



December 26, 2021

Professor Paolo Atzeni
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Dipartimento di Ingegneria
Sezione di Informatica e Automazione
Via della Vasca Navale 79
00146 Roma, Italy

Re: Emeritus status for Professor Alberto Paoluzzi

I am honored to offer this letter of recommendation for Professor Alberto Paoluzzi in connection with his request for Emeritus status at the University Roma Tre.

Professor Paoluzzi is somewhat of a legend in the fields of geometric modeling, programming, and computer-aided design. His work significantly advanced these fields using techniques from topological modeling and functional programming, and applying them to diverse application areas including architecture, computational biology, design, and computational physics. He published extensively in computational topology before this field was even recognized and created. Many of his early results were combined to create PLASM, the only functional programming geometric language and system I am aware of. Not only he led all the theoretical work, but also his group designed and implemented the complete system and that been used throughout the world for teaching geometric modeling and algorithms. His 800-page book published by Wiley remains unsurpassed technical achievement that greatly influenced generations of researchers and practitioners in geometric modeling. These accomplishments along would have been enough to define a respectable academic career. But Professor Paoluzzi did not stop there. He continued producing impressive theoretical and practical results spanning advancements in multiple disciplines. His latest work on Linear Algebraic Representations (LAR) holds the promise to transform and unify the fields on geometric and topological computing with modern scientific computing languages deploying linear algebra on GPU and parallel systems.

Professor Paoluzzi's contributions to education and service are equally impressive. His students hold faculty positions in prestigious US universities (e.g. Professor Valerio Pascucci at the University of Utah) and executive positions at leading corporations (e.g. Fausto Bernardini at IBM and now Google). He is known as a passionate teacher who works endlessly creating and improving his teaching methods and classes. Professor Paoluzzi's recognition and influence are equally wide-ranging. For example, he was recognized with the Pioneer award by the

international Solid Modeling Association, and has served as Editor for the prestigious Computer-Aided Design journal, and has been invited to lecture throughout the world.

This letter is necessarily incomplete and does not do justice to Professor Paoluzzi's accomplishments. University Roma Tre is fortunate to count Professor Alberto Paoluzzi among its faculty and certainly should grant him the Emeritus title. There is no doubt that his contributions and recognitions have contributed greatly to the University's reputation and stature. I must admit that I was somewhat surprised to even receive a request to write this letter. In my opinion, based on Professor Paoluzzi's record of achievement and service, any world class university would be eager and honored to grant him the honorary title or emeritus status.

Sincerely,

A handwritten signature in cursive script that reads "Vadim Shapiro".

Vadim Shapiro
Bernard A. and Frances M. Weideman Professor Emeritus
University of Wisconsin - Madison

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International Computer Science Institute
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Editor in Chief
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