

Remco van der Hofstad

Department of Mathematics and Computer Science
Eindhoven University of Technology
r.w.v.d.hofstad@tue.nl

Event Eurandom workshop honouring the 60th birthday of Frank den Hollander

Royal decoration for Frank den Hollander

On 15 December 2016, Frank den Hollander received a Royal Decoration in the Order of the Dutch Lion (Ridder in de Orde van de Nederlandse Leeuw). Mayor Emile Jaensch of Oegstgeest presented the decoration during a conference held at the research institute Eurandom located on the campus of Eindhoven University of Technology. Remco van der Hofstad reports on this special event.

This conference was devoted to the celebration of Frank den Hollander's sixtieth birthday. Frank was 'pleasantly surprised' by the honour awarded to him: "This was a very warm moment. It was wonderful that also my wife and children could attend. It is very attentive that the mayor of Oegstgeest came to Eindhoven especially for this event. I have always enjoyed working with young talents in science. Showcasing science is magnificent and you get to meet wonderful and beautiful people."

Eminent scientist and excellent manager

Frank den Hollander is a professor in probability and statistical mechanics. He is now

affiliated to the Department of Mathematics at Leiden University, and worked at Eindhoven University of Technology, Radboud University Nijmegen, Utrecht University and Delft University of Technology before that. He is an eminent Dutch scientist, who has made breakthrough international discoveries in probability theory, statistical mechanics and network theory. He acts as a role model for the many young scientists that he works with.

Frank den Hollander acted as the scientific director of the European institute in stochastics Eurandom from 2000 to 2005. He was one of the founding fathers of the Platform Wiskunde Nederland (PWN).

PWN united the rather fragmented mathematical landscape in mathematics before that time. He was also one of the founding fathers of the cluster in Stochastics STAR. He is an excellent manager, who has gained the respect that is needed to act as a leader and the vision to decide what is the right course of action. He is one of the pillars of the Gravitation project NETWORKS, a consortium of scientists from the University of Amsterdam, Leiden University, Eindhoven University of Technology and the Center for Mathematics and Computer Science (CWI). In his extensive contributions shaping the mathematical landscape in the Netherlands, he has always put mathematics and the needs of the mathematical community in the Netherlands central.

Supervisor and networker

One of the distinguishing characteristics of Frank are his warm character and his enor-



Frank is being addressed by Mayor Jaensch of Oegstgeest



Frank receives his Royal Decoration



Michiel van den Berg and Erwin Bolthausen: two of Frank's long term collaborators

mous energy, his positive and constructive attitude and his personal relations to his colleagues — from their first steps into research until, sometimes, their professorships. Frank keeps on supporting them and is always ready for a chat when and where needed. In this way, he helps his colleagues in making the tough decisions, in science and beyond, that they are being confronted with. Having supervised some thirty plus postdocs and twenty PhD students, of whom now eight are full professors, he has had a marked influence on the development of probability and statistical physics in the Netherlands and internationally. He has an extensive network of collaborators, with a focus on Germany, England, France, Switzerland and Italy. Remarkably, he works with these colleagues in their own languages, showing that he combines mathematical strength with an unusual gift for languages.

A guided tour through random media

Den Hollander turned sixty on 1 December 2016. On this occasion and according to scientific tradition, a birthday conference

was organised on 12–16 December at Eu-random in Eindhoven, organised by Marek Biskup, Aernout van Enter, Frank Redig and the author, appropriately titled 'A guided tour through random media'.

His collaborators in the past forty years from all over the world were invited, and massively attended. This gave rise to a scientific feast, showcasing the beauty of mathematics and the strong personal ties that Frank forged with many colleagues across the world. During their talks, Frank's collaborators discussed research as well as how it was to work with him. These collaborations often spanned several decades, showing that working with Frank is a lasting and stimulating, maybe even invigorating, experience. Many anecdotes about these collaborations were shared, giving an extensive overview of Frank's work, as well as his personality.

The workshop mainly focussed on the areas that Frank made the most well-known contributions. These include the theory of large deviations, metastability and random polymers. In each of these topics, Frank has written an influential monograph summarizing the state of the art, as well as posing many open problems that have shaped the areas since. Other topics include the Parabolic Anderson Model and random walks in static and dynamic random environments. Several of the close collaborators gave panoramic talks on various topics that are dear to Frank's heart. Stu Whittington spoke about 'Self-avoiding walks and related polymer models', Andreas Greven about 'Populations, genealogies and fluctuating environments', Roberto Fernandez about 'Gibbs–non-Gibbs dynamical transitions: The large-deviation

paradigm and how we got there', Anton Bovier about 'Metastability according to Frank' and Wolfgang König about 'The spatially discrete parabolic Anderson model with time-dependent potential'. In each of these fields, there is an intricate relation between the objects studied and the (often random) environment in which they live, and in each of these topics Frank made profound contributions.

Frank tackles these problems with tools from across the mathematic fields, including variational problems, functional analysis, combinatorics, and perturbative techniques. These tools are used in ingenious and creative ways that not only tackle the problem, but also give insight into the how and why of the solutions found. The young people that he worked with in these areas have often flown out since, and have become research leaders in the field themselves. This shows the lasting influence that Frank has on the field at large, as exemplified in this workshop.

Piano recital

On Thursday 15 December the conference was complemented by a piano recital by Italian pianist Igor Roma, in 1996 winner of the prestigious Liszt Concours and a good friend of Den Hollander. Frank also played an important role in the careers of a number of Italian top-pianists, by offering them a home-away-from-home when they were in the Netherlands, for example for concerts. This shows Frank's great personality, as well as his generosity in sharing his love for piano music with his scientific friends. At the reception afterwards, he received his well-deserved Royal Decoration. ☼



Frank with pianist Igor Roma



Igor Roma's piano recital