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To whom it may concern:

At the request of Ms. Ya LIU, I am very pleased to write this recommendation letter to support her application of a post-doctoral fellowship at your laboratory.

I got to know Ms. LIU when she started her Ph.D study in our laboratory in September 2006 under the supervision of Prof. Chengbin CHU. During her three years' stay at the laboratory, I had opportunities to discuss with her on some research subjects such as the vehicle routing problem with time windows and a cutting stock problem. I was very impressed by her active thinking and solid background on operations research. For the two problems, she has developed hybrid approaches that combine column generation and a dynamic programming algorithm with reduced state space. She is also working on a hospital operating room scheduling problem and has developed a reduced state space dynamic programming approach to solve. The numerical experimental results she obtained for these approaches on the problems show that the combination of column generation and reduced state space dynamic programming is very effective to solve some hard combinatorial optimization problems. Based on the research results, she has published 2 papers in the proceedings of international conferences and submitted one paper to an international journal. Moreover, she has a very good background on computer programming and masters C++ and CPLEX. Right now, she is at Laboratoire Génie Industriel, Ecole Centrale Paris as her supervisor Prof. Chengbin Chu has joined in the laboratory since September 2008.

In my assessment, Ms. LIU has high analysis and problem solving skills on industrial engineering and operations research. After the three years' research at our lab, she has got a very solid background on operations research/optimization, and has a great potential to become an excellent researcher in the research fields she choose.

Regarding her personality, she is very diligent and is always willing to cooperate with other persons in research and in daily life. She could always accomplish the tasks her supervisor and other professors assigned to her.

In conclusion, I strongly support Ms. LIU to apply for a post-doctoral fellowship in your laboratory. Your favorable consideration of her application will be highly appreciated. If you need further information about her, please do not hesitate to contact me.

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'Ha', followed by a horizontal line that ends in an arrowhead pointing to the right.

Haoxun Chen, Professor