THE UNIVERSITY OF CHICAGO
THE ENRICO FERMI INSTITUTE
933 EAST 56TH STREET
CHICAGO · ILLINOIS 60637
AREA CODE 312-753-8507

Laboratory for Astrophysics and Space Research

June 13, 1979

Prof. George Alexandrakis
Department of Physics
University of Crete
Iraklion, Crete
GREECE

Dear Prof. Alexandrakis,

Basilis Xanthopoulos has asked me to write you a letter of recommendation on his behalf. Xanthopoulos received his PhD in physics (general relativity), under my direction, from the University of Chicago in June, 1978. He has for the past year been working with Prof. Bill Kinnersley at the University of Montana. I thus know him and his work extremely well.

Xanthopoulos is an excellent physicist. He is one of the rare individuals to combine mathematical sophistication with sound physical sense. His style is to select and solve a key problem within an area, rather than to "play the field". He is extremely disciplined and hard-working. He further displays a good taste in the selection of problems. The one area in which he has not been fully tested is his ability to generate on his own interesting problems to keep a research program going. My guess is that he will perform well in this area, too. Xanthopoulos is a fair writer and an excellent speaker. He is, I would think, a very good teacher.

Xanthopoulos' thesis was on certain techniques for generating new solutions of Einstein's equation. Virtually all that is known about one technique (due originally to Chandrasekhar), and a number of properties of a second technique, are due to Xanthopoulos. In particular, he first obtained the expression for what happens under successive iteration of the two techniques. While at Chicago, Xanthopoulos also worked on a number of other problems, including the post-Newtonian approximations (with Chandrasekhar), and a result demonstrating stability of asymptotic flatness at null infinity (with me). At Montana, Xanthopoulos has continued his work on generating solutions, with the Kinnersley group, and has also, on his own, obtained some results involving Yang-Mills fields. There seems to be no sign of any slackening in his research output.

I can recommend Xanthopoulos no more highly than to say this: In my opinion, whichever Greek university he joins will, within five years, probably be the leading center of relativity in Greece.

Sincerely,

Robert Geroch

Robert Geroch

THE UNIVERSITY OF CHICAGO
THE ENRICO FERMI INSTITUTE
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CHICAGO · ILLINOIS 60637
AREA CODE 312-753-2507

Laboratory for Astrophysics and Space Research

June 22, 1981

The Selection Committee
Department of Mathematics
University of Crete
Solonos F 1,
Athens - 143
GREECE

Gentlemen:

I am writing on behalf of Basilis Xanthopoulos, who I understand is a candidate for a position in the Department of Mathematics at the University of Crete.

Xanthopoulos took his Ph.D. here at the University of Chicago in the summer of 1978. He wrote a superb thesis on axisymmetric solutions of Einstein's equations which was published in the Proceedings of the Royal Society. More recently, together with W. Kinnersley and C. Hoenselaers, Xanthopoulos has discovered a new series of transformations which enables the generation of whole new classes of axially symmetric asymptotically flat vacuum solutions of Einstein's equations; and the class is so large that he conjectures that the transformations, applied to the general Weyl metric, can be used to systematically generate all stationary metrics with axial symmetry.

Besides his contributions to the construction of axisymmetric solutions of the Einstein and the Einstein-Maxwell equations, Xanthopoulos has collaborated with me on a paper titled "On the metric perturbations of the Reissner Nördstrom black-hole," which has been published in the Proceedings of the Royal Society (Vol. 367, 1-14 (1979)). He has two further papers on related topics which will also be published in the Proceedings of the Royal Society later this year.

Xanthopoulos has also contributed papers on the asymptotic nature of space times, by himself, and also in collaboration with Professors Geroch and Ashtekar. He has also published on Yang-Mills theory and gauge theories in general.

I should also add that during the past year Xanthopoulos has given me invaluable assistance in the form of critical advice and criticism of the various chapters of a book on black hole solutions of general relativity that I am presently writing. Indeed, I went to Salonika in March for a week with the express purpose of consulting him with respect to my book.

By his publications and by the range, depth and breadth of his knowledge of general relativity and mathematical physics, Xanthopoulos is clearly among the very best in his age group. I cannot imagine that anyone with superior qualifications can have applied to you. Indeed, I am disappointed that Xanthopoulos is yet to secure a good faculty position in Greece.

Yours sincerely,

S. Chandrasekhar

S. Chandrasekhar

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DEPARTMENT OF PHYSICS

COLLEGE OF LETTERS & SCIENCE

MONTANA STATE UNIVERSITY, BOZEMAN 59717

October 19, 1981

Selection Committee
Department of Physics
University of Crete
Solonos Fl, Athens-143
GREECE

Gentlemen:

Dr. Basilis Xanthopoulos has requested that I write a letter of recommendation. I am delighted to be able to do this. Basilis is without question one of the most energetic, enthusiastic and hard working persons I have been around. He possesses a breath of knowledge in physics and is an exciting colleague with whom to interact.

We have had a number of interactions related to teaching. He is one of our most popular teachers. Last week our graduate students presented a petition requesting that he give some lectures in General Relativity (a copy of this petition is attached). They are enthusiastic about his course in Electromagnetic Theory from Jackson. He enjoys and is excellent in teaching students. I have received a number of petitions in this position, but none that were as positive and as enthusiastic as this one.

In terms of research, in a very short period of time he was interacting successfully and strongly with Bill Kinnersley's group and has done a number of interesting collaborative projects. He is gregarious and competent, so I anticipate that he will have a strong interaction with your department and will make very positive contributions to it.

If it would have been at all possible we would have kept him here although the budget did not allow for that. There is no question that he was highly regarded and would have been an excellent faculty member. Upon his leaving I wrote him the letter which is also attached.

In conclusion, I highly recommend Basilis to you and only wish we could have him here.

Sincerely yours,

Robert J. Swenson, Chairman
Department of Physics

TELEPHONE (406) 994-3614

June 12, 1979

Basilis Xanthopoulos
Physics Department
AJM Johnson Hall

Dear Basilis:

On behalf of the Physics Department I would like to express to you our appreciation for your interaction with the Department and students during the past year. We feel it has been our pleasure and good fortune having you here and that you have made a significant contribution to both our research and teaching program. The students have greatly enjoyed your lectures and your interactions with them and we will all feel a deep loss when you leave.

I hope that through the years that we can keep track of each other and that we will have the opportunity to see you back here sometime in the future for a visit or that occasionally people from here may be able to visit you in Greece.

Best wishes to you, Basilis, and I hope things go well for you on your return to your mother country.

Cordially yours,

Robert J. Swenson, Chairman
Department of Physics

RJS:hk

Dear Dr. Swenson,

We would like to take this opportunity to let you know our feelings about one of this Departments instructors, Basilis Xanthopoulous.

Most of us were associated with Basilis this year in the Electrodynamics course he taught. Others of us had the opportunity to hear him teach in the series of General Relativity lectures he gave, at our request, out of his own free time. Whatever the formal association may have been, we all felt that we could talk freely with him or visit him in his office at any time. He was always available and helpful with any physics problem we might have had, whether in his own teaching area or not.

We feel the department's effectiveness is greatly enhanced by such professors as Dr. Xanthopoulous. Such teachers, we have learned from experience, are extremely rare, and we think that anything that could be done on the departments behalf to retain him would be richly repaid in the long run. In other words, we think that the result of teachers such as Basilis in the department is that the people turned out by the University are much abler and better prepared for any challenge they may meet in the future.

We are all extremely pleased at the opportunity we had of learning under Basilis and we all wish that we could study under him in terms to follow. Whether you see fit to attempt

to retain him or not, we want you to know of our support for him and of our ~~great~~ thankfulness to the department for allowing him to teach us these last three quarters. We all feel we have found in Dr. Xanthopoulous a true friend.

Sincerely,

HIS STUDENTS:

John D. Gaudio
Michael C. Kelly
Paul J. Schuele
Peter Shifflett
Mike Cantz
Paul Schwackenberg
James R. Myson
David Warren Langford
Donald M. Flaneo
Mark Dickson
Christopher Smith
[illegible]
Scott Anderson
Terry Lemley

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Laboratory for Astrophysics and Space Research

November 18, 1981

Letter of Recommendation for Basilis Xanthopoulos

Xanthopoulos received his PhD in physics (general relativity) under my direction at the University of Chicago in June, 1978. I of course knew him and his work very well when he was here, and have since (during which time he has been, among other places, at Montana, Munich, and Greece) followed his work to some extent.

Xanthopoulos is an excellent physicist. He is one of the rare individuals who combine mathematical sophistication with sound physical sense. His style is to select and solve a key problem within an area, rather than to "play the field". Nonetheless, his work encompasses a broad range of topics. He is extremely disciplined and hard-working, and displays good taste in the selection of problems. I must confess I can think of no obvious weaknesses. He is a fair writer and an excellent speaker: I should think that he is a very good teacher.

Xanthopoulos' thesis was on certain techniques for generating new solutions of Einstein's equation. Virtually all that is known about one technique (due originally to Chandrasekhar), and a number of properties of a second technique, are due to Xanthopoulos. While at Chicago, Xanthopoulos also worked on a number of other problems, including one on post-Newtonian approximations and one on perturbations of black holes (both with Chandrasekhar), and a result demonstrating linearized stability of asymptotic flatness at null infinity (with me). At Montana, Xanthopoulos became involved in the Kinnersley program for the study of methods for generating new solutions of Einstein's equation from old. It is my impression (e.g., from a seminar he gave at Chicago on this work) that his contributions to this project were of central importance. He has also produced an interesting result with Ashtekar on the possible symmetries of asymptotically flat space-times. Most recently, he has been involved in the study of solutions of Yang-Mills fields. I know this work rather less well, but understand from others that it is very well thought of. In short, Xanthopoulos' publication record shows a remarkable breadth of interests, together with a number of very strong papers. His research output shows no sign of diminishing.

Xanthopoulos is one of the strongest two or three relativists to come out of the University of Chicago in the last decade. I without hesitation recommend him for a faculty position at any university.

Sincerely,

Robert Geroch

Robert Geroch

By his publications and by the range, depth and breadth of his knowledge of general relativity and mathematical physics, Xanthopoulos is clearly among the very best in his age group. I cannot imagine that anyone with superior qualifications can have applied to you. Indeed, I am disappointed that Xanthopoulos is yet to secure a good faculty position in Greece.

Yours sincerely,

S. Chandrasekhar

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