

FINAL PROGRAM

# 22<sup>nd</sup> Congress of the International Federation of Hospital Engineering

HURTIGRUTEN COASTAL EXPRESS | TROMSØ–BERGEN | 13–17 APRIL 2012



[www.ifhe.info](http://www.ifhe.info)



IFHE CONGRESS 2012

# Welcome to Norway and 22<sup>nd</sup> Congress of IFHE



**Gunnar Bækken**  
*Congress chairman,  
Past President IFHE*

While the Vikings conquered Europe with ships and swords, the modern Norwegians have conquered the world with their oil and shipping business. Viking ships crossed the Atlantic more than a thousand years ago and the polar ships took Norwegian explorers to the North and the South Pole.

We want you to feel like a Norwegian while in Norway! Use your feet, go for a run while ashore, have a snack looking on the sea, and try the many variants of Norwegian fish and beer!

The IFHE Congress is not only a place for science and education, but also a good opportunity to meet IFHE members, renew friendships and create new ones. We know that you will find IFHE stimulating and perhaps a future tool for you in your personal development in Hospital technology and architecture. Take the opportunity to find what IFHE can offer you: not only the congress, but a modern, interactive web site, an excellent journal, courses around the globe and good colleagues.

If you are not already a member, join IFHE and be part of the modern development of Health Care. We promise to make your visit to Norway worthwhile and look forward to be your hosts.



**Ole Rist**  
*Incoming President IFHE,  
Member – Organising Committee*

It is a pleasure for me to get the opportunity to wish you all welcome to Norway as guests and visitor in April 2012.

This occasion is for some of you once in a life time. I recommend to use this visit to open your minds and breath in the atmosphere of a coastal journey.

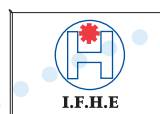
You will experience the winter in North and springtime down South on arrival in Bergen. You will therefore have the best feeling of Norwegian climate if you also can be outside on the ship. In the ports of call you will see a little pieces of the Norwegian daily life. Take a stroll along the quay. Warm clothes are recommendable.

Last but not least, you will have the opportunity to take this "Journey through Norwegian and International hospitals". We have succeeded in getting many speakers from all corners of the world.

You will also meet old friends and colleagues and make new acquaintances.

We and the staff on board M/S Midnatsol will do our best to make you feel welcomed and taken care of.

## A voyage through International and Norwegian Hospitals



IFHE CONGRESS 2012



**Vidar Smalås**  
*President FSTL*

FSTL was admitted to membership grade A of IFHE in June 1991. Since then we have been present at all IFHE congresses, and have taken active part in the work of the federation. We intend to continue this pleasant tradition also in the years to come.

In 2002 FSTL had the pleasure of hosting the 17<sup>th</sup> IFHE conference. Now, ten years later, we are happy to have been given the opportunity to once again welcome IFHE to Norway. To the “22<sup>nd</sup> Congress of the International Federation of Hospital Engineering”. This in co-arrangement with the annual meeting of FSTL.

Thanks to the many contributions from the speakers, who have submitted papers, our scientific committee have been able to put together a scientific program of high quality. I am confident that you all will find lectures of interest and benefit. I also recommend at the strongest that you take the opportunity to visit four different Norwegian hospitals, presented in the technical visits.

On behalf of FSTL, I welcome you all to this congress! I hope you will enjoy the lectures, the visits, the social program, the food,.... and, not least: the journey.

Enjoy!

PS: See you all in Buenos Aires 2014!

### ORGANISING COMMITTEE

Vidar Smalås  
*President FSTL*

Askjell Utaaker  
*Haukeland University Hospital*

Ole Rist  
*Stokmarknes Hospital*

Elin Berggren  
*Oslo University Hospital*

Gunnar Bækken  
*St. Olavs Hospital*

### SCIENTIFIC COMMITTEE

Elin Berggren

Oddmund Uttakleiv

Sverre Johan Gulstad

Torunn Eriksen

Øystein Jensen

### EXHIBITION COMMITTEE

Hans Skjulsvik

Morten Berg

Håkon Johansen

### CONGRESS ORGANISER

Kongress & Kultur



kongress.no



# Congress Schedule – 22<sup>nd</sup> Congress of the International

## Saturday 14 april – Hospital design, architecture and construction

VENUE: MÅNE AMFI		VENUE: STJERNE
0800–0900	Opening ceremony. Opening Speech. <i>Helsenord director Lars Vorland</i>	
0830–0900	01–01 <b>Three different Healthcare Buildings based on the same Typology</b> <i>Monza, Luciano, Argentina</i>	
0900–0930	01–02 <b>The relation between people and buildings</b> <i>Brynildsen, Per Christian, Norway</i>	
0930–1000	01–03 <b>The road ahead: A.O.B. Development Master Plan</b> <i>Borelli, Gianluca, Italy</i>	
1000–1030	Break	
1030–1100	01–04 <b>A HOSPITAL SCHOOL FOR AFRICA</b> <i>Castella, Francisco, Spain</i>	01X–01 <b>Healthcare architecture in Argentina – an experience</b> <i>Marjovsky, Alberto Jose + Vidauli, Susana Cristina, Argentina</i>
1100–1130	01–05 <b>Master plan in stages for a centennial children's hospital</b> <i>Pan, Silvina, Argentina</i>	01X–02 <b>On Hospital Design – Identifying Building Attributes of Hospital Design</b> <i>Holst, Malene Kristine, Denmark</i>
1130–1200	01–06 <b>Natural light - The Hypogeum Hospital spaces</b> <i>Atzeni, Mattia, Italy</i>	01X–03 <b>New healthcare model, new architectonic challenges</b> <i>Codina, Silvana, Argentina</i>
1200–1230	01–07 <b>The Architectural Master Plan og the Vital Brazil Institute</b> <i>Bitencourt, Fábio, Brazil</i>	01X–04 <b>Developing the health science campus: the implementation</b> <i>De Coster, Eddy, Belgium</i>
1230–1300	01–08 <b>NEW ACUTE HOSPITAL, STOKMARKNES - Development and solutions</b> <i>Tøien, Svein Erik, Norway</i>	
1300–1430	Lunch	
1515–1645	TECHNICAL VISIT – STOKMARKNES	
1700–1730	01–09 <b>Several Health Design projects adapted to different climatic, social and economical environments in Argentina.</b> <i>Sartorio, Javier, Argentina</i>	
1730–1800	01–10 <b>The operating room of the future</b> <i>Hol, Per Kristian, Norway</i>	
1800–1830	01–11 <b>Review of energy simulations for hospital design</b> <i>Shchuchenko, Vladyslav, Norway</i>	
1830–1900	01–12 <b>Use of BIM in hospital projects</b> <i>Alvsåker, Ingrid, Norway</i>	
1900–	Dinner	
2100–	Laurie's Night in Panorama	

### Chairs / Co-chairs

MAIN LECTURE		
	Chairman	Co-chairman
14-1	Browne R	Smalås V
14-2	Albertijn R	Ringén B
14-3	Pitcher D	Damlién T
15-1	Rantasalo J	Alida B. Kjeldsen
15-2	Mwaura S	Kjosås B
15-3	Jensen, K	Dalager. H
16-1	Poggenpoel K	Dyran. K
16-2	Aebischer Hans-Peter	Torun Eriksen
16-3	Kiestra, D	Hans Skjulsvik
17-1	Wavel A	Bjørn Johannesen

## Sunday 15 april – Facility management and administration

1000–1030	02–01 <b>Health technology management in Kenya</b> <i>Mwaura, Salome, Kenya</i>
1030–1100	02–02 <b>Strategic Analysis og Building Portfolios - Multimap</b> <i>Larssen, Anne Kathrine, Norway</i>
1100–1130	02–03 <b>Benchmarking of FM departments in 8 Scandinavian Hospitals</b> <i>Gissinger, Håkon Kvåle, Norway</i>
1130–1200	02–04 <b>Understanding your Carbon Footprint</b> <i>O'Brien, Robert, Australia</i>
1200–1230	02–05 <b>Implementation of Facility Management in hospitals abroad - Experiences in Iran</b> <i>Gudat, Dr. Horstn Germany</i>
1230–1300	02–06 <b>Developing risk management practices in a hospital environment</b> <i>Pietarinen, Veli-Matti, Finland</i>
1300–1430	Lunch

SIDE LECTURE		
	Chairman	
14-2	Brynjulf Skjulsvik	
15-2	James Herbert	
16-2	Paul Merlevede	

# Federation of Hospital Engineering



IFHE CONGRESS 2012

VENUE: MÅNE AMFI			VENUE: STJERNE		
1430–1500	02–07	Implementation of Norwegain Experiences to Slovenian Hospital Sector <i>Bjørberg, Svein, Norway</i>	02X–01	Relationship between the technical governance and clinical governance <i>Fiorenza, Marcello, Italy</i>	
1500–1530	02–08	Life Cycle Costs - A new approach and an innovative model for calculation <i>Listerud, Christian Andrè, Norway</i>	02X–02	Energy Perfomance Contracting - Efficiency Opportunities in Health Care Facilities and Patient Environments <i>Wells, Scott, Australia</i>	
1530–1600	02–09	Planning and Construction of a Nuclear Medicine Department <i>Aune, Kari Solem, Norway</i>	02X–03	Hospital Management Department - internal trade of services and the meaning of improvement, innovation and competiveness <i>Andresen, Yngvar, Norway</i>	
1600–1630	02–10	Exploitation of New Technology in Facility Design of Hospital District of South Ostrobothnia. <i>Yli-Karhu, Tiina, Finland</i>			
1630–1700	02–11	Medical Technology: The effect on the quality and cost of healthcare <i>Herbert, James, South Africa</i>			
1700–1800	Break				
1800–1830	02–12	St. Olav Hospital: Brief Presentation <i>Aslaksen, Ragnhild, Norway</i>			
1830–1900	02–13	Design and testing of safety ventilating systems, experiences from St. Olav <i>Aune, Kari Solem, Norway</i>			
1900–	Dinner				
2100–	Argentinian Night in Panorama and Bar				

## Monday 16 april – Hospital technology

0915–1200	TECHNICAL VISIT – TRONDHEIM				
1400–1430	03–01	Harnessing the Sun`s energy to improve Health Care delivery in health Centres in Uganda <i>Wanda, Sam, Uganda</i>	03X–01	Hospital Logistics in the modern Healthcare Facility <i>Lindgren, Filip, Sweden</i>	
1430–1500	03–02	Integration of IT-system in hospital environment <i>Kristensen, Kurt-Even, Norway</i>	03X–02	Intelligent battery- and cable-free, digital iLOQ locking technology for greater security, less work and lower costs in hospital building and secure management of medicine cabinets <i>Szûcs, Michael, Finland</i>	
1500–1530	03–03	What is the nature of hospitals? <i>Rohde, Tarald, Norway</i>	03X–03	Energy Saving Potential With Demand Contolled Ventilation In Hospitals <i>Harsem, Trond Thorgeir (Mysen, Mads), Norway</i>	
1530–1600	Break				
1600–1630	03–04	Management cost of Clinical engineering services <i>Jensen, Øystein, Norway</i>			
1630–1700	03–05	Legionella safe tap water. Heat solution without using energy <i>Harsem, Trond Thorgeir, Norway</i>			
1700–1730	03–06	Safety power supply in medical group 2 locations acc. to IEC364-7-710 (NEK 400-5-56) – Norwegian projects <i>Fykerud, Martin, Norway, Schwabe, Matthias, Germany</i>			
1730–1800	03–07	The New Energetic Plant Hospital Universitario 12De Octubre Madrid <i>Castella, Francisco (Mosquera, Louis), Spain</i>			

## Tuesday 17 april

0830–0900	Presentation of the best papers
0900–1000	Sum-Up of Technical speeches
1000–1030	Presentation of 23 <sup>rd</sup> Congress in Buenos Aires
1030–1100	Closing ceremony
1100–	General Assembly FSTL / General Assembly IFHE



# Technical Visits

Friday 13 April

University Hospital North Norway, Tromsø

16:00: Buses from the hotel

16:30–18:30: Lectures / surveys

The A-wing, the patient hotel and The PET-centre,  
*Willy Strand / KHP-arkitekter*

New UNN Narvik, *Gina Johansen / Borealis arkitekter*  
Lean-production – Lean in UNN, *Marit Lind /*  
*Randi Torgersen*

LUO - A condition for changes – area planning  
and integration of clinical activity and DES,  
*Gina Johansen/Marit Lind*

Technical operation, electrical/mechanical dept.,  
*Martin Sivertsen / Hallgeir Hansen*

Pressure Tank, PL Diagnostic Clinic and architect

The **BRUS** (child and adolescent psychiatry) building,  
*BUK by Elin Gullhav*

The Northern Territories – emergency planning,  
particular challenges in the arctic

Ca. 18:30: Return by bus to the hotel

Saturday 14 April

Nordland Hospital, Stokmarknes

14:15: Disembarkment

14:30: Museum of the Coastal Steamers

15:15: Bus departure. Guided trip around  
Stokmarknes, new hospital, local sightseeing.

16:45: Return to MS Midnatsol.

Monday 16 April

St. Olav Hospital HF, Trondheim

08:00: Information in Auditorium  
aboard the *MS Midnatsol*

09:15: Bus transport: to St. Olavs Hospital

09:45–11:45: Parallell visits at St. Olavs Hospital  
CHOOSE ONLY ONE OF VG1 OR VG2:

VG1: Clinical Concept – Buildings and  
Architecture, *Ragnhild Aslaksen, Chief Architect*  
*Helsebygg Midt-Norge*

VG2: Technical Concept – Systems and  
Products, *Otto Koch, Section Manager Technical*  
*Dept. St. Olav Hospital*

12:00: Bus transport to MS Midnatsol

Tuesday 17 April

Haukeland University Hospital, Bergen

15:10: Departure from coastal steamer wharf

15:25: Lectures / surveys

Transport installation, technical plant and envi-  
ronment hall, *Geir Brügger/Tore Sigbjørn Hansen*

New surgical centre / thorax operating rooms  
– on site briefing and guided tour of the central  
block, the ER, radiology dept. and bed wards,  
*Geir Pedersen and Kristian Brandseth*

Child and adolescent centre, Step 1 - rough draft  
and site, and guided tour of new lab building,  
*Helge Bergmann and Lars Petter Smith*

General guided tour of the Central Block, top to  
bottom (bed wards / service floors / new ER ),  
*Askjell Utaaker and Bror Hansen*

PET-ct / park building / new modern bed ward  
and heliport, *Aud Bruland, Terje Jan Nilsen and*  
*Terje Sørensen*

16:30: End of tour. Buses return to centre of  
Bergen, the Central Bus Station.



St. Olav Hospital HF, Trondheim

Photo: Helsebygg



Haukeland University Hospital, Bergen

Photo: Svein Harkestad

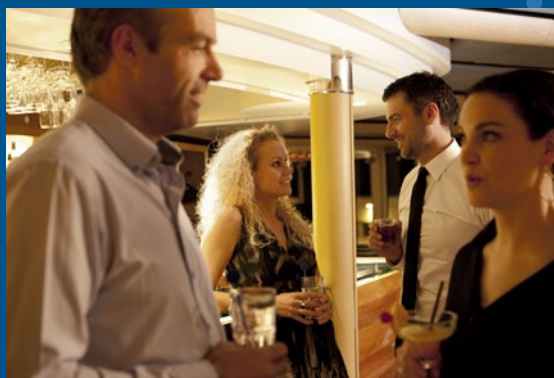
# Social Events

**Friday 13 April**

***Boknakaran plays on embarkment***

**Friday 13 April, 20:00–23:30**

***Get-together Party***



All participants are welcome to join the Get-together reception in the evening at Rica Ishavshotel in Tromsø

**Saturday 14 April, 21:00**

***Laurie's Night in Panorama***

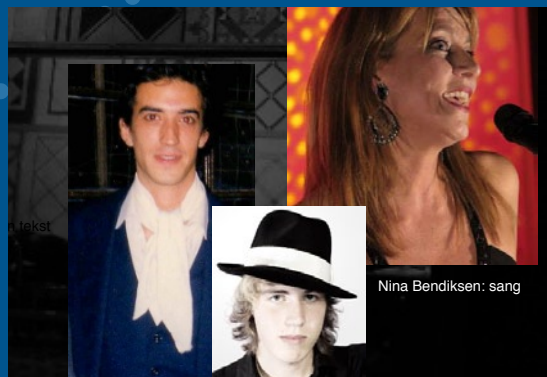
A tribute to Lawrence (Laurie) Hadley, a significant and vital British member of IFHE.

He did a lot to make this organisation vivid and growing. Laurie was president of IFHE 1998-2000. He was a true friend of FSTL and Norway and he attended many annual meetings in Norway. The most spectacular and memorable one, was in Kirkenes. We had many laughs when he memorised the happenings there.

He was proposed and became honorary member of FSTL, and he was very proud of this gesture. When he passed away a sum was donated from his son Brian to be used on the next international Congress in Norway as a memory of the good man and friend, Lawrence Hadley

**Sunday 15 April, 21:00**

***Argentinian Night in Panorama***



Nina Bendiksen: sang

The 23rd Congress of IFHE will in October 2014 be held in Buenos Aires, Argentina. The theme will be: "Healthcare Facilities in times of Radical Changes". After dinner we will enjoy Argentinian tango and experience the Argentinian atmosphere in the cold Norwegian climate!

**Monday 16 April, 14:00**

***Concert on deck***

By "Nowhere Men".

**Monday 16 April, 20:00**

***Gala Dinner***



The Gala Dinner takes place at Hurtigruten. Enjoy delicious food & wine together with old acquaintances and new friends

Dance to the music by "Nowhere Men".

# General information

## Dates

The IFHE Congress will take place on the Norwegian Coastal Steamer, 13–17 April 2012. Spring is a great time for a journey with the coastal steamer.

## Registration & Hospitality Service

Registration in Tromsø at Rica Ishavshotell (by the wharf) from 16:00–23:00. Here you'll get a name tag and the key to your cabin. A luggage room will be available from mid day. For those of you embarking in Kirkenes you will register for the congress on Saturday April 14. Our registration service & hospitality desk can be found in the meeting room "Sol". Opening hours will be announced.

## Meals aboard Hurtigruten

There are 3 meals included per day: breakfast, lunch and dinner. All meals are served in Restaurant Midnatsol. Beverage included only Monday evening at the Gala Dinner.

## Cruise Card

If you want to charge your cabin for purchases aboard the ship, you will have to sign up for a Cruise Card by the purser. The ship accepts the following credit cards: American Express, Diners, Master Card & Visa and also the following currencies: Euro GBP, NOK and USD.

## Exhibition

The exhibition will be open from April 14 until April 17 and features more than 20 relevant exhibitors:

- Aga As, Lindehealthcare
- Ascom (Norway) As
- Bender Group
- Best Teleprodukter As
- Bravida Norge As
- C. F. Møller Architects
- Camfil Norge As
- Copper Development Assoc.
- Courtney Thorne Ltd
- Eta Energi As
- Fagerhult Belysning As
- Getinge Infection Control
- Grove-Knutsen & Co As
- Iloq
- Ken Norge As
- Lydia As
- Multiconsult
- Noratel As
- Norconsult As
- Rambøll
- Siemens As
- Stokkan Lys Norge As

We would like to thank the following companies for being main sponsors to our Congress:



**SIEMENS**

**COWI**

**FAGERHULT**

**swisslog**





Arctic Cathedral, Tromsø

## Presentation of Destinations & Excursions

The ship will visit more than 20 ports on our journey. Here is a short introduction to the main ports:

### Tromsø

Tromsø is the largest town in Northern Norway, and the area's capital. It is a modern city, and is widely known for being a lively and exotic town full of North Norwegian charm. Tromsø is also the world's most northern university town.

#### Sightseeing, Polaria, and Fjellheisen Cable Car

A shuttle will take you from the hotel to the Polaria museum, where you will receive a guided tour. Here you will experience elements of Arctic nature – a snowstorm, a dozing polar bear, the tundra, the Northern Lights, and much more. After the museum tour, the shuttle will pick you up again and the guide on board will show you the best that Tromsø has to offer. One of the highlights is a round trip on the "Mountain Lift" cable car, which takes you up and above Tromsø for an amazing view! When the tour is over, the shuttle will drop you off back at the hotel.

**Time:** April 13th 2012. 15:30 – 19:00

**Location:** Departure from Rica Ishavshotell

**Price:** Spouses FREE, others NOK 400

**Includes:** Private coach, English speaking guide, and entrance fees.

[www.destinasjontromso.no](http://www.destinasjontromso.no)

### Stokmarknes

Stokmarknes is a small northern town with a population of 3 163. Here you can get a taste of what life in the far north is like, where the town and its people share a unique connection with the ocean.

#### Coastal Steamer Museum

Stokmarknes is the birth place of Hurtigruta, the complete experience of the Norwegian coast which is also the venue for this conference. In Stokmarknes we will visit the museum, which shows the history of the ships from the early years until today. The museum is right at the dock, so it's a convenient little trip on shore!

**Time:** April 14th 2012. 14:30 – 15:15

**Location:** Departure from MS Midnatsol

**Price:** FREE, on your own

**Includes:** Entrance fee



Foto: Trond Henningsen

Coastal Steamer Museum





Nidarosdomen

## Trondheim

A modern city, and a centre of knowledge with a highly respected university, and many popular colleges and a research community ranking among the best in Europe. It was the first capital of Norway, founded by the famous Viking King Olav Trygvason in 997.

### Sightseeing and visit Nidarosdomen Cathedral

Trondheim is a beautiful city with a rich history, and is also the home of Nidarosdomen Cathedral. Norway's national sanctuary, built on the grave of St. Olav, the patron saint of Norway. A guide will take you on an exploration of the city by bus, and the ride also includes a visit to "the view point", where you'll have the opportunity to admire the city from above. And of course the tour wouldn't be complete without a visit to Nidarosdomen. Once the tour is over, the shuttle will return to the ship for your convenience.

**Time:** April 16th 2012. 10:00 – 12:00

**Location:** Departure from MS Midnatsol

**Price:** Spouses FREE, others NOK 350

**Includes:** Private coach, English speaking guide, and entrance fees.



Trondheim Harbour



Kjeungskjær Lighthouse





Bryggen, Bergen

Fløien Funicular

Bergen Harbour

## Bergen

Bergen is an international city with small-town charm and atmosphere. The 235 000 inhabitants are proud of Bergen's shipping, trading and cultural traditions. The city is like a spectacular amphitheatre clambering up the mountainsides.

### Sightseeing, tour of the Hanseatic Wharf & Hanseatic Museum

Upon arrival in Bergen we're happy to be able to offer you a comprehensive tour of this historic city! A shuttle with guide will pick up you, and your luggage, at the dock. You will be taken on a comfortable ride through all of Bergen, while the guide tells you all you need to know to almost qualify as a local. Afterwards, you will be dropped off at the Hanseatic Wharf (Bryggen) for a guided stroll around this World Cultural Heritage, and the Hanseatic Museum. The guide will then show you back to your hotel, where the shuttle has already delivered your luggage.

**Time:** April 17th 2012. 15:00 – 18:00

**Location:** Departure from MS Midnatsol, return to Scandic Neptun

**Price:** NOK 300

**Includes:** Private coach, English speaking guide, and entrance fees.

[www.visitbergen.com](http://www.visitbergen.com)



Bergen Harbour at night

*Limited availability applies to all activities listed above. We reserve the right to make alterations in case of unforeseen events.*

### Links:

[www.hurtigruten.com](http://www.hurtigruten.com)

[www.ifhe.info](http://www.ifhe.info)

[www.fstl.org](http://www.fstl.org)

[www.visitnorway.com](http://www.visitnorway.com)



# Cruise Hurtigruten

## Single cabin

NOK 8 560 (Approx. € 1070)

## Twin cabin

NOK 4 600 (Approx. € 575)

The prices are per person embarking in Tromsø April 13th – disembarking in Bergen April 17th.

The cruise includes 3 meals a day, starting with a get-together party on embarkation and ending with a buffet lunch before arriving Bergen. We're planning the following events:

**April 13: Get-together Party**

**April 14: Laurie's Night**

**April 15: Argentinian Night**

**April 16: Gala Dinner**

As Hurtigruten has a limited numbers of cabins we encourage you all to share a twin cabin with a colleague! As you may see the prices also reflect this.

## The cruise will have the following southbound schedule:

<b>April 13</b>	Departure from Tromsø
<b>April 14</b>	Finnsnes
	Harstad
	Risøyhamn
	Sortland
	Stokmarknes (Hurtigrutemuseet)
	Svolvær
	Stamsund
<b>April 15</b>	Bodø
	Ørnes
	Nesna
	Sandnessjøen
	Brønnøysund
	Rørvik
<b>April 16</b>	Trondheim
	Kristiansund
	Molde
	Ålesund
<b>April 17</b>	Torvik
	Måløy
	Florø (Westernmost Call)
	Bergen







# Congress Registrants and Companions

Abe, Miyako, <i>Japan</i>	Damlie, Tore, <i>Norway</i>	Hashimoto, Kenshiro, <i>Japan</i>
Abrahamsen, Lars, <i>Norway</i>	De Brabandere, Ilse, <i>Belgium</i>	Haug, Tom, <i>Norway</i>
Aebischer, Hans-Peter, <i>Switzerland</i>	Decoster, Eddy, <i>Belgium</i>	Heide, Merete, <i>Norway</i>
Ahlgren, Jonas, <i>Norway</i>	Decroos, Christiane, <i>Belgium</i>	Herbert, James, <i>South Africa</i>
Al Jumaili, Omar, <i>Iraq</i>	Deman, Dirk, <i>Belgium</i>	Herbert, Helena, <i>South Africa</i>
Albertijn, Roger, <i>Belgium</i>	Donato, Osvaldo Mario, <i>Argentina</i>	Hjorth, Poul, <i>Denmark</i>
Alhonen, Minna, <i>Finland</i>	Drinkrow, Stephan, <i>South Africa</i>	Hobber, Mats, <i>Norway</i>
Alhonen, Jyrki, <i>Finland</i>	Drinkrow, Marietjie, <i>South Africa</i>	Hol, Per Kristian, <i>Norway</i>
Aller, Niels Bjørn, <i>Denmark</i>	Dybvadskog, Kjell, <i>Norway</i>	Holan, Tove Ofstad, <i>Norway</i>
Alm, Tron, <i>Norway</i>	Dyran, Knut, <i>Norway</i>	Holan, Per Magnus, <i>Norway</i>
Alm, Åse Brænden, <i>Norway</i>	Eidissen, Tore, <i>Norway</i>	Holst, Malene Kirstine, <i>Denmark</i>
Alvsåker, Ingrid, <i>Norway</i>	Eilertsen, Wenche, <i>Norway</i>	Holst, Jens Møller, <i>Denmark</i>
Amano, Sumiko, <i>Japan</i>	Eilstrup, Benny, <i>Denmark</i>	Hortman, Marina, <i>Norway</i>
Aragones, Angeles, <i>Spain</i>	Eilstrup, Conny, <i>Denmark</i>	Hosoya, Osamu, <i>Japan</i>
Aslaksen, Ragnhild, <i>Norway</i>	Einmo, Gunnar, <i>Norway</i>	Hundsahl, Lissy, <i>Denmark</i>
Atzeni, Mattia, <i>Italy</i>	Elgersma, Trijntje, <i>The Netherlands</i>	Husby, Gunnar, <i>Norway</i>
Aumayr, Josef, <i>Austria</i>	Elzaurdia, Pedro, <i>Uruguay</i>	Husby, Gunnar, <i>Norway</i>
Aune, Kari Solem, <i>Norway</i>	Emborg, Karin, <i>Denmark</i>	Hverven, Egil Sverre, <i>Norway</i>
Aune, Unni, <i>Norway</i>	Enevoldsen, John, <i>Denmark</i>	Haaland, Tor Martin, <i>Norway</i>
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Barbré Pedersen, Bjørn, <i>Denmark</i>	Engebreetsen, Jan Erik, <i>Norway</i>	Hårnes, Toril, <i>Norway</i>
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Bender, Christian, <i>Germany</i>	Eriksen, Torunn, <i>Norway</i>	Jacobsen, Harriet Maxine, <i>Norway</i>
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Berg, Morten Olav, <i>Norway</i>	Ernstsen, Ulf, <i>Norway</i>	Jensen, Øystein, <i>Norway</i>
Berg, Egil, <i>Norway</i>	Fiorenza, Marcello, <i>Italy</i>	Jensen, Birthe Tronsgaard, <i>Denmark</i>
Bergmann, Helge, <i>Norway</i>	Fiskvik, Magne, <i>Norway</i>	Johannessen, Bjørn, <i>Norway</i>
Bitencourt, Fábio, <i>Brazil</i>	Floan, Trond, <i>Norway</i>	Johansen, Ole-Hermann, <i>Norway</i>
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Boeke, A. Willem, <i>Netherlands</i>	Font, Liliana, <i>Argentina</i>	Johansen, Eva Merethe, <i>Norway</i>
Bolghaug, Torgeir, <i>Norway</i>	Forsblom, Marja, <i>Finland</i>	Johnsen, Ninna Gerner, <i>Norway</i>
Borelli, Gianluca, <i>Italy</i>	Fredericia, Tina, <i>Denmark</i>	Jonck, Jacobus, <i>South Africa</i>
Borgman, Ingemar, <i>Finland</i>	Frise, Carina, <i>Norway</i>	Jonck, Johanette, <i>South Africa</i>
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Bristot, Peter, <i>Germany</i>	Fujita, Ei, <i>Japan</i>	Järvi, Kerttu, <i>Finland</i>
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Browne, Maureen, <i>Northern Ireland</i>	Galesio, Maria Elena, <i>Argentina</i>	Kamp, Pieter G., <i>Netherlands</i>
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Bækken, Anne Helene, <i>Norway</i>	Graaf van de, P.T., <i>The Netherlands</i>	Kjosås, Bjørn Helge, <i>Norway</i>
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 Stonham, Cindy, *Australia*  
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 Viitanen, Kalevi, *Finland*  
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 Visser, Piet, *The Netherlands*  
 Voutilainen, Pia Katriina, *Finland*  
 Vuorinen, Marko, *Finland*  
 Wagnerberger, Florian, *Norway*  
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 Westerheim, Tore, *Norway*  
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 Whiteley, Linda, *United Kingdom*  
 Wilhelm, Andreas, *Germany*  
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 Yli-Karhu, Tiina, *Finland*  
 Yu, Dong, *China*  
 Zhang, Yu, *China*

## 22<sup>nd</sup> Congress of the International Federation of Hospital Engineering

IFHE was established in 1970, on the occasion of the 1st Biennial International Congress of Hospital Engineering in Rome, prompted by:

1 ) The desire of several national engineering professional organizations and individuals to join in a world-wide federation.

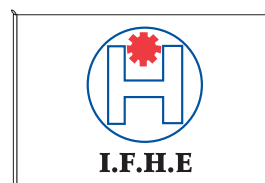
2 ) To encourage and facilitate the exchange of information and experience of hospital and healthcare facilities relative to planning, design, engineering, procurement, construction, technology, commissioning, maintenance, estate management and administration.

The IFHE membership embraces some ten thousand persons in more than thirty countries, engaged in the wide range of activities involved in the operation and safety of healthcare facilities.

IFHE 2012 will be of interest to all persons involved in healthcare engineering with a conference programme covering a wide range of subjects including workshops under the auspices of the World Health Organization (WHO) and an exhibition of products and services relative to the healthcare industry.

It is our hope that many newcomers – as well as delegates to previous IFHE Congresses and national healthcare engineering conferences – will take this unique opportunity to participate in this 22nd Congress which promises to be an innovative, interesting and exciting event.

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