



**SWARM  
2019**

**Finalist**

**Best Paper Award**

The 3rd International Symposium on Swarm  
Behavior and Bioinspired Robotics

Constrained Optimization by Improved Particle  
Swarm Optimization with the Equivalent Penalty  
Coefficient Method

Tetsuyuki Takahama and Setsuko Sakai

The 3rd International Symposium on Swarm Behavior and Bioinspired Robotics  
Okinawa, Japan, November 22, 2019



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