

Biberian Awarded Preparata Medal

Christy L. Frazier

At the 19th Conference on Condensed Matter Nuclear Science (ICCF) in April, the International Society for Condensed Matter Nuclear Science (ISCMNS) awarded its 16th Preparata Medal to Dr. Jean-Paul Biberian, a French physicist who has worked on cold fusion-related experiments since 1993. His colleague, Dr. Michael McKubre, noted, “The recognition by award of the Preparata Medal to Jean-Paul for his many contributions to CMNS is overwhelmingly appropriate—some would say overdue.”

The silver Preparata Medal was minted by the ISCMNS in 2003 to commemorate the late Italian physicist Giuliano Preparata. Biberian is the award’s first French recipient. It has been awarded to 15 other luminaries in the cold fusion field: 2004 - Yasuhiro Iwamura (Japan), Tadahiko Mizuno (Japan), Antonella De Ninno (Italy), Peter Hagelstein (U.S.); 2005 - Edmund Storms (U.S.), Yoshiaki Arata (Japan), Xingzhong Li (China), Michael McKubre (U.S.); 2006 - Akira Kitamura (Japan); 2007 - Alexander Karabut (Russia), Andrei Lipson (Russia), George Miley (U.S.); 2008 - Irving Dardik (U.S.); 2012 - John O’M. Bockris (U.S.); 2013 - Pamela Mosier-Boss (U.S.).

Biberian is incredibly honored to receive the distinguished award. He stated, “I am very proud to receive this medal. I am proud to join the previous recipients. This distinction makes me feel that my peers appreciate my work. Actually, they are the only ones who can do it in full. This field is very small in comparison to many other scientific ones, and I am very much grateful to my fellow colleagues who work hard to make this research succeed.”

William Collis, director of the ISCMNS, says that the presentation of the medal to Biberian was done secretly because the ISCMNS Executive Committee, the group that normally votes on medal recipients, includes Biberian. Collis explained, “There has been a conspiracy, and I must confess that I am responsible. My sins are two-fold. Firstly, we have bypassed the criteria, established by the Awards Committee at ICCF14 in 2008, that the Giuliano Preparata Medal should be awarded on scientific merit only. But we never considered that an outstanding contribution to science by a single individual could be surpassed in other fields. Secondly, I bypassed the Awards Committee itself. I conspired with Mike McKubre to present the medal to a long standing member of that committee.”

Collis feels that Biberian’s work as Editor-in-Chief of the *Journal of Condensed Matter Nuclear Science* (a free, peer-reviewed online journal published by ISCMNS) equals his experimental contribution to the field. He noted, “Ten years ago, on a cold winter’s evening at ICCF12 in Yokohama, some friends were having dinner together. Jean-Paul bravely took on the task of editing the electronic journal *JCMNS*... *JCMNS* is the jewel in the crown of the ISCMNS and it is

largely Jean-Paul as editor whom we have to thank.” McKubre added that Biberian has created “a viable and vibrant existence” for *JCMNS*.

Biberian recalls the early days of organizing the *JCMNS*. He said, “I remember suggesting the creation of a peer-reviewed scientific journal dedicated to cold fusion, because it was then very difficult to publish our work. In any scientific field, there are highly specialized journals dedicated to a specific community. I felt that the time had come to do as all fields do, have our own technical journal where it will not be necessary every time to prove the effect. This journal is very important; there are experimental papers that no other journal will dare to publish. There are theoretical papers that are sometimes so outside what is accepted now by the scientific community that no other journal will ever publish. However, I believe that an exchange of ideas is the way to proceed. Some of the experiments might be incomplete and might need improvements, but this might trigger new ideas for other people. A journal is not only a place to



Photo courtesy of TSEM.

Jean-Paul Biberian received the Preparata Medal at ICCF19.

publish absolutely perfect works, but also works in progress. This is true both for experiments and for theories.”

The first volume of *JCMNS* was released in 2007 and Vol. 15 was just published in March 2015. Collis noted that over 240 peer-reviewed papers have been published. *JCMNS* has been publishing proceedings of the recent ICCF conferences as special volumes. Biberian explained, “Since the first ICCF in 1990 various routes have been chosen to publish the conference proceedings. The quality of them was very variable, especially in the early days. But with the spreading of the internet, it became obvious that people (as myself) prefer pdf files that are easy to read and take no bookshelf space. So online publication seems to be the solution. As the *JCMNS* is already specialized in LENR, it is clear that the choice of publishing the conference proceedings as special volumes of the journal is the correct choice. In 2004, I organized ICCF11 in Marseilles, France, and I had to deal with the proceedings, so I have now quite a bit of experience in finding the appropriate referees. Since ICCF16, all the conference proceedings have been published in the journal, and I hope it will continue that way. I hope to publish the proceedings of ICCF19 before the end of the year.”

Biberian stated, “Our research is still too limited in terms of audience, and giving out the papers for free is a way of helping recognition of LENR. In the future the journal will be a source of information for historians. They will find how people of our time were thinking about the field.” See: <http://www.iscmns.org/CMNS/publications.htm>

It seems clear that Biberian’s role as Editor-in-Chief of *JCMNS* will have a lasting impact on the cold fusion field. His experimental work is also well-appreciated. When asked what experimental work of his own that Biberian thinks could have the longest legacy or impact, he mentioned his first cold fusion experiment with solid state electrolytes. McKubre noted, “Jean-Paul brought an experiment involving deuterium-conducting solid electrolytes to SRI that we worked on together. Although we did not demonstrate success in my laboratory at that time, solid electrolytes are starting to undergo a renaissance in our field and Jean-Paul was very much ahead of his time.” Biberian said, “The experiment was designed following the idea of Francis Forrat, a person I owe a lot, since it is thanks to him that I started in the field. I still think that it is a very important solution for future applications because proton conductors work better at high temperature. In the 1990s we had good results, and they need to be continued.”

McKubre highlighted another achievement of Biberian: “He was partially responsible, with Georges Lonchamp, for the only true engineered replication of any Fleischmann-Pons experiment.” Biberian is very proud of this work and was honored to work with Lonchamp. He discusses this in detail in his book *Fusion in All Its Forms* (available from Infinite Energy Press).

McKubre noted that “Jean-Paul has continued to innovate technically and has made several other substantial contributions to the CMNS community.”

It seems that Biberian always has numerous experiments running at once. Currently, he has four major efforts underway. He is trying to replicate the Parkhomov experiment with a mass flow calorimeter. He explained, “I designed this calorimeter 15 years ago, and I know it inside out, so if there is any excess, I should be able to detect it. Unfortunately,

things are not so simple, and my device is different from his. One of the difficulties is to make sure that there is no hydrogen leak, and this is a problem since sealing alumina is not easy. Hydrogen molecules are very small, and they easily leak out. Sealing with cement does not guarantee a perfect seal for hydrogen.”

Biberian’s second current project is with high pressure and temperature plasma electrolysis. He noted, “We have in the past shown that excess heat was produced with this method, but our goal is to amplify it greatly by adding variable magnetic fields. It is more and more believed that cold fusion is triggered by external means; in particular, variable magnetic fields are of great importance. Producing large and constant magnetic fields is difficult because the electrical currents become excessive. However, high intensity pulsed magnetic fields are much easier to produce.”

A third experiment “consists of a thin palladium film deposited on a silicon wafer covered by a silicon oxide layer in deuterium gas.” Biberian said, “The palladium film and the silicon wafer form a capacitor. As the palladium film is loaded with hydrogen, when a variable voltage is applied on the two electrodes, the deuterium is forced to move in and out of the palladium film. Some preliminary experiments have shown that excess heat is produced and this excess heat varies with the frequency of the applied signal.”

The fourth major project underway is an attempt to reproduce an experiment of Ubaldo Mastromatteo. Biberian explained, “He shines a beam of a red laser onto a palladium film deposited on silicon in a deuterium or hydrogen atmosphere, and observes locally apparition of new elements. I like this experiment, since it is very simple, and not time-consuming. I have a lot to do, and in order to make them all, some have to be less intense time-wise.”

Biberian is also a member of another distinguished group of cold fusioners—he was chairman of one of the field’s international conferences, the ICCF. In the fall of 2004, Biberian organized ICCF11 in Marseilles, France. At this event, Biberian’s cold fusion colleagues learned about one of his greatest loves—dance. Biberian performed an interpretive modern dance as one evening’s entertainment. He and fellow dancers have at other times performed a dance with a water theme, followed by a lecture on cold fusion by Biberian.

McKubre said, “I have often referred to Jean-Paul as the ‘funniest man in cold fusion’ and he remains a good friend and companion, and a strong colleague.”