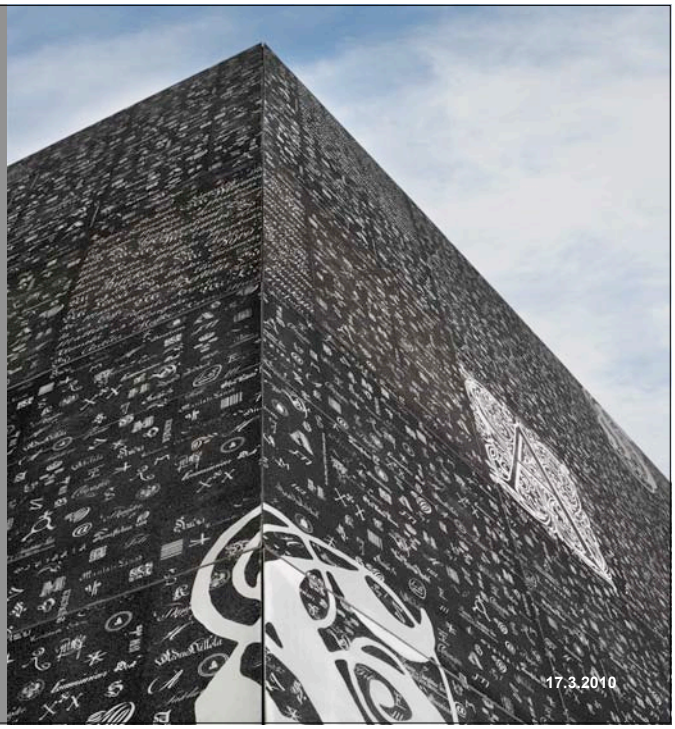
CONCRETE ARCHITECTURE

AND

STRUCTURES IN FINLAND – 40 YEARS

MARITTA KOIVISTO
ARCHITECT SAFA, EDITOR IN CHIEF

betoni



17.3.2010

The award of the Concrete Structure of the year starts ...

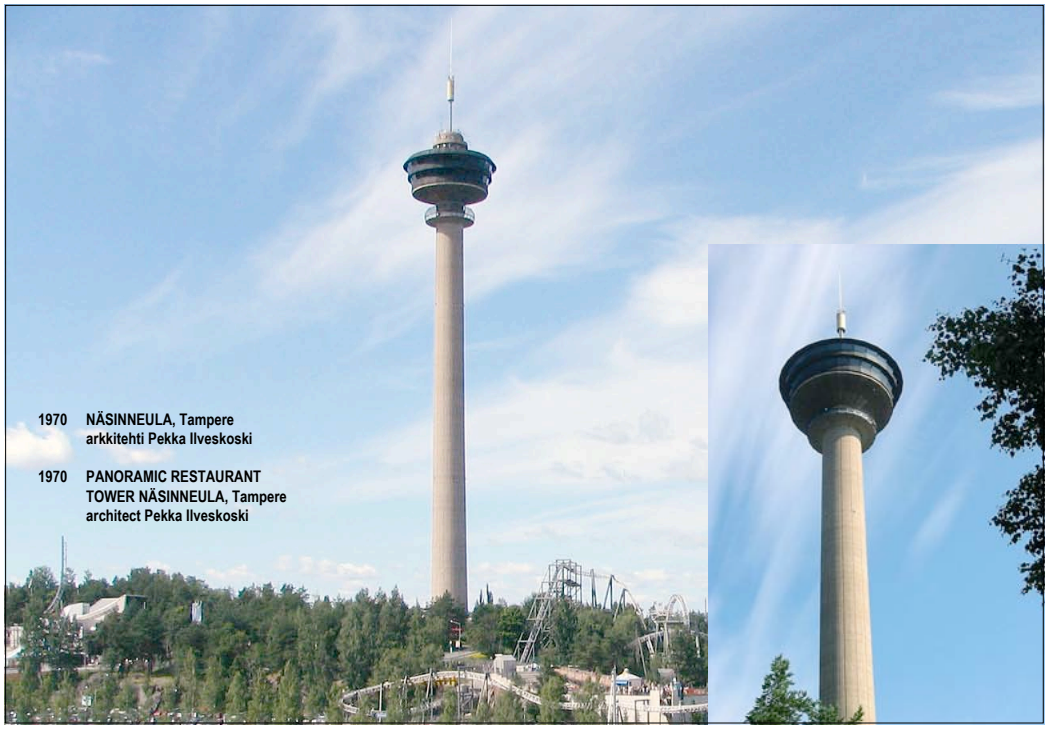
The first award of the Concrete Structure of the year was given in 1970 in Finland.
During 1970-1975 the board committee of the central organization of the Finnish Concrete Industry chose the nominees.

The proper criterion of evaluation had not been defined at that time.

The judges of the competition were SBK's (Finnish Concrete Central Organisation) board committee, which consisted of persons selected from among the members of the organization. The board committee had a strong representation of engineers.

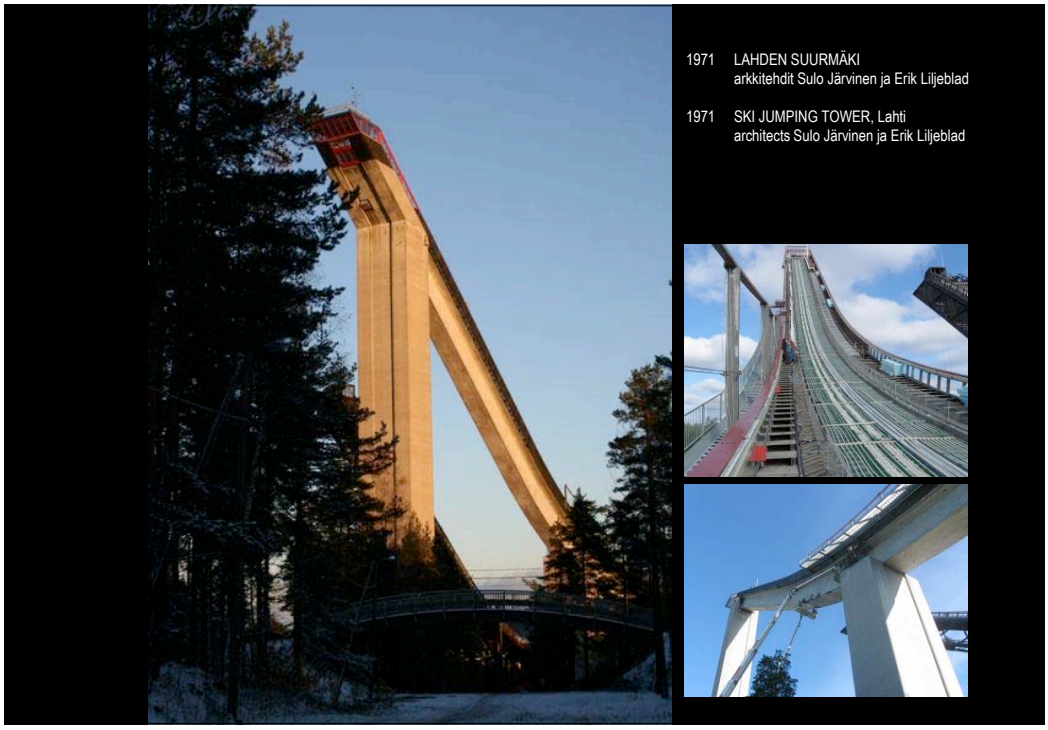
The awarded sites were advertisements of concrete construction, large and demanding structures or structures that were visible from afar. As an example the Panoramic restaurant Näsinneula in Tampere.

The nature of the competition became more official in 1977, as the first rules were drawn out. The rules determined the purpose of the competition, the grounds for awarding, criterion and the composition of the panel of judges. The criterion were determined as the design of the site, the pioneering work of the construction, the technical attributes of the site, the economy of the site, the appearance, the acclimatization to the environment and the significance the construction has to the development of concrete construction. After the rules were drawn up, the competition became open for everyone.



1970 NÄSINNEULA, Tampere
arkkitehti Pekka Ilveskoski

1970 PANORAMIC RESTAURANT
TOWER NÄSINNEULA, Tampere
architect Pekka Ilveskoski



1971 LAHDEN SUURMÄKI
arkkitehdit Sulo Järvinen ja Erik Liljeblad

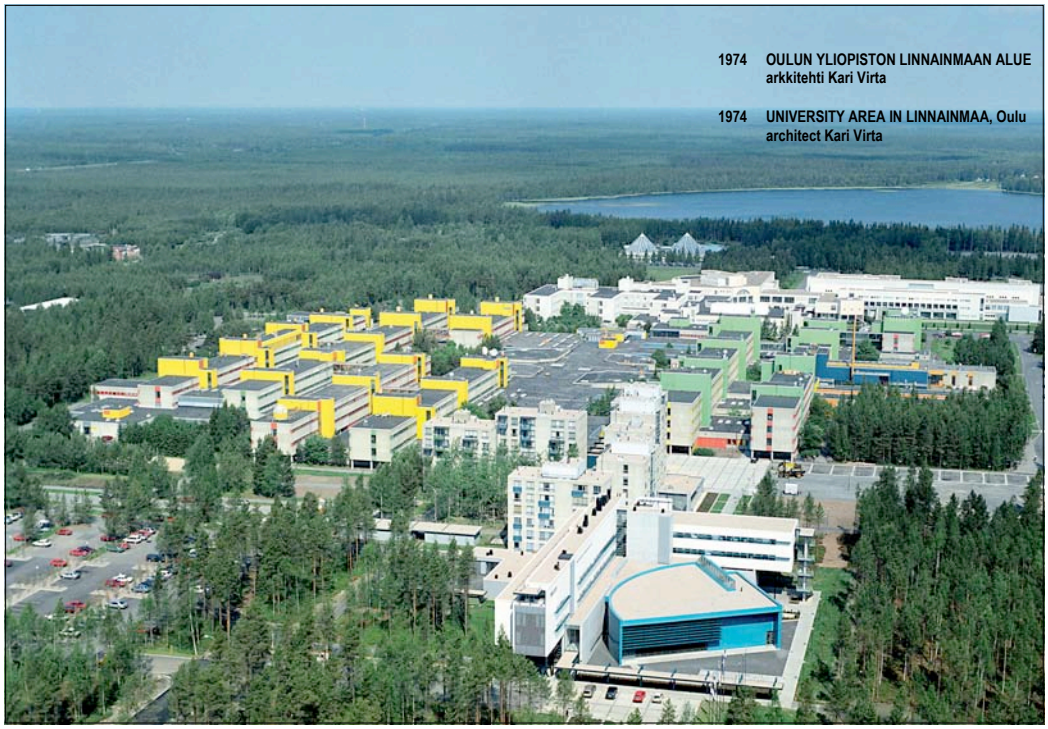
1971 SKI JUMPING TOWER, Lahti
architects Sulo Järvinen ja Erik Liljeblad

1972 MJ-VESITORNI
suunnittelijat Matti, Henri ja Petri Janhunen, Matti Ollila
arkkitehti Michele Merckling

1972 MJ WATER TOWER
construction design
Matti, Henri and Petri Janhunen, Matti Ollila,
architect Michele Merckling

1973 MERIHAKA, Helsinki
KK:n arkkitehtiosasto: arkkitehdit Peter Biber, Arvi Ilonen, Sulo Savolainen

1973 RESIDENTIAL AREA MERIHAKA, Helsinki
architects Peter Biber, Arvi Ilonen, Sulo Savolainen



1974 OULUN YLIOPISTON LINNAINMAAN ALUE
arkkitehti Kari Virta

1974 UNIVERSITY AREA IN LINNAINMAA, Oulu
architect Kari Virta

1975 PORVOONJOEN JALANKULKUSILTA
suunnittelu: Insinööritoimisto Eero Paloheimo - Matti Ollila

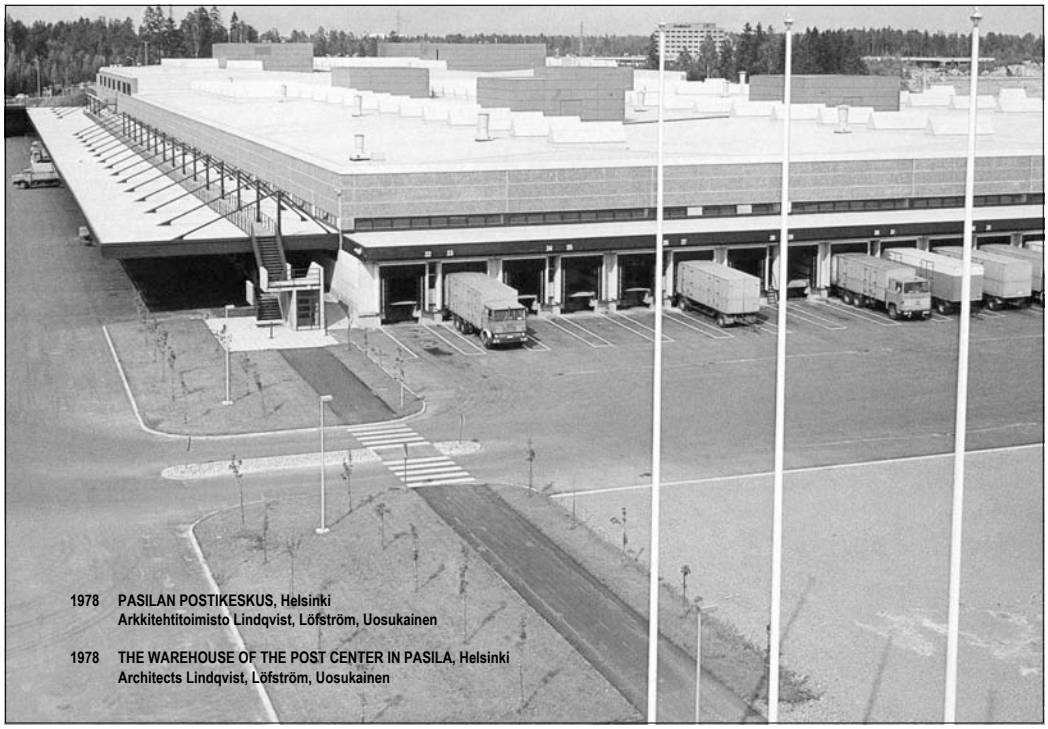
1975 PEDESTRIAN BRIDGE, Porvoo
design: Insinööritoimisto Eero Paloheimo - Matti Ollila

1976 TVH:N ELEMENTTISILTA-JÄRJESTELMÄT
suunnittelu:
TVH, sillansuunnit-telutoimisto, Insinööritoimisto Sormunen & Uuttu Ky

1976 PRECAST CONSTRUCTION SYSTEMS OF BRIDGES OF TVH
design:
TVH, sillansuunnit-telutoimisto, Insinööritoimisto Sormunen & Uuttu Ky

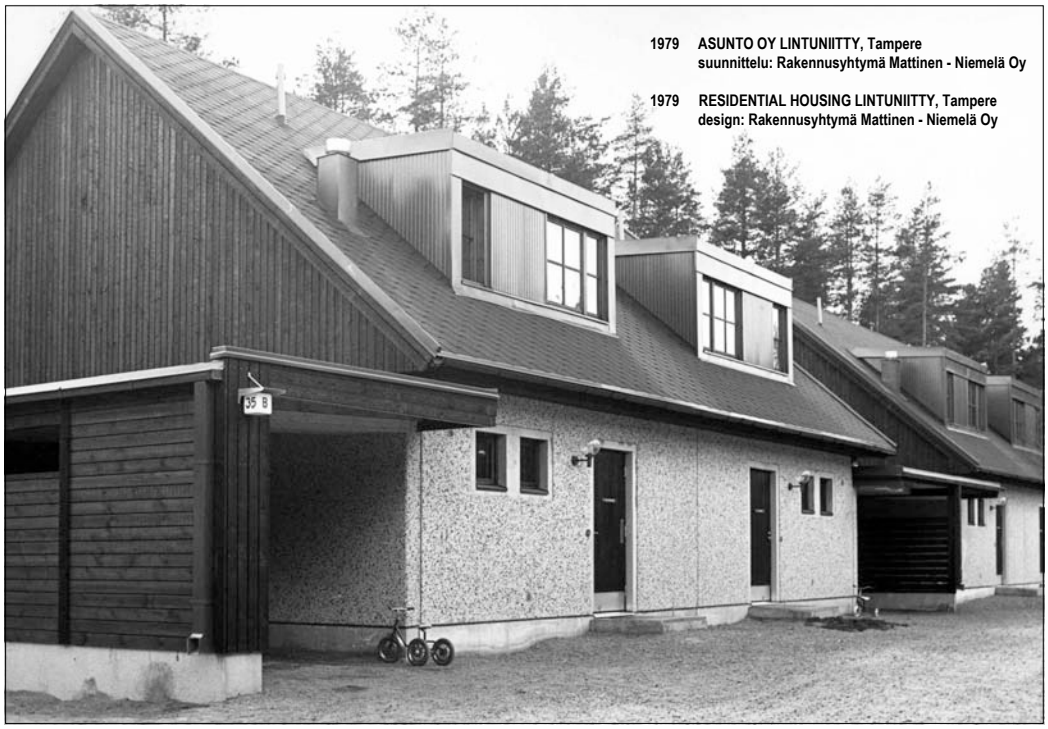
1977 LAHDEN URHEILUKESKUKSEN KATSOMO
Konsulttikeskus Oy / arkkitehtitoimisto KSS

1977 THE MAIN SPECTATOR STAND BUILDING OF LAHTI SPORTS CENTER
Konsulttikeskus Oy / arkkitehtitoimisto KSS



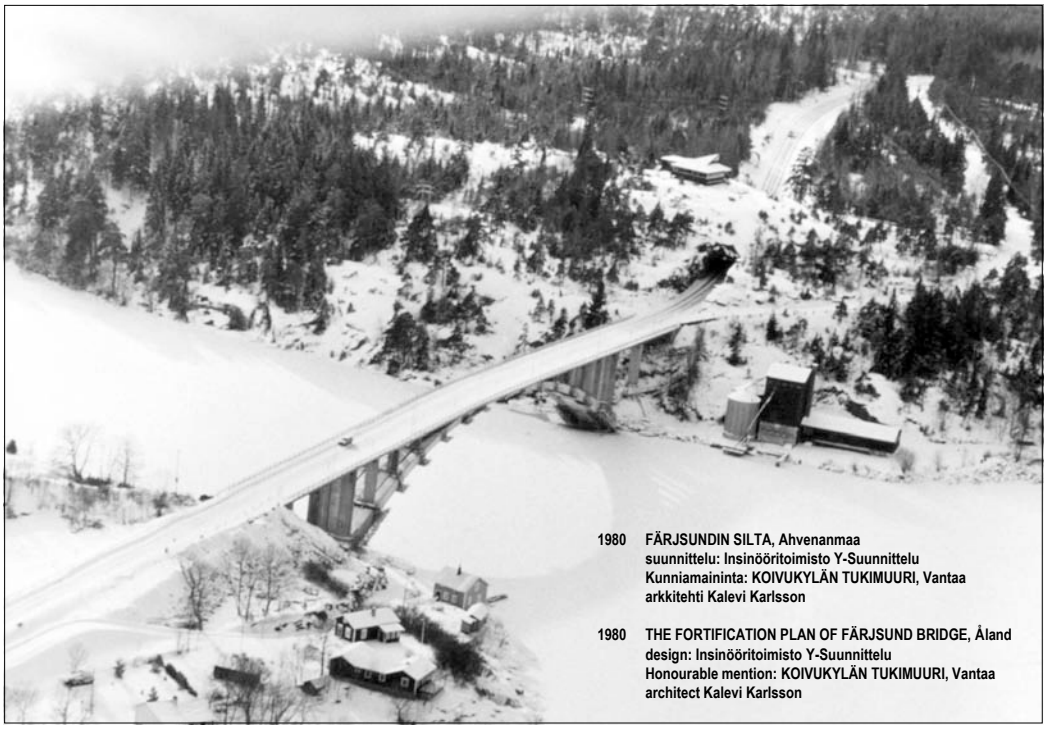
1978 PASILAN POSTIKESKUS, Helsinki
Arkkitehtitoimisto Lindqvist, Löfström, Uosukainen

1978 THE WAREHOUSE OF THE POST CENTER IN PASILA, Helsinki
Architects Lindqvist, Löfström, Uosukainen



1979 ASUNTO OY LINTUNIITTY, Tampere
suunnittelu: Rakennusyhtymä Mattinen - Niemelä Oy

1979 RESIDENTIAL HOUSING LINTUNIITTY, Tampere
design: Rakennusyhtymä Mattinen - Niemelä Oy



In the 1980s

In 1980 specifications were made to the rules.
The most significant change was the expansion of the panel judges:

- Suomen Arkkitehtiliitto (the Architect's Association of Finland, SAFA),
- Suomen Betoniyhdistys (the Concrete Association of Finland),
- Suomen Kunnallisteknillinen Yhdistys (the Municipal Technique Association),
- Teknillisen Korkeakoulun Rakennusinsinööriosasto (the Engineer department of the institute of technology) and
- SBK were all allowed to appoint one representative.

In the criterion the term appearance of the building was replaced by the term architecture.

The competition of 1982 can be seen as a turning point towards a competition emphasizing architecture. That year, the award was given to a cultural building; Lahti theatre building designed by architect Pekka Salminen.

The rules were specified again year 1986. The purpose of the competition was recorded the development of concrete architecture alongside the development of concrete technology, which furthermore strengthened the architectural nature of the competition.

The designers of the awarded sites are well-known and recognized Finnish architects. The rules of the competition have remained similar in content from 1986 until today, not taking into consideration the abolishment of the central organization of the Finnish Concrete Industry and the fact that the organizational responsibilities were taken over by Rakennustuoteteollisuus RTT and furthermore by Betonitieto Ltd. Since 2004 the rules were assessed and as a result the winner must be located in Finland.

Form and Plasticity

One quality of concrete is its plasticity, which enables the diverse use and shaping of the material. It is possible to cast the more diversely shaped bodies in a mould. The development of steel concrete technology has released the realization of structural and artistic aspirations.

While examining the shape and the function of it in the awarded sites, it can be stated that the forms during 1970-1981 were very constructive or "box-like".
The freer shaping of concrete can be first seen in 1983 in the facade elements of the Baghdad congress' palace.
After the beginning of the 80s free forms have been used as architectural focal points in many awarded sites as in Tampere's Metso designed by the Pietiläs.

Surface

Concrete can be used as a surface in innumerable manners. The surface can be left unrefined after molding or it can be treated in different ways after the mold has been taken apart.
The most significant thing that affects the appearance of the concrete structure in a larger scale is the way the surface is realized. In industrially manufactured facade-elements the element seams divide the surface vertically and horizontally. In the facades of the awarded sites Merihaka residential area and the Linnainmaa area of Oulu University in 1973 and 1974 bright basic colors were used as effects in the grey concrete surface to brighten up the grey overall look.

The use of coloured concrete gives its own look to the facades in the 90s. The colour is achieved by using colour pigments and white cement.

1981 KAJAANIN URHEILUKESKUKSEN PÄÄKATSOMO
arkkitehtisuunnittelu: Maa ja Vesi Oy, Kajaanin kaupungin tekninen virasto

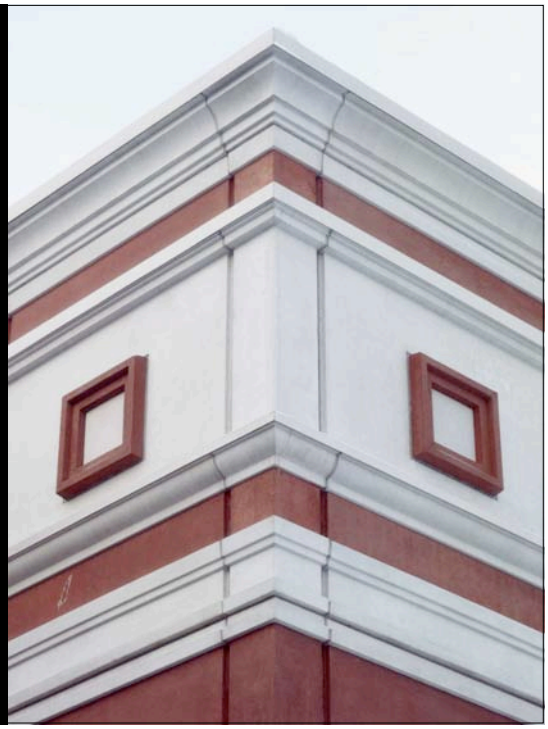
1981 THE MAIN SPECTATOR STAND BUILDING OF KAJAANI SPORTS CENTER
architecture design: Maa ja Vesi Oy, Kajaanin kaupungin tekninen virasto

1982 LAHDEN TEATTERITALO
arkkitehti Pekka Salminen

1982 LAHTI THEATER BUILDING
architect Pekka Salminen

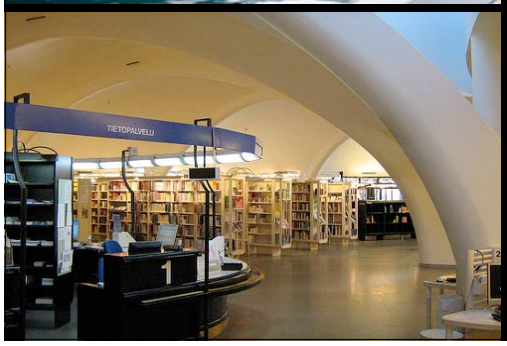
1983 BAGDADIN KONGRESSIPALATSI, Irak
arkkitehdit Kaija ja Heikki Siren

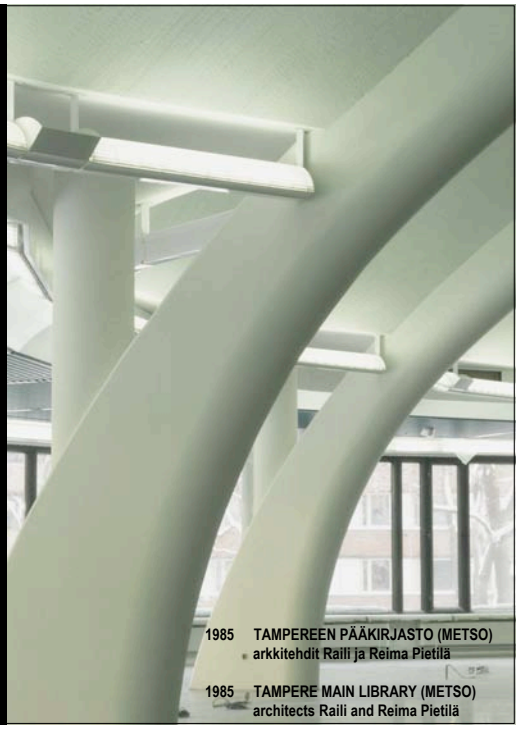
1983 THE BAGHDAD CONGRESS´ PALACE IN IRAQ
architects Kaija ja Heikki Siren



1984 TRETJAKOVIN GALLERIAN DEPOSITARIUM, Neuvostoliitto
arkkitehdit Jaakko Salonen ja Eva-Karin Wilkko-Antell

1984 TRETJAKOVS´GALLERY, DEPOSITARIUM, Sovjet Union
architects Jaakko Salonen ja Eva-Karin Wilkko-Antell





1985 TAMPEREEN PÄÄKIRJASTO (METSO)
arkkitehdit Raili ja Reima Pietilä

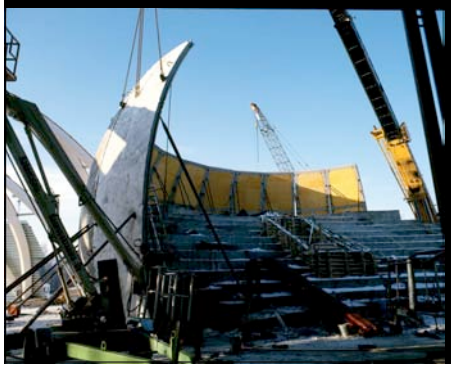
1985 TAMPERE MAIN LIBRARY (METSO)
architects Raili and Reima Pietilä

1986 YHTYNEIDEN KUVALEHTIEN TOIMITALO, Länsi-Pasila, Helsinki arkkitehti Ilmo Valjakka

1986 YHTYNEET KUVALEHDET MAIN OFFICE BUILDING Länsi-Pasila, Helsinki architect Ilmo Valjakka

1987 LÄNSI-PASILAN ASUNTOALUEEN KOERAKENTAMISKORTTELI, Helsinki arkkitehti Jan Söderlund

1987 THE DEVELOPMENT OF WESTERN PASILA RESIDENTIAL AREA, Helsinki architect Jan Söderlund



1988 TIEDEKESKUS HEUREKA, Vantaa, arkkitehdit Mikko Heikkinen ja Markku Komonen

1988 SCIENCE CENTRE HEUREKA, Vantaa, architects Mikko Heikkinen and Markku Komonen

In the 1990s

The sites awarded in the beginning of the 1990s continue the series of public or cultural buildings.
The participation in the competition has been considerable in the 90s. Among the nominees have been shopping malls, main office buildings, residential buildings, cultural buildings and a few church buildings. A few bridges and water towers among the nominees keep up the traditions of the 70s in the competition.

The new direction of the competition started in 1998. After that year there has been also renovation projects among the nominees almost every year .....


"LEHTIMAJAT"
ARKKITEHTITOIMISTO
8 STUDIO OY
THE CONCRETE
STRUCTURE OF 1991
HAUSJÄRVI HEALTH
CENTRE AND OLD
PEOPLE'S HOME
VUODEN BETONIRAKENNE 1991/SBK
HAUSJÄRVEN TERVEYSASEMA JA VANHAINKOTI

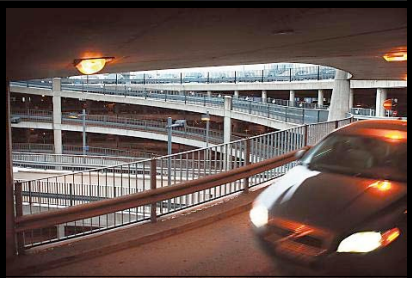

1992 JOENSUUN KIRJASTOTALO
arkkitehdit Tuomo Siitonen ja Tuomas Wichman
1992 JOENSUU MAIN LIBRARY
architects Tuomo Siitonen and Tuomas Wichman

1993 HELSINGIN OOPPERATALO
Arkkitehtitoimisto Hyvämäki - Karhunen - Parkkinen

1993 HELSINKI OPERA BUILDING
Architects Hyvämäki - Karhunen - Parkkinen

1994 HELSINKI-VANTAAN LENTOASEMAN KOTIMAAN TERMINAALIN PYSÄKÖINTILAITOS
Arkkitehtitoimisto Pekka Salminen Oy

1994 HELSINKI-VANTAAN AIRPORT FACILITY AND PARKING
Architects Pekka Salminen Ltd

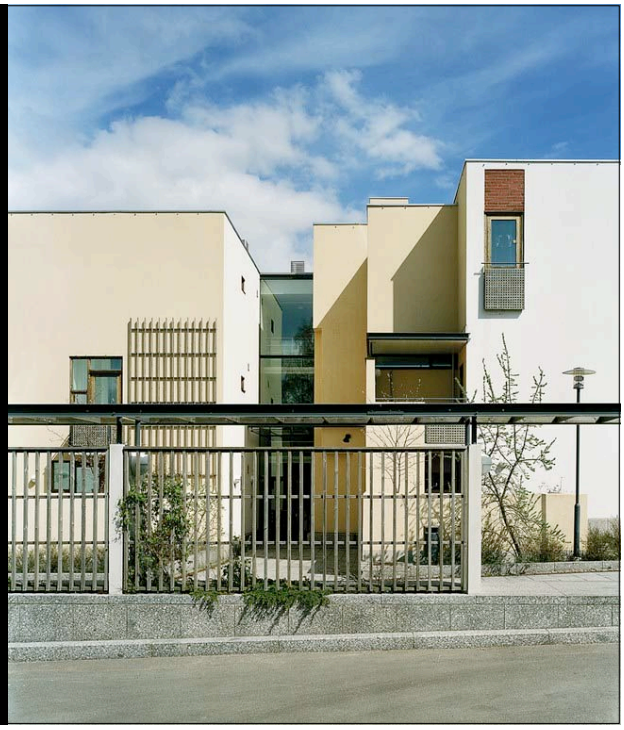


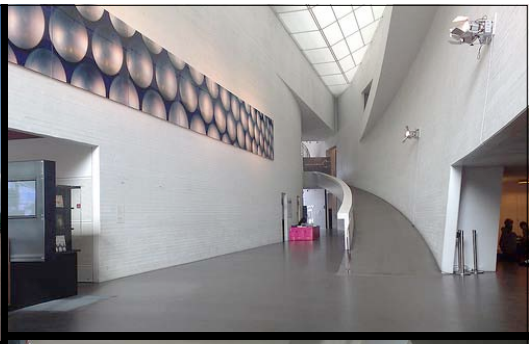
1995 ASUNTO OY LAIVAPOIKA, Helsinki
Arkkitehtitoimisto Helin & Siitonen Oy

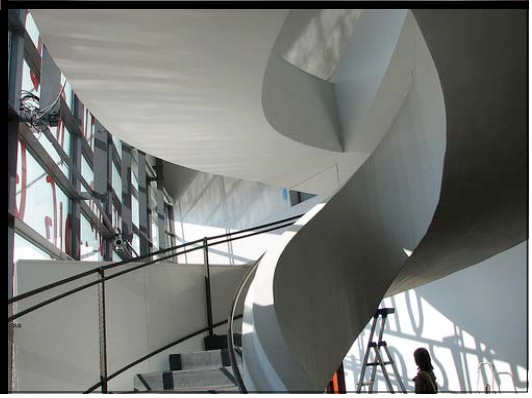
1995 APARTMENT BUILDING LAIVAPOIKA, Helsinki
Architects Helin & Siitonen Ltd

1996 ASUNTO OY MYLLYTIEN OLYMPOS,
Helsinki
arkkitehti Kristian Gullichsen

1996 APARTMENT BUILDING MYLLYTIEN
OLYMPOS, Helsinki
architect Kristian Gullichsen

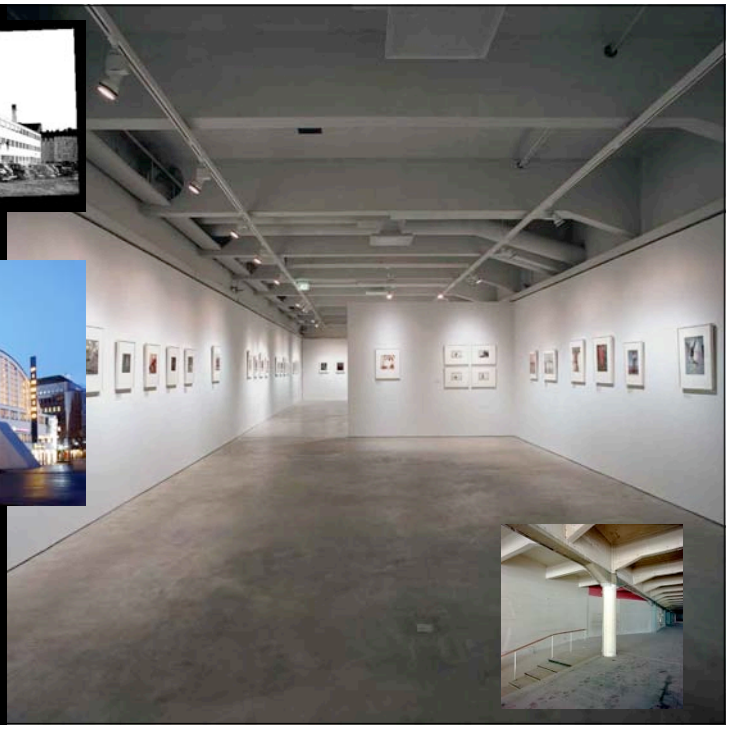






1997 NYKYTAITEEN MUSEO KIASMA, Helsinki
Steven Holl Architects ja Arkkitehtitoimisto Juhani Pallasmaa Oy

1997 MUSEUM OF CONTEMPORARY ART KIASMA, Helsinki
Steven Holl Architects and Juhani Pallasmaa Architects Ltd



1998 TENNISPALATSIN PERUSKORJAUS, Helsinki
Arkkitehtitoimisto Nurmela - Raimoranta - Tasa Oy

1998 TENNISPALATSI RENOVATION, Helsinki
Architects Nurmela - Raimoranta - Tasa Ltd

1999 RAISION KAUPUNGINKIRJASTO JA AUDITORIO, Raisio
Arkkitehtityöhuone Artto Palo Rossi
Tikka Oy

1999 RAISIO MAIN LIBRARY AND AUDITORIUM, Raisio
Arkkitehtityöhuone Artto Palo Rossi
Tikka Ltd

2000 KIINTEISTÖ OY BIOMEDICUM, Helsinki
Gullichsen Vormala Arkkitehdit Ky

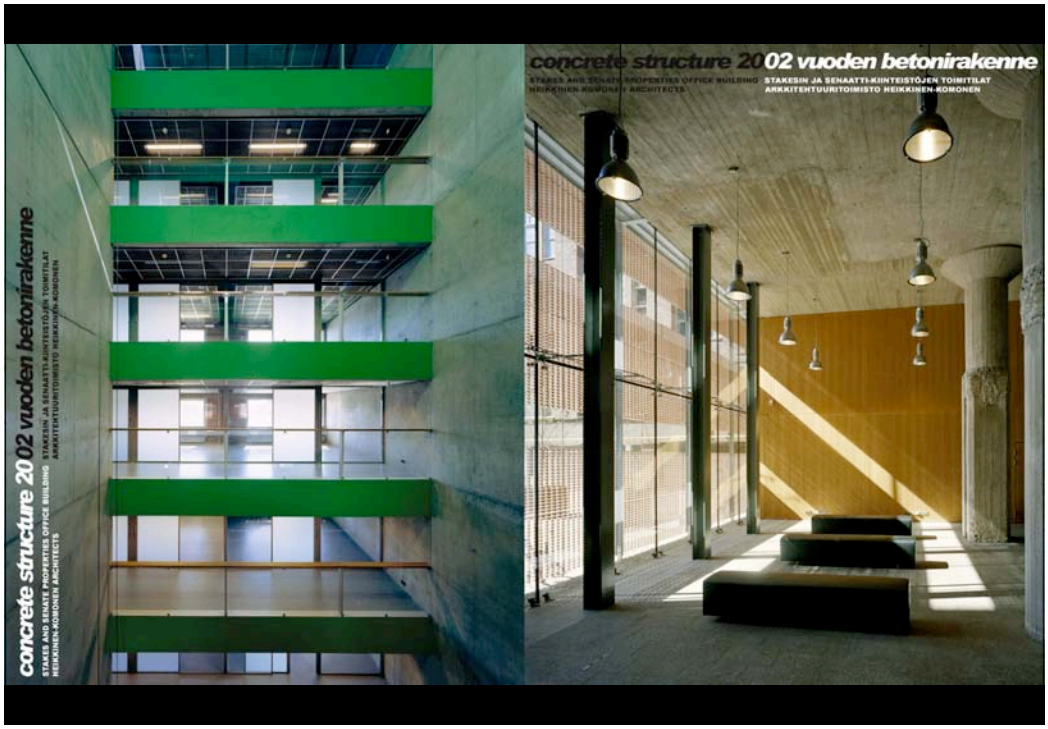
2000 MEDICAL RESEARCH CENTRE BIOMEDICUM, Helsinki
Gullichsen Vormala Architects

2001 MAX PLANCK – TUTKIMUSINSTITUUTTI,
Dresden, Saksa
Arkkitehtuuritoimisto Heikkinen – Komonen Oy

MAX PLANCK – RESEARCH INSTITUTE,
Dresden, Germany
Heikkinen – Komonen Architects Ltd

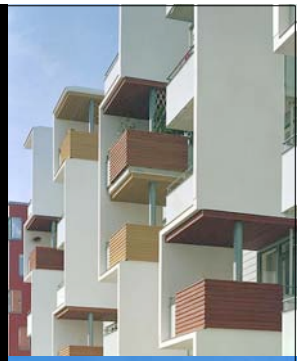
2001 MARIENKIRCHEN KONSERTTISALI,
Neubrandenburg, Saksa
Arkkitehtitoimisto Pekka Salminen Oy

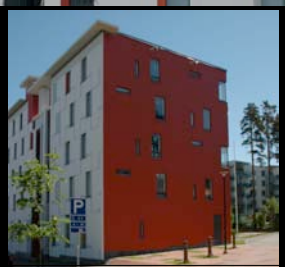
MARIENKIRCHE CONCERT HALL,
Neubrandenburg, Germany
Pekka Salminen Architects Ltd



2002 STAKESIN JA SENAATTI-KIINTEISTÖJEN TOIMITILAT, Helsinki
Arkkitehtuuritoimisto Heikkinen-Komonen Oy

2002 STAKES AND SENATE PROPERTIES OFFICE BUILDING, Helsinki
Heikkinen-Komonen Architects Ltd.

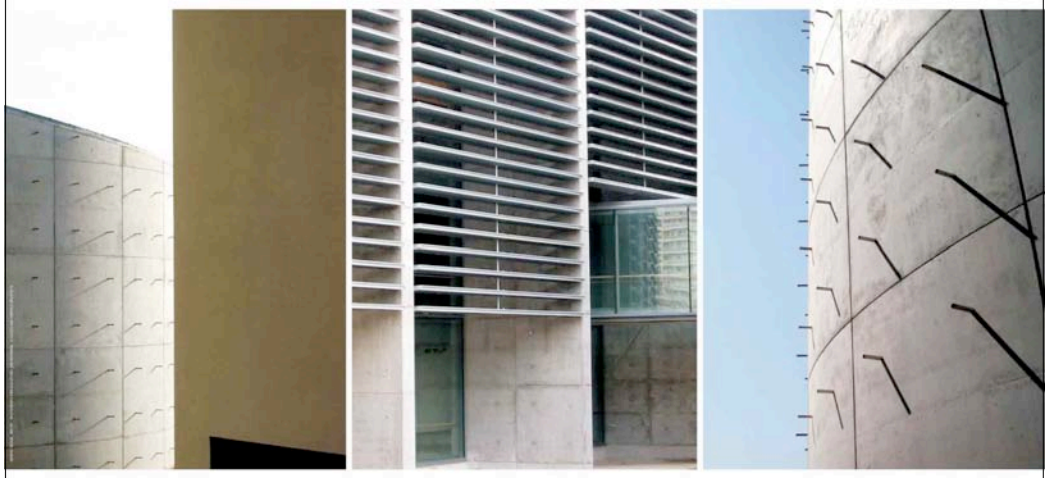




2002 Kunniamaininta:
ASUNTO OY SÄTERINRINNE, LEPPÄVAARA , ESPOO
Arkkitehtuuritoimisto Brunow & Maunula Oy

2002 Honourable mention:
APARTMENT BUILDING SÄTERINRINNE, LEPPÄVAARA , ESPOO
Architects Brunow & Maunula Ltd

LLEIDAN YLIOPISTON KIRJASTO JA KULTTUURIKESKUS, ESPANJA UNIVERSITY OF LLEIDA LIBRARY AND CULTURAL CENTER, SPAIN



VUODEN BETONIRAKENNE 2003 CONCRETE STRUCTURE THE FINNISH CONCRETE ORGANIZATIONS ARKKITEHDIT GULLICHSEN VORMALA ARCHITECTS

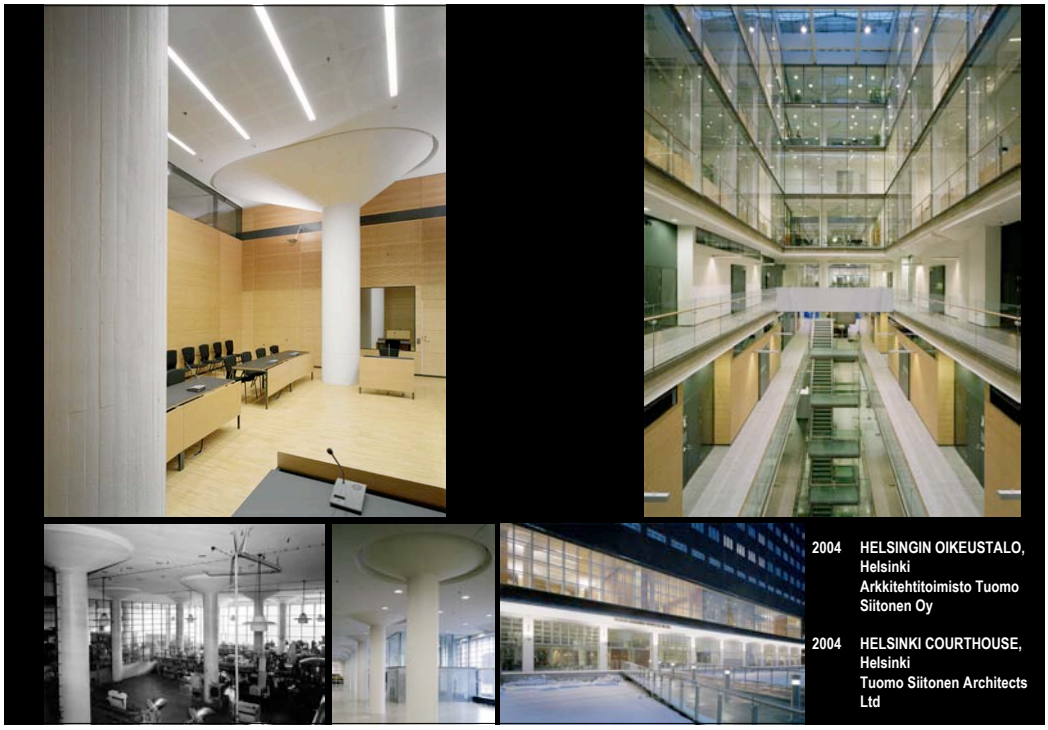
2003 Kunniamaininta:
OPPIMISKESKUS
ALEKSANDRIA
FABIANINKATU 28,
HELSINKI
Arkkitehtuuritoimisto
Davidsson Oy

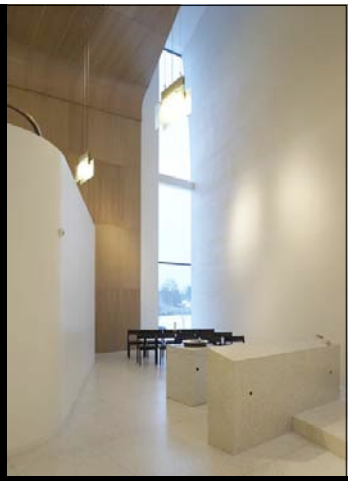
2003 Honourable mention:
LEARNING CENTRE
ALEKSANDRIA
FABIANINKATU 28,
HELSINKI
Davidsson Architects

2003 Kunniamaininta:
KARHULAN
MOOTTORITIEN
TUKIMUURIEN
KORJAUS, KOTKA
Korjaussuunnittelu
Insinööritoimisto
Jorma Huura Oy

2003 Honourable mention:
KARHULAN
MOOTTORITIEN
TUKIMUURIEN
KORJAUS, KOTKA
Korjaussuunnittelu
Insinööritoimisto
Jorma Huura Oy


VUODEN BETONIRAKENNE 2004 CONCRETE STRUCTURE
HELSINGIN OIKEUSTALO
ARKKITEHTITOIMISTO TUOMO SIITONEN


2004 HELSINGIN OIKEUSTALO, Helsinki
Arkkitehtitoimisto Tuomo Siitonen Oy
2004 HELSINKI COURTHOUSE, Helsinki
Tuomo Siitonen Architects Ltd



2004 Kunniamaininta:
ALEKSANTERINKADUN SILTA, Porvoo
Arkkitehtitoimisto Mikko Kaira Oy

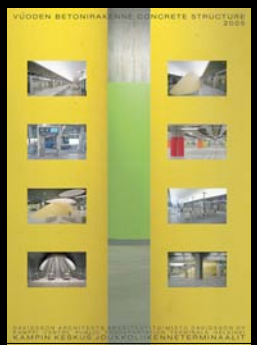
Honourable mention:
ALEKSANTERINKATU BRIDGE, Porvoo
Mikko Kaira Architects Ltd

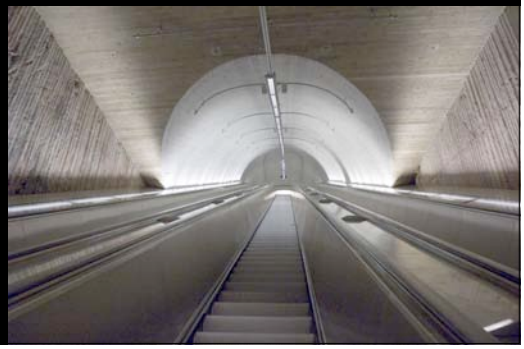
2004 Kunniamainta:
KLAUKKALAN KIRKKO, Nurmijärvi
Lassila Hirvilammi Arkkitehdit Oy

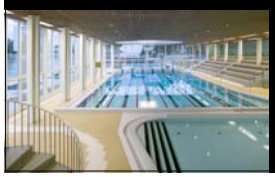
Honourable mention:
KLAUKKALA CHURCH, Nurmijärvi
Lassila Hirvilammi Architects Ltd

2005 KAMPIN KESKUKSEN JOUKKOLIIKENNE TERMINAALIT, Helsinki
Arkkitehtitoimisto Davidsson Oy

2005 KAMPIN CENTRE PUBLIC TRANSPORTATION TERMINALS, Helsinki
Davidsson Architects Ltd

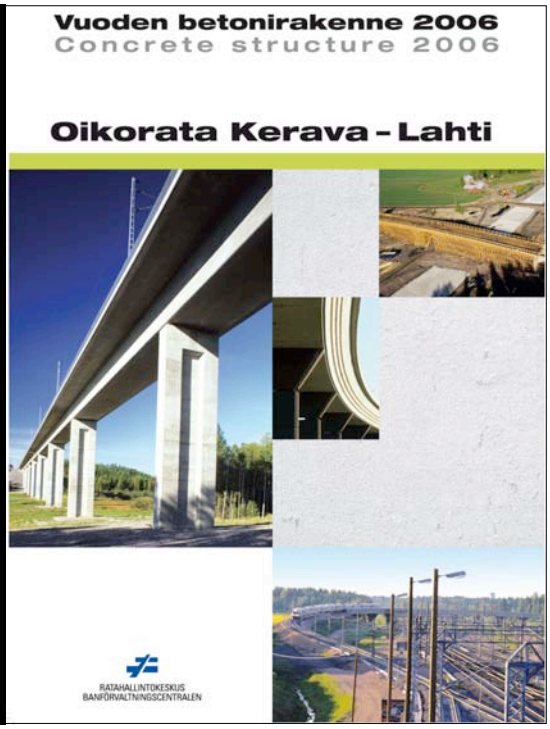






2005 Kunniamaininta:
TAPIOLAN UIMAHALLIN PERUSKORJAUS JA LAAJENNUS, Espoo
Arkkitehtitoimisto Nurmela - Raimoranta - Tasa Oy

2005 Honourable mention:
TAPIOLA SWIMMING HALL RENOVATION AND EXPANSION, Espoo
Nurmela - Raimoranta - Tasa Architects Ltd

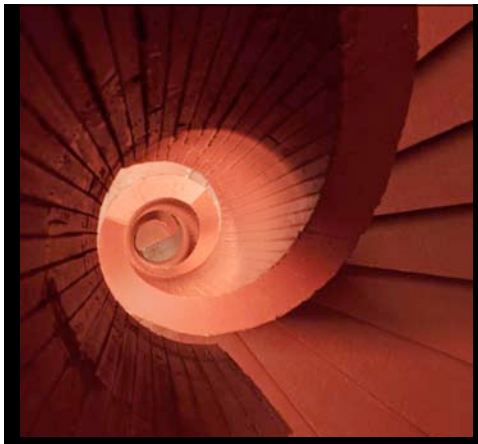


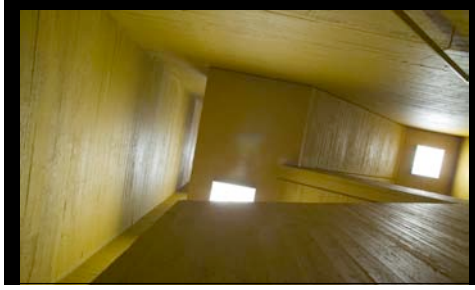
2006 Kunniamaininta:
WEEGEE -TALO, Espoo
Airas Arkkitehdit Ky ja arkkitehti Henna Helander

2006 Honourable mention:
WEEGEE -HOUSE, Espoo
Airas Architects and architect Henna Helander

2006 Kunniamaininta:
ASUNTO OY TRIADI, Helsinki
Arkkitehdit Suvi ja Risto Huttunen

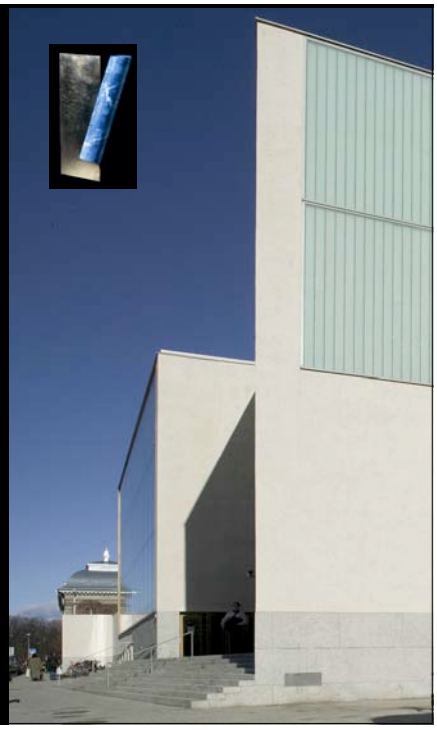
2006 Honourable mention:
APARTMENT HOUSE TRIADI, Helsinki
Architects Suvi ja Risto Huttunen



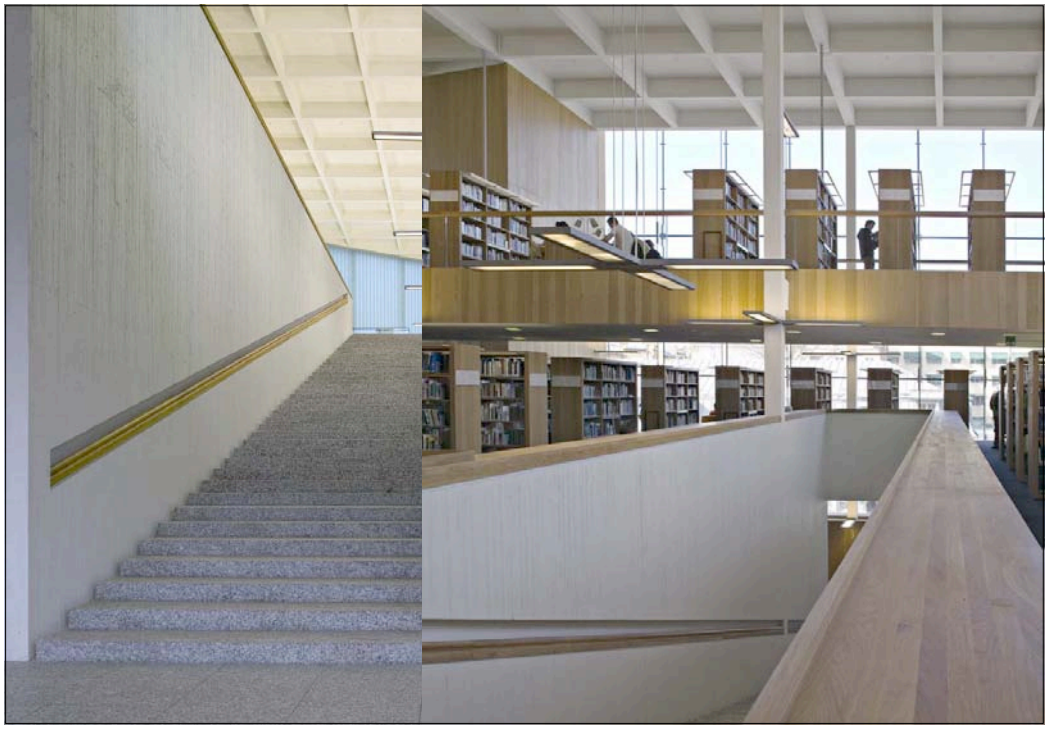


2007
TURUN
KAUPUNGIN
KIRJASTO
JKMM Arkkitehdit

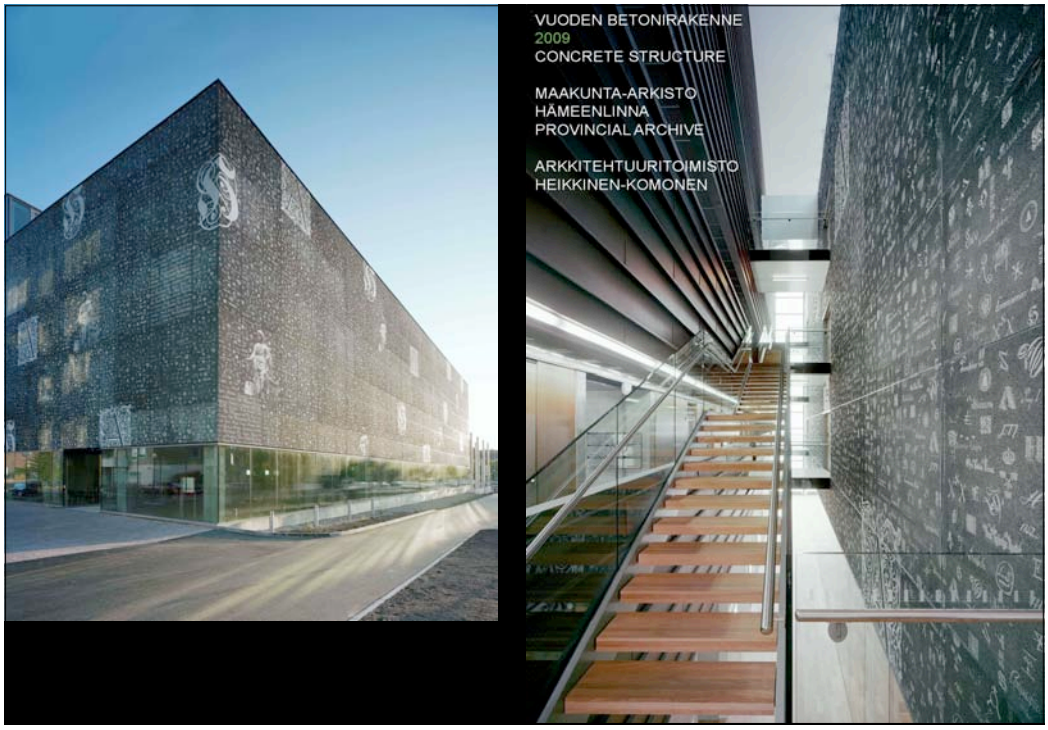
2007
TURKU LIBRARY
JKMM Architects

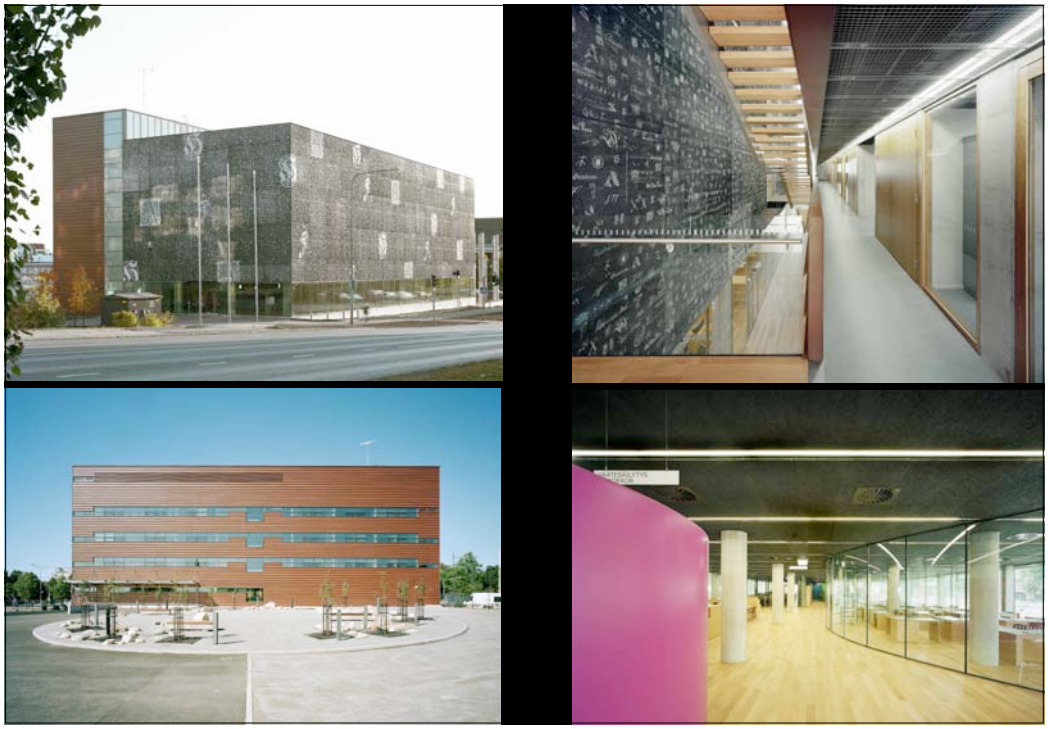



TURKU MAIN LIBRARY- JKMM ARCHITECTS




2008 VUOSAAREN MELUMUURI, Helsinki
Arkkitehtityöhuone Artto Palo Rossi Tikka
2008 NOISE ABATEMENT WALL IN VUOSAARI, Helsinki
Arkkitehtityöhuone Artto Palo Rossi Tikka


VUODEN BETONIRAKENNE
2009
CONCRETE STRUCTURE
MAAKUNTA-ARKISTO
HÄMEENLINNA
PROVINCIAL ARCHIVE
ARKKITEHTUURITOIMISTO
HEIKKINEN-KOMONEN



– The nature of the competition has developed during the years from a concrete structure technology – based competition into a competition towards a concrete architecture – based competition.

The sites awarded in the competition can be roughly divided into four groups:

1. The sites awarded in the 70s represented sites that were structure technologically demanding, where construction was highly visible.
2. The sites awarded in the 80s were mainly sites that were significant in publicity value and architecturally high quality constructions and thus gave positive publicity for the field.
3. While examining the sites awarded in the 90s it can be stated that a new profile was searched for the competition, where concrete technology and concrete structure technique were in a considerable position in addition to architecture.
4. The sites awarded in the 20th century represented something new alongside the goals mentioned earlier: sites in repairmen construction have emerged. On the other hand, infrastructure has appeared again with its new sites – for example Oikorata with its bridges and noise abatement wall structures.

Plastic and surfaces:

While examining the forms and shapes of the awarded sites it can clearly be noticed that the plastic qualities of concrete are being begun to use in shaping and as architectural means of emphasis.

A significant development has occurred in concrete surfaces during the history of the competition. The development of concrete technology and ways of manufacturing is clearly visible in for example the diversity of surface types.

Future ?

- new and free forms and surfaces
- plasticity
- transparency
- new materials: light, washable surfaces, ...
- new mixed materials and construction: glass fibre concrete, glass mixed in concrete ...
- new products, new structures
- graphic concrete
- new coloured concrete

CONCRETE AWARD:
" BLUE MOMENT" - SCULPTURE
designed by Pertti Kukkonen