Contributor)  
2015

### **SAFIR2014 FINAL SEMINAR, Hanasaari, Helsinki, Finland, 19.-20.3.2015, Finland**

Fahim Al-Neshawy (Contributor)  
2015

### **SMiRT-23 2015, 23rd International Conference on Structural Mechanics in Reactor Technology, SMiRT-23, Manchester, United Kingdom - August 10-14, 2015, United Kingdom**

Fahim Al-Neshawy (Contributor)  
2015

### **David Lange**

Fahim Al-Neshawy (Host)  
1 Jan 2014

### **1st International Conference on Ageing of Materials & Structures, AMS'14, Delft University of Technology, Delft, The Netherlands, 26 – 28 May 2014, Netherlands**

Fahim Al-Neshawy (Contributor)



2014

**University (External organisation)**

Fahim Al-Neshawy (Chair)  
2014

**Vagelis Papadakis**

Fahim Al-Neshawy (Host)  
1 Jan 2013

**IABSE Workshop, Helsinki, Finland, February 14-15, 2013, Finland**

Fahim Al-Neshawy (Contributor)  
2013

**OECD-NEA, CSNI Working Group on the Integrity and Ageing of Components and Structures Workshop, Prague, Czech Republic 17-19.9.2013, Czech Republic**

Fahim Al-Neshawy (Contributor)  
2013

**SAFIR2014 - Interim Seminar, Hanasaari, Swedish-Finnish Cultural Centre, 21.-22.3.2013, Finland**

Fahim Al-Neshawy (Contributor)  
2013

**University (External organisation)**

Fahim Al-Neshawy (Chair)  
2013

**Vagelis Papadakis**

Fahim Al-Neshawy (Host)  
1 Jan 2012

**IABSE Conference on Global Thinking in Structural Engineering: Recent Achievements, Sharm El Sheikh, Egypt, 7-9 May 2012, Egypt**

Fahim Al-Neshawy (Contributor)  
2012

**NUCPERF 2012 RILEM Event TC 226-CNM EFC Event 351, Cadarache, France 12-15 November 2012, France**

Fahim Al-Neshawy (Contributor)  
2012

**Concrete Solutions 2011, 4th International Conference on Concrete Repair 26-28. Sept. 2011, Dresden, Germany, Germany**

Fahim Al-Neshawy (Contributor)  
2011

**CIB W78 2010, 27th International Conference Applications of IT in the AEC Industry. Cairo, Egypt 16-18 November 2010., Egypt**

Fahim Al-Neshawy (Contributor)  
2010

**20th International Conference on structural mechanics in reactor technology. Dipoli Congress Centre, Espoo (Helsinki), Finland. August 9-14, 2009, Finland**

Fahim Al-Neshawy (Contributor)  
2009

**3rd International Conference on Concrete Repair (Concrete Solutions 2009), Venice/Padova, Italy 29 June-2 July 2009, Italy**

Fahim Al-Neshawy (Contributor)  
2009

**Duralnt-Project Workshop: Effect of interacted deterioration parameters on service life of concrete structures in cold environments" March 2-4, 2009, VTT and TKK, Espoo, Finland, Finland**

Fahim Al-Neshawy (Contributor)  
2009

**Euroinfra 2009, International ECCE Conference, October 15-16, 2009, Helsinki, Finland**

Fahim Al-Neshawy (Contributor)  
2009

**Foreign Organisation**

Fahim Al-Neshawy (Visiting researcher)  
2009

**Foreign Organisation**

Fahim Al-Neshawy (Visiting researcher)  
2007

**Foreign Organisation**

Fahim Al-Neshawy (Visiting researcher)  
2007

**Foundit Nordic/Salford Workshop 8-9 October 2007, Iso-Britannia**

Fahim Al-Neshawy (Contributor)  
2007

**Foundit Nordic/Salford Workshop 8 - 9 October 2007, University of Salford, U.K., 2007., Iso-Britannia**

Fahim Al-Neshawy (Contributor)  
2007

**Foundit Seminar, 12.-13.12.2007, Helsinki University of Technology, Finland, Finland**

Fahim Al-Neshawy (Contributor)  
2007

**FOUNDIT SEMINAR, 3rd TWO-DAY SPRING WORKSHOP: MAPS, MODELS AND METHODS, Finland**

Fahim Al-Neshawy (Contributor)  
2007

**Found Seminar, Helsinki University of Technology, 12 - 13.12.2007,, Finland**

Fahim Al-Neshawy (Contributor)  
2007

**Concrete Solutions, 2nd International Conference on Concrete Repair, 27 – 29, June 2006, St-Malo, Brittan, France**

Fahim Al-Neshawy (Contributor)  
2006

**European Symposium on Service Life and Serviceability of Concrete Structures, 12. - 14. June 2006, Helsinki, Finland**

Fahim Al-Neshawy (Contributor)  
2006

### **Foreign Organisation**

Fahim Al-Neshawy (Visiting researcher)  
2006

### **Foreign Organisation**

Fahim Al-Neshawy (Visiting researcher)  
2006

### **Nordic construction IT seminar, 29. - 30.3.2006, Espoo, Finland**

Fahim Al-Neshawy (Contributor)  
2006

### **The Nordic Graduate School for the Construction Sector, Lynby, DTU 12.12.2006**

Fahim Al-Neshawy (Contributor)  
2006

### **The Nordic Graduate School for the Construction Sector ,Tukholma, KTH 22.09.2006**

Fahim Al-Neshawy (Contributor)  
2006

### **XIX Symposium on Nordic Concrete Research & Development – A Meeting Place for Research and Practice, 12.-15.June, Sandefjord, Norway**

Fahim Al-Neshawy (Contributor)  
2005

### **Prizes**

#### **Student prize: Oskari Vilamon rahaston väitöskirjapalkinto 2014 Oskari Vilamon rahasto, Finland**

Al-Neshawy, Fahim (Student prize recipient), 2014

### **Projects**

#### **LOIKKA: Betonin CO<sub>2</sub>-päästöjen puolittaminen**

Punkki, J., Antonova, A., Saranya, R., Alapieti, T., Al-Neshawy, F., Illarionova, D., Repo, V., Iqbal, A. & Piironen, J.  
01/03/2022 → 28/02/2024

#### **CONAGE: Critical studies in support of the Ageing Management of NPP concrete infrastructure**

Puttonen, J., Ahmed, H., Ojala, T., Al-Neshawy, F. & Sistonen, E.  
01/02/2019 → 31/01/2020

#### **CONAGE: Critical studies in support of the Ageing Management of NPP concrete infrastructure**

Puttonen, J., Ahmed, H., Sistonen, E., Al-Neshawy, F. & Piironen, J.  
01/02/2020 → 31/01/2021

#### **CONAGE: Critical studies in support of the Ageing Management of NPP concrete infrastructure**

Puttonen, J., Piironen, J., Al-Neshawy, F. & Sistonen, E.  
01/02/2021 → 31/01/2022

#### **CONAGE2022 (VYR/SAFIR2022): Critical Studies in support of the Ageing Management of NPP Concrete Infrastructure**

Puttonen, J., Al-Neshawy, F. & Ba Ragaa, A.  
01/01/2022 → 31/01/2023

**ConLoT (VYR/KYT2022): Durability Testing of Concrete in Long-Term Simulated Groundwater Conditions**

Punkki, J., Al-Neshawy, F., Piironen, J. & Ba Ragaa, A.

01/01/2022 → 31/01/2023

**Duralnt (vtt)**

Sistonen, E., Al-Neshawy, F., Piironen, J., Kari, O. & Sillanpää, M.

01/01/2010 → 31/12/2011

**KYT2010 (VYR)**

Sistonen, E., Piironen, J., Al-Neshawy, F. & Kari, O.

01/01/2010 → 31/12/2011

**PERCO2\_2023 (VYR/SAFER2028): Long-term Performance Modelling of Concrete in Final Repositories of LILW Nuclear Waste**

Puttonen, J., Ba Ragaa, A., Piironen, J., Al-Neshawy, F. & Sundström, N.

01/01/2023 → 31/01/2024

**Lämmöneristettyjen kuorimuuriseinien emissiot**

Piironen, J., Al-Neshawy, F., Kari, O. & Peltola, S.

01/01/2010 → 31/12/2011

**WANDA: NDE of NPP primary circuit components and concrete infrastructure**

Puttonen, J. & Al-Neshawy, F.

01/01/2016 → 31/01/2017

**Non destructive examination of NPP primary circuit components and concrete infrastructure**

Puttonen, J., Ojala, T., Al-Neshawy, F. & Huuskonen-Snicker, E.

01/01/2017 → 31/01/2018

**RAILO**

Al-Neshawy, F.

01/01/2010 → 31/12/2012

**SAFIR2014-MANAGE (VYR)**

Puttonen, J., Sistonen, E., Al-Neshawy, F., Piironen, J. & Kari, O.

01/01/2011 → 31/01/2015

**Thorborg von Konowin aineisto**

Al-Neshawy, F.

01/11/2013 → 31/12/2014

**WANDA (VYR)**

Puttonen, J., Sistonen, E. & Al-Neshawy, F.

01/01/2015 → 31/01/2016

**WANDA (VYR) 2018 - T21400**

Puttonen, J., Al-Neshawy, F. & Ojala, T.

01/02/2018 → 31/01/2019